MULTIPLE CHOICE TESTS FOR PHYSIOTHERAPY BACHELOR'S DEGREE EXAM

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GENERAL BASES OF PHYSIOTHERAPY

1. In which part of the ATE description system is the patient's initial position described?
   A. Activities
   B. Techniques
   C. Elements
   D. Movement

2. The A from the description of physical exercises in the ATE system represents:
   A. The technique by which movement is achieved
   B. Facilitation elements
   C. Position and movement
   D. Dosage

3. In the description of kinetic exercises, the type of muscle contraction is specified in:
   A. Activities
   B. Techniques
   C. Elements
   D. Movements

4. In the description of kinetic exercises, the physiotherapist's position in relation to the patient is specified in:
   A. Activities
   B. Techniques
   C. Elements
   D. Movement

5. Which is the purpose of medical rehabilitation during the convalescence period?
   A. Elimination of residual functional deficiencies
   B. Rehabilitation of lost function
   C. Maintenance of function
   D. Full stabilization of lesions

6. During the post-convalescence period, the purpose of medical rehabilitation is:
   A. Rehabilitation of the lost function by using various therapeutic means
   B. Full stabilization of lesions, of the disease
   C. Elimination of residual functional deficiencies
   D. Restoration, as completely as possible, of an individual's diminished or lost functional abilities, as consequence of congenital or gained diseases or trauma

7. Professional rehabilitation is the rehabilitation stage which has as purpose:
   A. Elimination of residual functional deficiencies
   B. Recovery of necessary functions to return to work
   C. Recovery of necessary functions for daily living
   D. Full stabilization of lesions

8. Social rehabilitation is the rehabilitation stage which has as purpose:
   A. Full stabilization of lesions
   B. Elimination of residual functional deficiencies
   C. Recovery of necessary functions to return to work
   D. Recovery of necessary functions for daily living

9. Secondary kinetoprophylaxy has as purpose:
   A. Prevention of sequelae, of irreversible, somato-functional lesions occurrence, which could cause motor and/or psychic disability
   B. Maintenance of health condition within biological and chronological boundaries
   C. Prevention of disease complications
   D. Prevention of diseases

10. Primary kinetoprophylaxy has as purpose:
   A. Prevention of sequelae, of irreversible, somato-functional lesions occurrence, which could cause motor and/or psychic disability
   B. Maintenance of health condition within biological and chronological boundaries
   C. Prevention of disease complications
   D. Elimination of residual functional deficiencies

11. Prevention of diseases is a purpose of which type of kinetoprophylaxy?
   A. Secondary
   B. Primary
   C. Tertiary

12. Prevention of disease complications is a purpose of which type of kinetoprophylaxy?
   A. Tertiary
   B. Primary
   C. Secondary

13. The theoretical and scientific bases of physiotherapy represents one of its subsystems which refers to:
   A. Working methodology – exercise programs for various pathologies
   B. Structure, organization and functioning of the neuro-myo-arthrokinetic apparatus
   C. Assessment, therapy, rehabilitation
   D. Kinetic techniques and exercises

14. Active and conscious participation refers to:
    A. The fact that a patient is being treated and not generally a disease
    B. The "placebo" effect which shows the intervention of the psychic in "healing"
    C. The individualization of treatment
    D. The fact that the purpose is the full recovery after effort

15. Individualization of treatment is a physiotherapy principle which refers to:
    A. The fact that a patient is being treated and not generally a disease
    B. The "placebo" effect which shows the intervention of the psychic in "healing"
    C. The fact that the following are considered: type of disorder, cooperation ability in tensed situations, intellectual level, age, sex, etc.
    D. The fact the following are considered: the individual's or the relatives' needs, requirements and requests

16. Effort dosage is a physiotherapy principle which refers to:
    A. Effort economy (the chosen means should require maximum effort to accomplish the strictly localized objective, but this effort should be minimal for the entire body)
    B. The fact that delay implies extending the treatment period
    C. The fact that not always "more" is "better"
    D. The fact that work must progress from easy to difficult, from simple to complex, from known to unknown

17. The early stage of treatment is a physiotherapy principle which refers to:
    A. Respecting the method principle of accessibility in selecting and combining the used means
    B. The fact that delaying the onset of a physiotherapy program, implies the extension of the treatment period
    C. Individualization of treatment according to the individual's or relatives' needs, requirements and requests
    D. Individualization of treatment

18. Controlling involuntary movements is an intermediary objective of:
    A. Increasing mobility
    B. Sensitivity re-education
    C. Relaxation
    D. Restoration of stamina

19. Which of the following objectives are intermediary objectives to enhance relaxation?
    A. Pain re-education through relaxation on CNS/local level
    B. Muscle contracture re-education (and retracture prevention)
    C. Formation of correct body attitude reflex in statics/dynamics
    D. Decreasing/controlling involuntary movements

20. Getting capacity to notice the particular excitation in exteroception-proprioception-interoception is an intermediary objective for:

A. Increasing mobility
B. Sensitiveness re-education
C. Relaxation
D. Respiratory re-education

21. Which of the following objectives are the intermediary objectives for sensitivity re-education?

A. Decreasing/controlling involuntary movements
B. Gaining the ability to notice specific excitation in exteroception-proprioception-interoception
C. Performing the topographic localization ability of a specific excitation
D. Moderating hyperesthesia

22. Secondary prophylaxis of a bad posture is an intermediary objective for:

A. Relaxation
B. Respiratory re-education
C. Correction of body posture, body and its segments' alignment
D. Increasing mobility

23. Which of the following objectives are intermediary objectives for the correction of posture, body and its segments' alignment?

A. Fighting against the wrong attitudes of the locomotor apparatus
B. Secondary prophylaxis of de-posturing
C. Performing the topographic localization ability of a specific excitation
D. Formation of correct body attitude reflex in statics/dynamics

24. Correction of body and body parts posture and alignment is an objective of the following type:

A. Operational
B. General
C. Intermediary

25. Controlling the center of gravity within the support base is an intermediary objective for:

A. Increasing mobility
B. Sensitivity re-education
C. Education/re-education/rehabilitation of control, coordination and balance
D. Increase of resistance

26. Which of the following objectives are intermediary objectives for education/re-education/ rehabilitation of control, coordination and balance?

A. Promotion of control capacity over the movement performed by a synergistic muscle or group of muscles
B. Formation of correct body attitude reflex in statics/dynamics
C. Learning-enhancing-improving the normal movement sequence
D. Learning the balance control strategies

27. Learning the use of aids to prevent falling is an objective of the following type:
    A. Intermediary
    B. General
    C. Operational

28. Controlling the center of gravity within the support base is an intermediary objective for:
    A. Increasing mobility
    B. Respiratory re-education
    C. Education/re-education/rehabilitation of control, coordination and balance
    D. Stamina recovery

29. Which of the following objectives are intermediary objectives for respiratory re-education?
    A. Relaxation of respiratory muscles
    B. Mobilization of the thoracic cage through passive movements
    C. Promotion of breathing control/coordination (frequency, current volume control, rhythm, air flow control) in rest-movement-effort
    D. Performing the topographic localization ability of a specific excitation

30. Increasing effort training is an objective of the following type:
    A. Operational
    B. Intermediary
    C. General

31. Increasing elasticity (stretching) of the contractile/non-contractile tissue is an intermediary objective for:
    A. Increasing mobility
    B. Respiratory re-education
    C. Education/re-education/rehabilitation of control, coordination and balance
    D. Recovery of stamina

32. Which of the following objectives are intermediary objectives for increasing mobility?
    A. Inhibition of muscle hypertonia
    B. Promotion of control capacity over the movement performed by a synergistic muscle or group of muscles
    C. Increase of arthro-kinematic motion range
    D. Controlling soft tissue adherences

33. Increasing joint mobility is an objective of the following type:
    A. Operational
    B. General
    C. Intermediary
    D. Specific

34. Inhibition of muscle hypertonia is an intermediary objective for:
    A. Increasing mobility
    B. Sensitivity re-education
    C. Recovery of stamina
    D. Respiratory re-education

35. Preventing the atrophy of the denervated muscle is an intermediary objective for:
    A. Increasing mobility
    B. Respiratory re-education
    C. Education/re-education/rehabilitation of control, coordination and balance
    D. Increasing muscle strength

36. Which of the following objectives are intermediary objectives for increasing muscle strength?
    A. Muscle toning in the long area of the muscle
    B. Formation of correct body attitude reflex in statics/dynamics
    C. Muscle toning in speed conditions
    D. Keeping the denervated muscle from atrophy

37. Increasing muscle resistance is an objective of the following type:
    A. Intermediary
    B. General
    C. Operational
    D. Specific

38. Which is the first recovery stage of the bone, after fracture?
    A. Cellular proliferation
    B. Hematoma
    C. Callus
    D. Consolidation

39. The bone
    A. Has circulation
    B. Does not have circulation
    C. Does not have innervation
    D. Does not contain blood vessels, but it contains nerves

40. Which are the cells responsible with bone recovery?
    A. Osteoclasts
    B. Osteoblasts
    C. Myofibrils
    D. Collagen matrix

41. The basic bone unit is:
    A. Osteon
    B. Osteoblast
    C. Mineralized matrix
    D. Osteoclast

42. Wolf's law refers to:
    A. Bone adaptation to blood flow
    B. Bone structure development according to osteoblast activity
    C. Trabecular organization according to the direction of forces' action on the bones
    D. Bone structure development according to the borne forces

43. Bone remodeling is achieved through:
    A. Ca and P ions activation
    B. Blood cells production
    C. Collagen fibers organization
    D. Destruction by osteoclasts and recovery by osteoblasts

44. The bone, within the musculoskeletal system, has the following functions:
    A. Provides mechanical support and leverage to each moving segment
    B. Releases heat
    C. Active Ca and P ions reservoir
    D. Hematopoietic organ

45. The cartilage
    A. Has circulation
    B. Does not have circulation
    C. Has innervation
    D. Does not have innervation

46. The cartilage
    A. Does not contain blood vessels and nerves
    B. Regenerates itself
    C. Its lesion is very painful
    D. It scars

47. The role of cartilage is:
    A. To destroy cartilaginous cells
    B. Cartilage food
    C. Shock absorber for the bone
    D. To clean the joint cavity

48. The main functions of joints within the locomotor apparatus are:
    A. Mobility
    B. Cartilage food
    C. Joint cavity lubrication
    D. Stability

49. The synovial fluid has the following functions:
    A. Destruction of cartilaginous cells
    B. Cartilage food
    C. Joint cavity lubrication
    D. To clean the joint cavity

50. Thixotropy represents
    A. Tissue capacity to change its length
    B. Tissue capacity to change its viscosity
    C. Joint capacity to send forces to the
    D. Tissue resistance to stretching

51. The tendon has the following functions:
    A. Sending the contraction force
    B. Cartilage food
    C. Modulation of gross contraction
    D. Destruction of cartilaginous cells

52. Which is the role of ligaments?
    A. Joint resistance and stability
    B. Participates in guiding movement
    C. Blocks excess movement, regulating muscle strength
    D. Destruction of cartilaginous cells

53. The tendon
    A. Has circulation
    B. Does not have circulation
    C. Is formed of connective tissue
    D. Does not contain blood vessels and nerves

54. The ligament
    A. Is formed of collagen and elastin fibers
    B. Does not have innervation
    C. Has innervation
    D. Does not contain blood vessels and nerves

55. The tendon lesion is healed through:
    A. Regeneration
    B. Fibrous scarring
    C. Callus
    D. Hematoma

56. The tendon resistance decreases through:
    A. Immobilization
    B. Repeated stretching
    C. Muscle contractions
    D. Repeated mobilizations

57. The stages of tendon repair are:
    A. Fibroblastic cellular invasion, collagen fibers development, remodeling stage
    B. Fibroblastic cellular invasion, collagen fibers development, fiber organization with strengthening
    C. Early stage, fibroblastic cellular invasion, collagen fibers development, proliferation
    D. Fibroblastic cellular invasion, remodeling stage, collagen fibers development, fiber organization with strengthening, callus, terminal stage

58. Which are the functional characteristics of muscles?
    A. Extensibility
    B. Excitability
    C. Contractility
    D. Elasticity

59. Which are the functions of skeletal muscles?
    A. Maintain posture
    B. Produce movement
    C. Release heat
    D. Stabilize joints

60. Muscular excitability refers to:
    A. Muscle's capacity to react to stimuli, producing electrical signals
    B. Muscle fibers' capacity to stretch without breaking
    C. Muscle fibers' capacity to find their length and original form after contraction or stretching
    D. Contraction capacity with a certain force when stimulated through an action potential

61. Muscle contractility refers to:
    A. Muscle's capacity to react to stimuli, producing electrical signals
    B. Muscle fibers' capacity to stretch without breaking
    C. Muscle fibers' capacity to find their length and original form after contraction or stretching
    D. Contraction capacity with a certain force when stimulated through an action potential

62. Muscle extensibility refers to:
    A. Muscle's capacity to react to stimuli, producing electrical signals
    B. Muscle fibers' capacity to stretch without breaking
    C. Muscle fibers' capacity to find their length and original form after contraction or stretching
    D. Contraction capacity with a certain force when stimulated through an action potential

63. Muscle elasticity refers to:
    A. Muscle's capacity to react to stimuli, producing electrical signals
    B. Muscle fibers' capacity to stretch without breaking
    C. Muscle fibers' capacity to find their length and original form after contraction or stretching
    D. Contraction capacity with a certain force when stimulated through an action potential

64. Which is the contractile element of the muscle?
    A. Muscle fiber
    B. Myofibril
    C. Myofilaments
    D. Sarcoplasm

65. The motor muscle protein which moves to produce movement is:
    A. Myosin
    B. Actin
    C. Troponin
    D. Tropomyosin

66. Phasic muscle fibers (type 2):
    A. Are red fibers
    B. Have rich vascularization
    C. Accomplish fast contractions, determining high energy expenditure
    D. Are poor in myoglobin, mitochondria, oxidative enzymes

67. Tonic fiber muscles (type 1):
    A. Accomplish fast contractions
    B. Are rich in mitochondria, ATP, myoglobin
    C. Have rich vascularization
    D. Are poor in myoglobin, mitochondria, oxidative enzymes

68. The laws of "nerve regeneration" state that:
    A. Regeneration speed is not age-influenced
    B. It is not variable from nerve to nerve
    C. Proximal nerve lesions are more severe than the distal ones
    D. Exuberant regeneration, with very many buds is an unfavorable process

69. What peripheral nerve lesion has the highest chances to fully recover?
    A. Neuropraxia
    B. Axonotmesis
    C. Neurotmesis
    D. Total nerve sectioning

70. Intercalary neurons
    A. Are receivers of information, of sensitive-sensory action potentials from periphery
    B. Modulate the interaction between input and output in excitating and inhibiting way
    C. Make the connection between the cerebro-medular nervous tract terminations and motoneurons
    D. Make the connection between motor and sensorial neurons

71. Neurotmesis represents
    A. Total nerve sectioning
    B. Nerve compressions
    C. Axone distruction
    D. Myelin sheath distruction

72. Neuropraxia
    A. Causes paresthesia
    B. It is driven by nerve compressions
    C. It is the most severe nerve lesion
    D. Determines muscle atrophy

73. Neurotmesis
    A. Represents total nerve sectioning
    B. It is driven by nerve compressions
    C. It is the most severe nerve lesion
    D. Determines total paralysis

74. The gamma motoneuron is in:
    A. Extrafusal fibers
    B. Muscle spindle
    C. Medullary anterior horn
    D. Medullary posterior horn

75. The efferences from alpha motoneuron go to:
    A. Extrafusal fibers
    B. Cerebral cortex
    C. Muscle spindle
    D. Intrafusal fibers

76. The gamma motoneuron provides the innervation of:
    A. Extrafusal fibers
    B. Intrafusal fibers
    C. Ligament
    D. Tendon

77. The axons from gamma motoneurons go to:
    A. Muscle spindle
    B. Extrafusal fibers
    C. Cerebral cortex
    D. Spine

78. The Renshaw cells are specialized intercalary neurons which
    A. Determine excitatory phenomena for the alpha motoneuron
    B. Determine excitatory phenomena for the neurons nearby
    C. Are specialized intercalary neurons
    D. Determine inhibitory phenomena for the alpha motoneuron

79. The Golgi organ is influenced by:
    A. Muscle stretching
    B. Muscle relaxation
    C. Prolonged immobilization
    D. Increased muscle tension

80. The secondary receptor (Ruffini efflorescence) is:
    A. In the muscle spindle's central area
    B. Towards the intrafusal fiber's periphery
    C. On the muscle spindle myotube
    D. In the medullary anterior horn

81. The motor unit represents:
    A. Muscle fibers reached by the axonal terminations
    B. The muscle
    C. The cellular body
    D. The smallest neuromuscular morphofunctional unit

82. What is "the innervation ratio" (Innervation coefficient)?
    A. The number of muscle fibers innervated by a neuron
    B. The number of neurons which innervate a muscle fiber
    C. The ratio between a movement's motor neurons and sensitive neurons
    D. The number of neurons per linear cm of muscle fiber

83. Which process triggers the cellular action potential?
    A. Cellular membrane inhibition
    B. Cellular membrane depolarization
    C. Cellular membrane deactivation
    D. Na+ penetration in the muscle cell with K+ exit

84. Neuromuscular propagation is achieved when:
    A. The axonal action potential (AP) propagates and becomes sarcolemmal AP
    B. Axonal approaches the neuromuscular junction
    C. PPT propagates, becoming sarcolemmal PA
    D. The cellular membrane is inhibited

85. Which is the first phase in the muscle contraction formation process?
    A. Energy release from ATP
    B. Connecting the transversal bridges to the actin
    C. Ca^{++} deinhibition (release) from the sarcoplasmic reticulum
    D. Depolarization of T transverse tubes

86. Which ion triggers the excitation-contraction coupling?
    A. K+
    B. Ca++
    C. Na+
    D. Cl–

87. Which is the "fuel" which provides energy to achieve muscle contraction?
    A. Glycogen
    B. Ca++
    C. ATP
    D. K+

88. Which is the role of calcium in muscle contraction?
    A. Increases the postsynaptic membrane permeability (sarcolemma) for Na++ and K++
    B. Disinhibits troponin, thus releasing the fixation spots between actin and myosin
    C. ATP molecule hydrolysis
    D. Attachment of ends to myosin

89. The gamma loop circuit is:
    A. Muscle – Ia fibers – α motoneuron – extrafusal fibers – muscle contraction
    B. γ MN from the anterior horn → axon → intrafusal muscle fibers → annulospiral ending from the spindle → Ia fibers → spinal sensitive protoneuron → intercalary neurons → α MN
    C. α MN from the posterior horn → axon → extrafusal muscle fibers → annulospiral ending from the spindle → Ia fibers → spinal sensitive protoneuron → intercalary neurons → α MN
    D. Increase of muscle tension – Golgi organ – Ia fibers – α motoneuron – muscle contraction

90. Golgi tendon reflex has the following circuit:
    A. Tension increase in the muscle – Golgi organ – Ib fibers – inhibiting intercalary neuron – α motoneuron – motor inhibition
    B. Tension increase in the muscle – Golgi organ – Ia fibers – α motoneuron – muscle contraction
    C. Muscle stretch – Golgi organ – Ib fibers – inhibiting intercalary neuron – α motoneuron – motor inhibition
    D. Muscle stretch – Ia fibers – α MN – intrafusal fibers – muscle inhibition

91. The myotatic reflex has the following circuit:
    A. Muscle contraction – Ia fibers – gamma MN – extrafusal fibers – muscle stretch
    B. Muscle stretch – Ia fibers – α MN – intrafusal fibers – muscle inhibition
    C. Muscle stretch – Ia fibers – α MN – extrafusal fibers – muscle contraction
    D. γ MN from the anterior horn → axon → extrafusal muscle fibers → annulospiral ending from the spindle → Ia fibers → spinal sensitive protoneuron → intercalary neurons → γ MN

92. The myotatic reflex is triggered by:
    A. Muscle stretch
    B. Muscle contraction
    C. Resistance to movement
    D. Increase of muscle tone

93. Akinetic techniques are based on the following idea:
    A. Suppression of joint movement
    B. Suppression of voluntary contractions, but existence of movement
    C. Movement suppression, but achievement of muscle contractions
    D. Suppression of voluntary contractions

94. Immobilizations suspend:
    A. Voluntary dynamic contraction, but allow the concentric contractions of muscles around the respective joint
    B. Joint movement and voluntary dynamic contraction, but allow the isometric contractions of muscles around the respective joint
    C. Joint movement and voluntary dynamic contraction, without allowing the isometric contractions of muscles around the respective joint
    D. Joint movement, but allow voluntary dynamic contraction

95. Posturing
    A. Is characterized by artificial holding and fixation, for certain periods of time, of the entire body, or only of a part, in a determined position, with or without the help of devices or apparatus
    B. Represents attitudes imposed to the entire body or only to parts of it, for therapeutic or prophylactic purposes, to correct or prevent the onset of statics deviations and vicious positions, or to facilitate a physiological process

C. Consists in "head to head" maintenance of joint surfaces or bone fragments; thus, a segment or part of a segment is locked in an external fixation system
D. Can be corrective and facilitating

96. What types of posturing are there?
A. For resting
B. Corrective
C. Of contention
D. Facilitating

97. The static kinetic techniques are characterized by
A. Joint movement
B. Muscle tone change with segment movement
C. Muscle tone change without determining segment movement
D. Suppression of voluntary contractions

98. Isometric contraction
A. Represents a muscle contraction in which the muscle fiber length decreases, without achieving shifting of segments on which the respective muscle inserts
B. Represents a muscle contraction in which the muscle fiber length is changed, thus achieving the shifting of segments on which the respective muscle inserts
C. Represents a muscle contraction in which the muscle fiber length remains constant, without achieving shifting of segments on which the respective muscle inserts
D. Is part of the static kinetic techniques

99. Maximum isometric contraction is maintained
A. Maximum 3 seconds for those who did not train
B. Maximum 12 seconds for those who trained
C. As much as the subject resists
D. Maximum 5–6 seconds for those who did not train

100. In isometric contraction
A. Opposed resistance is equal with the respective muscle's strength
B. Opposed resistance is higher than the respective muscle's strength, defeating it
C. Resistance is lower than the respective muscle's strength
D. Muscle strength gradually cedes to the opposed resistance

101. Muscle relaxation is part of the following techniques:
E. Akinetic
F. Static kinetic
G. Passive dynamic kinetic
H. Active dynamic kinetic

102. Active muscle relaxation

A. Is obtained through psychic voluntary effort (acknowledgement of relaxation kinesthetic sensation as an inverse state to the muscle contraction) or physical voluntary effort (contraction of antagonist, active stretching, etc.)
B. Is made by the physiotherapist (segment posturing, thermo-therapy, passive stretching, vibrations applied to the antagonist muscles, etc.)
C. Is induced through psychic mechanisms (suggestion, hypnosis)
D. Is achieved with the patient's active participation

103. Passive muscle relaxation

A. Is made by the physiotherapist (segment posturing, thermo-therapy, passive stretching, vibrations applied to the antagonist muscles, etc.);
B. Is obtained through psychic voluntary effort (acknowledgement of relaxation kinesthetic sensation as an inverse state to the muscle contraction);
C. Is induced through psychic mechanisms (suggestion, hypnosis)
D. Is achieved with the patient's active participation

104. The role of the grip in passive movement is to:

A. Oppose resistance to segment movement
B. Support the segment
C. Stabilize the segment
D. Mobilize the segment

105. When mobilization is made directly by the subject with the help of a body part, it is mobilization of the following type:

A. Passive-active
B. Active-passive
C. Active
D. Self-passive

106. Manual, passive stretching is applied for a period of:

A. 10–15 sec
B. 20–60 sec
C. 2–5 minutes
D. As much as the patient resists

107. Stretching of antagonists achieved through antagonists' isometry is a stretching of the following type:

A. Passive
B. Sportive
C. Active
D. Self-passive

108. Self-stretching is of the following type:
A. Passive
B. Isometric
C. Active
D. Sportive

109. Self-stretching of the gluteus medius is achieved from:
A. Dorsal decubitus with abducted hip
B. Lying with thighs abducted on the pelvis
C. Contralateral decubitus on the bed edge with the thigh adducted on the pelvis
D. Orthostatism with abducted hip

110. Self-stretching of the quadratus lumborum muscle is achieved from:
A. Lying with thighs abducted on the pelvis
B. Dorsal decubitus with the thigh adducted on the pelvis and the pelvis contralaterally rotated
C. Orthostatism with the pelvis raised ipsilateral
D. Ipsilateral decubitus with support on the hand, trunk flexed contralaterally

111. Tractions are part of the following techniques
A. Static kinetic
B. Passive dynamic kinetic
C. Active dynamic kinetic
D. Akinetic

112. In case of joint stiffness which requires muscle hypertonia decrease, the following PNF techniques are used:
A. RO and RC
B. MARO and IL
C. SI and RR
D. IA and ILO

113. On which muscle is facilitation achieved in the stretch-reflex technique?
A. On the hypertonic muscle
B. On the hypotonic muscle
C. On the agonist and antagonist
D. On the strong muscle

114. The RO, RC, MARO techniques are for:
A. Mobility promotion
B. Stability promotion
C. Ability promotion
D. Coordination

115. For the inhibition of increased muscle tone, the following PNF techniques can be used:
    A. RO and MARO
    B. RR and IA
    C. RC and RR
    D. RO and RC

116. For muscle excitation, the following PNF techniques can be used:
    A. RC and IL
    B. ILO and IA
    C. RR and MARO
    D. IL and MARO

117. The MARO technique is based on:
    A. Excitatory effect of the myotatic reflex during short, quick stretches
    B. Inhibiting effect of Golgi reflex during the concentric contraction
    C. Inhibiting effect of the mitotic reflex during stretching
    D. Excitatory effect of the Ruffini receptors due to the passive movement of bringing the segment in the muscle's long position

118. Brushing represents an element of the following type:
    A. Interoceptive
    B. Proprioceptive
    C. Exteroceptive
    D. General

119. Prolonged stretching
    A. Has an inhibitory effect for agonists
    B. Has an excitatory effect for agonists
    C. Has an inhibiting effect for antagonists
    D. Increases muscle tone

120. The resistance opposed to movement represents an element of the following type
    A. Exteroceptive
    B. Proprioceptive
    C. Interoceptive
    D. Facilitating

Correct answers:

1.A; 2.C; 3.B; 4.A; 5.B; 6.BC; 7.B; 8.D; 9.C; 10.B; 11.B; 12.C; 13.BD; 14.B; 15.A,C,D; 16.A,C,D; 17.B; 18.C; 19.A,B,D; 20.B; 21.BCD; 22.BC; 23.ABD; 24.B; 25.C; 26.ACD; 27.A; 28.C; 29.ABC; 30.C; 31.A; 32.ACD; 33.B; 34.A; 35.D; 36.ACD; 37.B; 38.B, 39.A; 40.B; 41.A; 42.CD; 43.CD; 44.ACD; 45.BD; 46.A; 47.C; 48.AD; 49.BCD; 50.B; 51.AC; 52.ABC; 53.AC; 54.AC; 55.B; 56.A; 57.B; 58.ABCD; 59.ABCD; 60.A; 61.D; 62.B; 63.C; 64.B; 65.A; 66.CD; 67.BC; 68.CD; 69.A; 70.BCD; 71.A; 72.AB; 73.ACD; 74.C; 75.A; 76.B; 77.A; 78.CD; 79.D; 80.B; 81.D; 82.A; 83.B; 84.A; 85.C; 86.B; 87.C; 88.B; 89.B; 90.A; 91.C; 92.A; 93.AD; 94.B; 95.BD; 96.BD; 97.C; 98.CD; 99.BD; 100.A; 101.B; 102.AD; 103.A; 104.BD; 105.D; 106.B; 107.C; 108A; 109C; 110.B,D; 111.B; 112.A; 113.B; 114.A; 115.C,D; 116.B,D; 117.AD; 118.C; 119.A; 120. B,D.

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PHYSIOTHERAPY IN NEUROLOGICAL DISORDERS

1. The presence of an incoherent discourse, with paraphasia, of a reduced vocabulary and the use of agrammatisms characterizes:
   A. Non-fluent aphasia
   B. Fluent aphasia
   C. Expressive aphasia
   D. Motor aphasia

2. In the case of peripheral motor neuron syndrome, sensitivity reeducation has as objectives:
   A. Decrease of spasticity
   B. Increase of muscle strength
   C. Recovery of stereognosis
   D. Mobility improvement

3. When a person has a speech disorder, they feature:
   A. Non-fluent aphasia
   B. Fluent aphasia
   C. Expressive aphasia
   D. Motor aphasia

4. The foot drop is specific to patients with:
   A. Parkinson's disease
   B. Multiple sclerosis
   C. Stroke
   D. Spinal cord injury

5. Shuffling is specific to patients with:
   A. Parkinson's disease
   B. Multiple sclerosis
   C. Stroke
   D. Spinal cord injury

6. Parkinson's disease specific symptomatology includes:
   A. Pyramidal type hypertonia
   B. Tremor in rest
   C. Stiffness
   D. Postural instability

7. Stretching is indicated for:
   A. Muscle strength increase
   B. Tissue flexibility increase
   C. Spasticity decrease
   D. Acute inflammation reduction

8. The fundamental neuromuscular proprioceptive facilitation procedures are:
   A. Manual contact
   B. Body position and biomechanics
   C. Visual feedback
   D. Visual contact

9. Select the telereceptive facilitation elements:
   A. Hearing
   B. Pressure on tendon
   C. Seeing
   D. Manual contact

10. The central motor neuron syndrome is determined by:
   A. Peripheral nerve lesion
   B. Cerebellum lesion
   C. Pyramidal paths lesion
   D. Extrapyramidal paths lesion

11. The cerebellum's function includes:
   A. Voluntary movement control
   B. Posture and gait control
   C. Muscle tone regulation
   D. Movement coordination

12. Multiple sclerosis features the following characteristics:
   A. It is a chronic disease
   B. It belongs to the demyelinating diseases group
   C. It evolves with remissions and intensity exacerbations and variable duration
   D. It is a degenerative disorder of the central nervous system

13. Multiple sclerosis features the following characteristics:
   A. It is based on the extrapyramidal syndrome of hypertonic-hyperkinetic type
   B. It is a degenerative disorder of the central nervous system
   C. It belongs to a group of disorders characterized by multiple and scarring lesions
   D. It presents a symptomatology dominated by bradykinesia, stiffness and tremor

14. The characteristics of the pyramidal syndrome are:
    A. The presence of muscle atrophy
    B. Positive Babinski sign
    C. Live osteotendinous reflexes
    D. Tremor

15. The symptomatology specific to the cerebellar syndrome includes:
    A. Aphasia
    B. Agnosia
    C. Ataxia
    D. Nystagmus

16. The characteristics of the cerebellar syndrome are:
    A. Dysdiadochokinesia
    B. Agnosia
    C. Dysmetria
    D. It is a neurological, degenerative, hereditary disease with autosomal – dominant transmission

17. Parkinson's disease has the following characteristics:
    A. It is based on the extrapyramidal syndrome of hypotonic-hyperkinetic type
    B. It is a degenerative disorder of the central nervous system
    C. It presents a symptomatology dominated by bradykinesia, stiffness and tremor
    D. It belongs to a group of disorders characterized by multiple and scarring lesions

18. Parkinson's disease has the following characteristics:
    A. It is a chronic disease
    B. It is based on the extrapyramidal syndrome of hypertonic-hypokinetic type
    C. It presents a symptomatology dominated by bradykinesia, stiffness and tremor
    D. It evolves with remissions and intensity exacerbations and variable duration

19. Multiple sclerosis presents the following evolution forms:
    A. Stationary form
    B. Alternating form
    C. Mixed forms
    D. Acute/fulminant form

20. Multiple sclerosis presents the following clinical forms:
    A. Stationary medullary form
    B. Progressive form
    C. Vestibular form
    D. Pyramidal form

21. Cornea presents the following characteristics:
    A. It is based on the extrapyramidal syndrome of hypotonic-hyperkinetic type
    B. It is a degenerative disorder of the peripheral nervous system
    C. It is based on the extrapyramidal syndrome of hypertonic-hypokinetic type
    D. It belongs to a group of disorders characterized by multiple and scarring lesions

22. Myasthenia gravis presents the following characteristics:
    A. It is based on the extrapyramidal syndrome of hypotonic-hyperkinetic type
    B. It is a degenerative disorder of the central nervous system
    C. It is an autoimmune disease
    D. Physical effort exacerbates the specific symptomatology

23. Myasthenia gravis presents the following characteristics:
    A. It has two forms: infectious and allergic
    B. It is an inflammatory disorder of the central nervous system
    C. It is a disease which affects the neuro-muscular junction
    D. It is a neurological, degenerative, hereditary disease with autosomal – dominant transmission

24. Clinical myasthenia gravis is characterized by:
    A. Diplopia
    B. Muscular fatigue which becomes more pregnant during the second part of the day
    C. It presents two clinical forms: infectious and allergic
    D. Dysarthria

25. The peripheral motor neuron presents the following characteristics:
    A. The peripheral motor neuron's body is situated in the spinal cord, the posterior horn
    B. The peripheral motor neuron's body is situated in the motor nuclei of the cranial nerves from brainstem level
    C. It is one of the afferent paths from the nervous system to the muscles
    D. The peripheral motor neuron's body is situated in the spinal cord, the anterior horn

26. The peripheral motor neuron presents the following characteristics:
    A. It represents the sensitive neurons from the spinal ganglions
    B. It forms the paravertebral sympathetic chain
    C. It is the only efferent of the central nervous system to the muscles
    D. The peripheral motor neuron's body is situated at the cerebral cortex level

27. The transient ischemic attack presents the following characteristics:
    A. It can last for more than 24 hours
    B. It can last from a few minutes to several hours, but no more than 24 hours
    C. Sudden onset
    D. Slow onset

28. The loss of voluntary motility of one half of the body is called:
    A. Quadriplegia
    B. Paraplegia
    C. Hemiplegia
    D. Monoplegia

29. The Golgi tendinous organ has a role in:
    A. Exteroceptive sensitivity
    B. Cutaneous sensitivity
    C. Proprioception
    D. Visual perception

30. For assessing spasticity, we can use:
    A. Ashworth scale
    B. Berg scale
    C. Preston scale
    D. Asia scale

31. The vertebral-medullary traumatism presents the following characteristics:
    A. Over 80% of the total cases are encountered in women
    B. It occurs rarely
    C. It is mostly encountered in men
    D. In less than 75% cases, it also implies other systemic lesions

32. The clinical manifestations in the case of vertebral-medullary traumatisms take place according to the following stages:
    A. Medullary rest stage
    B. Medullary automatism stage
    C. Cortical shock stage
    D. Final stage, with the disappearance of any reflex activity

33. The clinical manifestations in the case of spinal cord injury take place according to the following stages:
    A. Cortical automatism stage
    B. Medullary reflex stage
    C. Resorption final stage
    D. Medullary/final shock stage

34. To asses spasticity, we can use:
    A. Frenkel scale
    B. Barthel scale
    C. Preston scale
    D. Asia scale

35. In relation to the lesion topography, the following syndromes can be achieved at spinal cord level:

A. Anterior medullary syndrome
B. Lateral medullary syndrome
C. Posterior medullary syndrome
D. Superior medullary syndrome

36. In relation to the lesion topography, the following syndromes can be achieved at spinal cord level:

A. Distal medullary syndrome
B. Medial medullary syndrome
C. Anterior medullary syndrome
D. Central medullary syndrome

37. In relation to the lesion topography, the following syndromes can exist at spinal cord level:

A. Asia-Frenkel syndrome
B. "Horse-tail" syndrome
C. Medullary cone syndrome
D. Brown-Sequard syndrome

38. The complications of vertebral-medullary traumatism are:

A. Eschars
B. Meningitis
C. Orthostatic dysreflexia
D. Spasticity

39. The complications of vertebral-medullary traumatism are:

A. Osteoporosis and fractures
B. Heterotopic ossification
C. Orthostatic dysreflexia
D. Respiratory insufficiency

40. The complications of spinal cord injuries are:

A. Pain syndrome
B. Meningitis
C. Orthostatic hypertension
D. Ataxia

41. The neurological disorder characterized by coordination and motor function impairment is known as:

A. Dyspraxia
B. Apraxia
C. Anapraxia
D. Neurological syndrome

42. Problem-solving, planning, initiative, organization, as well as, monitoring and inhibition of complex behaviors are usually associated with which part of the brain?

A. Neocortex
B. Corpus callosum
C. Cerebellum
D. Prefrontal cortex

43. In cerebral lesions, a severe traumatism in which the brain is not only shattered, but the impact also causes lesions at brain level, is known as:

A. Concussion
B. Contusion
C. Encephalitis
D. Cranitus

44. When a person is incapable of recognizing and naming correctly daily used objects, this is known as:

A. Asterognosis
B. Ametria
C. Agnosia
D. Ataxia

45. When a person presents muscle hypertonia caused by subcortical structures and basal ganglions impairment, this neurological disorder is named:

A. Dystonia
B. Stiffness
C. Tremor
D. Pyramidal syndrome

46. Accomplishing some stretches by slow voluntary movements of the segment through which the range of motion' maximum point is attempted to overpass, has the following name:

A. Static stretching
B. Dynamic stretching
C. Stretching
D. Ballistic stretching

47. Achieving transfer with the transfer board is recommended in the following situations:

A. The patient has enough strength at upper limbs level
B. The patient has enough strength at lower limbs level
C. The patient does not have enough strength at upper limbs level
D. The patient presents renal dysfunction

48. The use of wheelchair is recommended for:

A. Individuals with reversible disorders or orthopedic disorders
B. Individuals with respiratory dysfunction

C. Individuals who present a permanent of progressive dysfunction
D. Individuals with renal dysfunction

49. The defining aspects of muscle control are:
A. Effort training
B. Voluntary movement
C. Involuntary movement
D. Muscle tone and strength

50. A medullary lesion at C3-C4 level determines the following functional manifestations:
A. The individual requires permanent supervision and care
B. The individual requires temporary or permanent respiratory assistance
C. The individual manages to accomplish activities commanded with the help of their mouth (flipping pages, games, driving the wheelchair)
D. The individual manifests total dependence regarding daily activities

51. The speech capacity disruption is known as:
A. Wernicke aphasia
B. Broca aphasia
C. Beidecker aphasia
D. Warnick aphasia

52. The difficulty in understanding speaking, which implies difficulties in recognizing the spoken words and transposing thoughts into words is known as:
E. Wernicke aphasia
F. Broca aphasia
G. Beidecker aphasia
H. Warnick aphasia

53. A rehabilitation manner in case of limbs' apraxia is:
A. Gestural training
B. Mime training
C. Motor training
D. Training by imitation

54. Related to aggression intensity and application way, a traumatic brain injury can determine the following types of cerebral impairment:
A. Cranitus
B. Concussion
C. Contusion
D. Dilacerations

55. The external popliteal sciatic nerve paralysis determines the following functional disturbances:
    A. Impossibility to perform foot inversion
    B. Impossibility to perform foot eversion
    C. Difficult/absent tip-toe walking
    D. Difficult/absent heel walking

56. The transfer of the neurological patient, dependent on the wheelchair can be achieved through the following transfer techniques:
    A. Transfer depending on 4 people
    B. Transfer by using the sliding board
    C. Transfer by pivoting with flexed knees
    D. Transfer by pivoting with the help of the sliding board

57. The transfer of the neurological patient, dependent on the wheelchair can be achieved through the following transfer techniques:
    A. Transfer by pivoting from orthostatic position
    B. Transfer by pivoting with flexed knees
    C. Transfer with extended knees
    D. Transfer with the sliding board

58. A medullary lesion at C7-T1 level determines the following functional manifestations:
    A. The individual can turn independently in bed from one side to the other
    B. The individual can sit up independently
    C. The individual can eat independently, using adapted equipment
    D. The individual cannot independently accomplish personal hygiene and dressing

59. A medullary lesion at T10-L2 level determines the following functional manifestations:
    A. The individual accomplishes independently the professional and household activities
    B. The individual can move around using orthoses and walking aids
    C. The individual cannot turn independently in bed from one side to the other
    D. The individual cannot eat independently, using adapted equipment

60. A medullary lesion at C7-T1 level determines the following functional manifestations:
    A. The individual cannot turn independently in bed from one side to the other
    B. The individual can sit up independently
    C. The individual can eat independently, using adapted equipment
    D. The individual can independently accomplish personal hygiene and dressing

61. A medullary lesion at T10-L2 level determines the following functional manifestations:
    A. The individual can eat independently
    B. The individual accomplishes independently most activities
    C. The individual accomplishes independently self-care, hygiene and sports activities
    D. The individual accomplishes independently the professional and household activities

62. Which is the most frequent cause of lumbar spinal canal stenosis?

A. Discus herniation
B. Fractures with vertebral compression
C. Degenerative disc disease
D. Spondylolisthesis

63. Which is the most frequently damaged nerve following an anterior shoulder luxation?

A. Axillary nerve
B. Radial nerve
C. Long thoracic nerve
D. Thoracic-dorsal nerve

64. In case of making cervical tractions for a patient with radiculopathy, which is the position that the patient's neck should be in?

A. Full extension
B. Partial extension
C. Full flexion
D. Partial flexion

65. Which is the most frequent localization of brain concussion after cranial-cerebral traumatism?

A. Temporal lobe
B. Occipital lobe
C. Corpus callosum
D. Mesencephalon

66. In the case of a patient with cranial-cerebral traumatism, which of the following clinical manifestations present the higher risk to develop post-traumatic epilepsy?

E. Penetrating cranial traumatism
F. Intracranial hematoma
G. Subdural hematoma
H. Prolonged coma

67. Which of the wheelchair equipment is necessary for a person with hemiplegia?

A. Symmetrical arm rest, to prevent anterior glenohumeral luxation
B. Anti-eschar sitting cushion, to prevent the occurrence of pressure ulcerations
C. Low sitting area, to facilitate chair guiding
D. Solid frame, to prevent falling

68. Which can be the most frequent diagnosis in the case of young gymnasts who suffer of chronic back pain?

A. Spondylosis
B. Spondylolysis
C. Spondylitis
D. Spondylolisthesis

69. The neurological examination of a patient with spinal cord lesion on T6 level, does not feature the presence of motor function under T6 level, but it indicates a decreased sensory function in the sacral segments. This patient, according to ASIA scale, shows a medullary impairment degree of the following level:

A. A
B. B
C. C
D. D

70. On which medullary segment level are the spinal cord lesions encountered in elderly patients?

A. Cervical
B. Superior thoracic
C. Inferior thoracic
D. Lumbosacral

71. According to Asia scale, which is the key muscle which defines an L4 level medullary lesion?

A. Long peroneal
B. Long extensor of the hallux
C. Vastus medialis
D. Anterior tibialis

72. What type of aphasia is characterized by non-fluent speech, intact capacity to repeat and intact understanding?

A. Broca
B. Transcortical motor
C. Wernicke
D. Transcortical sensory

73. Based on genetic susceptibility, there is high association between cranio-cerebral traumatisms and:

A. Hydrocephaly with normal pressure
B. Multiple sclerosis
C. Multiform glioblastoma
D. Alzheimer's disease

74. According to Asia scale, which is the key muscle which defines an L3 level medullary lesion?

A. Long peroneal
B. Long extensor of hallux
C. Femoral quadriceps
D. Anterior tibialis

75. According to Asia scale, which is the key muscle which defines an L5 level medullary lesion:

A. Short peroneal
B. Long extensor of hallux

C. Femoral quadriceps
D. Posterior tibialis

76. According to Asia scale, which is the key muscle which defines an S1 level medullary lesion?
A. Triceps surae
B. Right anterior
C. Femoral quadriceps
D. Anterior tibialis

77. According to Asia scale, which is the key muscle which defines an L2 level medullary lesion?
A. Triceps surae
B. Sartorius
C. Femoral biceps
D. Iliopsoas

78. According to Asia scale, which is the key muscle which defines a C5 level medullary lesion?
A. Brachial biceps
B. Brachial
C. Brachial triceps
D. Deltoid

79. According to Asia scale, which is the key muscle which defines a C6 level medullary lesion?
A. Short ulnar extensor of carpus
B. Long ulnar extensor of carpus
C. Long radial extensor of carpus
D. Short radial extensor of carpus

80. According to Asia scale, which is the key muscle which defines a C7 level medullary lesion?
A. Brachial biceps
B. Brachial triceps
C. Brachial
D. Brachioradialis

81. According to Asia scale, which is the key muscle which defines a C8 level medullary lesion?
A. Profound flexor of fingers
B. Superficial flexor of fingers
C. Flexor of medius finger
D. Flexor of small finger

82. According to Asia scale, which is the key muscle which defines a T1 level medullary lesion?
A. Profound flexor of fingers
B. Superficial flexor of fingers
C. Thumb abductor
D. Small finger abductor

83. According to Asia scale, which is the key point which defines a T1 level medullary lesion?
    A. Ulnar side of antecubital fossa
    B. Radial side of antecubital fossa
    C. Ulnar side of antero-radial fossa
    D. Radial side of antero-radial fossa

84. According to Asia scale, which is the key point which defines a T2 level medullary lesion?
    A. Ulnar side of antecubital fossa
    B. 5^{th} intercostal space (in the middle between T4 and T6)
    C. Tip of the axilla
    D. 3^{rd} intercostal space

85. According to Asia scale, which is the key point which defines a T3 level medullary lesion?
    A. 4^{th} intercostal space
    B. 5^{th} intercostal space (in the middle between T4 and T6)
    C. 6^{th} intercostal space (at xiphoid appendix level)
    D. 3^{rd} intercostal space

86. According to Asia scale, which is the key point which defines an L2 level medullary lesion?
    A. Middle of the thigh on anterior face
    B. Middle of the thigh on posterior face
    C. Middle of the thigh on lateral face
    D. Middle of the thigh on medial face

87. According to Asia scale, which is the key point which defines an L3 level medullary lesion?
    A. Lateral femoral condyle
    B. Medial femoral condyle
    C. Patella
    D. Lateral malleolus

88. According to Asia scale, which is the key point which defines an L4 level medullary lesion?
    A. Lateral femoral condyle
    B. Tibial tuberosity
    C. Medial malleolus
    D. Lateral malleolus

89. According to Asia scale, which is the key point which defines an S1 level medullary lesion?
    A. Lateral side of calcaneus
    B. Medial side of calcaneus
    C. Medial malleolus
    D. Lateral malleolus

90. According to Asia scale, which is the key point which defines an S2 level medullary lesion?
    A. Medial femoral condyle
    B. Lateral femoral condyle
    C. Popliteal fossa on medial line
    D. Popliteal fossa on lateral line

91. According to Asia scale, which is the key point which defines an S3 level medullary lesion?
    A. Medial femoral condyle
    B. Popliteal fossa on medial line
    C. Ischial tuberosity
    D. Tibial tuberosity

92. According to Asia scale, which is the key point which defines a T10 level medullary lesion?
    A. 11^{th} intercostal space
    B. 10^{th} intercostal space
    C. 9^{th} intercostal space
    D. Umbilicus

93. According to Asia scale, which is the key point which defines a C2 level medullary lesion?
    A. Occipital protuberance
    B. 3^{rd} intercostal space
    C. Supraclavicular fossa
    D. Acromion

94. According to Asia scale, which is the key point which defines a C3 level medullary lesion?
    A. Occipital protuberance
    B. Menton
    C. Supraclavicular fossa
    D. Acromion

95. According to Asia scale, which is the key point which defines a C4 level medullary lesion?
    A. Occipital protuberance
    B. Superior side of the acromioclavicular joint
    C. Supraclavicular fossa
    D. Lateral side of the antecubital fossa

96. According to Asia scale, which is the key point which defines a C5 level medullary lesion?
    A. Medial side of antecubital fossa
    B. Superior side of the acromioclavicular joint
    C. Radial side of antecubital fossa
    D. Lateral side of the antecubital fossa

97. According to Asia scale, which is the key point which defines a C6 level medullary lesion?
    A. Thumb
    B. Index finger
    C. Medius
    D. Navicular

98. According to Asia scale, which is the key point which defines a C7 level medullary lesion?
    A. Thumb
    B. Index finger
    C. Medius
    D. Small finger

99. According to Asia scale, which is the key point which defines a C8 level medullary lesion?
    A. Thumb
    B. Index finger
    C. Medius
    D. Small finger

100. The medullary syndrome, which occurs in elderly individuals and which features important degenerative disc modifications, accompanied by loss of yellow ligaments elasticity, completed with vascular manifestations, is:
    A. Anterior medullary syndrome
    B. Central medullary syndrome
    C. Posterior medullary syndrome
    D. Medullary cone syndrome

Correct answers:

1. A; 2. C; 3. A; 4. C; 5. A; 6. A,B,C; 7. B,C; 8. A,B,C; 9. A,C; 10. C; 11. B,C,D; 12. A,B,C; 13. C; 14. A,B,C; 15. C,D; 16. A,C; 17. B,C; 18. B,C; 19. A,B,D; 20. C,D; 21. A; 22. C,D; 23. C; 24. A,B,D; 25. B,D; 26. C; 27. B,C; 28. C; 29. C; 30. A,C; 31. B,C; 32. B,D; 33. D; 34. C; 35. A,C; 36. C,D; 37. B,C,D; 38. A,D; 39. A,B,D; 40. A; 41. B; 42. D; 43. C; 44. C; 45. A; 46. B; 47. C; 48. A,C; 49. B,C,D; 50. A,B,C; 51. B; 52. A; 53. A; 54. B,C,D; 55. C,D; 56. B,C; 57. A,B,D; 58. A,B,C; 59. A,B; 60. B,C,D;61. A,C,D; 62. C; 63. A; 64. D; 65. A; 66. A; 67. C; 68. B; 69. B; 70. A; 71. D; 72. B; 73. D; 74. C; 75. B; 76. A; 77. D; 78. A,B; 79. C,D; 80. B; 81. A,C; 82. D; 83. A; 84. C; 85. D; 86. A; 87. B; 88. C; 89. A; 90. C; 91. C; 92. B,D; 93. A; 94. C; 95. B; 96. C,D; 97. A; 98. C; 99. D; 100. B.

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PHYSIOTHERAPY IN PEDIATRIC DISORDERS

1. Stage 1 (0–3 months), is:
    A. Movements without purpose and effect, strongly subordinated to the primitive posture tone reflexes
    B. Disorganized movement stage, subordinated to primitive reflexes
    C. Uncoordinated movement stage, subordinated to monosynaptic reflexes

2. At 3 months, the baby can maintain:
    A. Ventral decubitus without support on upper limbs
    B. Lateral decubitus with forearm support
    C. Ventral decubitus with forearms support and tight fists

3. The progression of extensor muscles' tone is as follows:
    A. Spine, head, hips
    B. Head, spine, hips cap,
    C. Hips, spine, head

4. At 5 months, the extensors' tone increase determines the occurrence of:
    A. Labyrinthine and posture reflexes
    B. Righting and gait reflexes
    C. Landau reflex

5. At 6 months:
    A. The child can sit without support
    B. The child sits supported by pillows
    C. The child walks on all fours.

6. Monosynaptic medullary reflexes:
    A. Do not contain intercalary neurons
    B. Contain a single intercalary neuron
    C. Contain several intercalary neurons

7. The medullary reflex act is:
    A. The motor receptor's excitation response from the spinal cord anterior horn, determining an action potential
    B. The physiological process which occurs on the medullary reflex arc trajectory
    C. It represents the reaction of the body to the excitation, with spinal cord participation

8. A reflex movement is made up of:
   A. Excitation of the sensitive reflex center, excitation of the motor nerve and excitation of the sensitive nerve with the trigger of the reflex response
   B. Excitation of the sensitive nerve, excitation of the intermediary reflex center, excitation of the motor nerve and the reflex movement which accompanies it
   C. Excitation of the reflex center, followed by the excitation of the motor nerve with the trigger of the reflex movement

9. The law of one-sidedness refers to:
   A. Response to stimulus of the ipsilateral segment
   B. Response of the upper and lower limb on the same side
   C. Response of the limb opposite to the stimulus

10. The reflex laws are:
   A. One-sidedness law, Symmetry law/longitudinal irradiation
   B. Contralateral irradiation law, Generalization law
   C. All or nothing law, One-sidedness law, Symmetry law/longitudinal irradiation, Contralateral irradiation law, Generalization law

11. Reflexes
   A. Subconscious, automatic responses to changes on the inside or outside of the body
   B. Reactions gained during the lifespan which exhibit the same stereotype response to various stimuli
   C. Involuntary, unsystematized responses of the human body, exhibited in well determined circumstances, responsible only for automatic action

12. Reflex arc
   A. The most complex neuronal pathway, formed of a minimum number of neurons, which involves, in order, the following structures: muscles, afferent pathway (sensitive neuron), receptor, interneuron, efferent pathway (motor neuron)
   B. The simplest neuronal pathway, formed of a minimum number of neurons, which involves, in order, the following structures: receptors, afferent pathway (sensitive neuron), interneuron, efferent pathway (motor neuron), muscles
   C. The simplest neuronal pathway

13. The stimulation of the motor neurons from the muscle spindles, determining the contraction of the elongated muscle, defines:
   A. Golgi tendon reflex
   B. Flexion reflex
   C. Stretch reflex

14. The flexion reflex:
   A. Is a polysynaptic defense reflex

B. Is a stretch and defense reflex
C. Is a monosynaptic defense reflex

15. Neuromuscular spindles:
A. Are non-contractile and act as receptors
B. Are made up of intrafusal muscle fibers which do not contain actin and myosin in the central region (they are non-contractile and act as receptors)
C. Are intrafusal muscle fibers which contain actin and myosin in the central region (they are non-contractile and act as receptors) and Golgi tendon organs

16. Babinski reflex
A. Hallux flexion and toes abduction, as a response to a painful stimulus in the sole
B. Toes extension and hallux abduction, as a response to a plantar cutaneous excitation
C. Hallux extension and toes abduction, as a response to a plantar cutaneous excitation

17. Cutaneous superficial reflexes are:
A. Cremasteric reflex
B. Abdominal reflex
C. Plantar flexion reflex

18. The nervous centers which control primitive reflexes are:
A. Cerebellum
B. Mesencephalon and basal ganglia
C. Brain stem

19. Out of the newborn general reflexes, we mention:
A. Tendon reflexes, Gallant reflex, tonic labyrinthine reflexes
B. Babinski, Babkin, parachute, Landau, flexion reflexes
C. Ready to jump reflex, Landau reflex, stepping over an obstacle reflex, symmetrical and asymmetrical cervical reflexes

20. The cerebral cortex has the role to:
A. Inhibit primitive reflexes and integrate them in more functional, postural and voluntary motor responses
B. Protect and maintain the newborn primitive reflexes, to ensure survival
C. Activate and inhibit the newborn reflexes, according to the environmental stimuli

21. The following reaction: fast abduction and extension of arms with palm opening, back muscles tensioning, lower limbs flexion and crying, and, after a few moments, the upper limbs return into flexion and adduction, near the body, defines which reflex?
A. Landau
B. Moro
C. Babinski

22. The neck's asymmetrical tone reflex
    A. Head rotation to one side determines the flexion of the upper limb on the same side and the flexion of the lower limb on the opposite side
    B. Head rotation to one side determines the flexion of the limbs on the same side and the extension of the limbs on the opposite side
    C. Head rotation to one side determines the extension of the limbs on the same side and the flexion of the limbs on the opposite side

23. The neck's asymmetrical tone reflex is not noticed after:
    A. 6 months
    B. 4 months
    C. 8 months

24. Head extension determines the extension of upper limbs and the flexion of lower limbs
    A. Flexion reflex
    B. Neck's asymmetrical tone reflex
    C. Neck's symmetrical tone reflex

25. The decrease of deep tendon reflexes occurs in:
    A. Lesions of the reflex arc,
    B. Supraacute lesions of the pyramidal system (flaccid phase)
    C. Extrapyramidal lesions

26. Cervical symmetrical tone reflexes:
    A. Are produced by head rotation and lateral flexion and head rotation and extension
    B. Are produced by head lateral rotation
    C. Are produced by head flexion and extension

27. The parachute reflex:
    A. Occurs at 6 months and disappears at 9 months
    B. Occurs at approx. 6–9 months and persists throughout the lifespan
    C. Consists in the upper limb extension, as defense action to loss of balance

28. Facial reflexes are:
    A. Nasal reflex
    B. Oculocephalic, blinking reflex
    C. Auditive reflex of orientation

29. Suckling reflex:
    A. It onsets at 28 weeks from birth, well established at 32–34 weeks from birth, disappears at 12 months
    B. It onsets at 28 weeks intrauterine, well established at 32–34 weeks intrauterine, disappears at 12 months
    C. It onsets at 28 weeks intrauterine, well established at 32–34 weeks from birth, disappears at 6 months

30. The cephalocaudal direction of neuro-motor development consists in:
    A. The child first develops torso control, grabbing, and then, rolling, crawling, sitting position, standing and walking
    B. The child first develops head control, and then, rolling, grabbing, sitting position, crawling, standing and walking
    C. The child first develops head control, rolling, torso control, quadrupedal gait, crawling, walking

31. The warning signs at 3 months are:
    A. Strong asymmetries, avoids/cries in ventral decubitus
    B. Arms are not in line with the shoulders
    C. Elbows are behind the shoulders, deficient visual control

32. Excessive hypotone/hypertone is a warning sign for the following age:
    A. 2 months
    B. 4 months
    C. 1 month

33. At 5 months, the warning signs are:
    A. Lack of antigravity flexion, lack of weight change
    B. Rolling in ventral decubitus by neck hyper-extension
    C. lack of weight change

34. From the point of view of scapular belt development, at 4 months, the child should:
    A. Hold the elbows in front of the shoulders
    B. Hold the elbows extended
    C. Hold the elbows behind the shoulders

35. Compensation development becomes obvious at the age of:
    A. 3 months
    B. 1 year
    C. 7 months

36. Sitting in W is a warning sign at the age of:
    A. 6 months
    B. 9 months
    C. 4 months

37. In normal motor development, the first antigravity component expressed is:
    A. Axial extension
    B. Axial flexion
    C. Physiological flexion

38. The compensation of abnormal neck hyper-extension is:
    A. Lateral head tilt, to stabilize the trunk
    B. Blocking the torso in hyper-extension, with blocking the head movements
    C. Raising the shoulders, which prevents the normal head movement and exaggerates the hyper-extension

39. Opening the mouth and, ultimately, the anterior projection of the jaw are consequences of:
    A. Hyper-tonia of anterior muscles of the torso, neck and head
    B. Maintaining the head in hyper-extension and the lack of taking the chin to the chest from sitting position
    C. Prolonged maintenance of the sitting position

40. The head and neck asymmetry is the consequence of:
    A. Maintaining the neck's asymmetrical tone reflex
    B. Maintaining the neck's symmetrical tone reflex
    C. Lack of the neck's symmetrical tone reflex

41. The lack of scapular stability can be compensated through:
    A. Prolonged use of primitive extension
    B. Stabilizing the humerus by fixing the trunk, in ventral decubitus
    C. Anterior projection of the upper limb, to stabilize and increase the support base

42. The forward pelvis tilt is:
    A. The result of lumbar extensor muscles' hypotonia
    B. The result of hip sprain, which keeps the pelvis in anteversion
    C. The result of lumbar spine hyper-extension and hip flexion

43. The backward pelvis tilt is initially accomplished by:
    A. Abdominal flexion, being accompanied by bilateral flexion, abduction and external rotation of the lower extremity in dorsal decubitus
    B. Hypertonia of trunk flexors and rotators, as well as head hyperextension
    C. Hypotonia of trunk extensors and hypertonia of trunk flexors, with posterior hip projection

44. Consequence of anterior hip tilt in all fours position:
    A. Maintains lordosis and ABD, RE and FL of lower limbs, meanwhile stabilizing the pelvis through active hip flexion
    B. Blocking the femur in FL, ADD, RI and posterior hip tilt and plasticity increase on ADD
    C. Maintains lordosis and ADD, RI and FL of lower limbs, meanwhile stabilizing the pelvis and hips through active hip flexion

45. In posterior pelvis tilt, the main problem seems to be:
    A. External femur rotation, with abduction and extension and knee flexion
    B. Head and lumbar spine hyper-extension, its posterior pelvis tilt
    C. Abnormal, excessive spine flexion, posterior pelvis tilt, hips and knees flexion

46. Plagiocephaly is:
    A. A medical condition characterized by the flattened base of the child's head
    B. A medical condition characterized by the flattened anterior part of the skull, as a result of prolonged ventral decubitus position
    C. A medical condition characterized by the flattened lateral side of the child's head

47. Dolichocephaly
    A. Occipitoparietal flattening
    B. Long, narrow skull, affects the occipitum
    C. Long, narrow skull, affects the temporal, parietal and frontal bones, and even the facial bones

48. Brachycephaly
    A. Cephalic index higher than 90
    B. Long, narrow skull, affects the occipitum
    C. Short skull, centrally flattened occipitum, widened

49. Plagiocephaly treatment/ prevention consists in:
    A. A longer period of time spent in ventral decubitus, a week of sleep with the head rotated to the right/ a week to the left
    B. Reducing the period of time spent in dorsal decubitus, in the car chair or in the stroller
    C. Torticollis intervention specific program

50. Torticollis
    A. Condition characterized by the SCM muscle's involuntary contraction, accompanied by head rotation towards the affected side and tilt to the opposite side
    B. Condition characterized by the SCM muscle's involuntary contraction, accompanied by head rotation towards the affected side and tilt to the opposite side
    C. Condition characterized by the SCM muscle's involuntary contraction, accompanied by head tilt to the shortened side and its rotation to the opposite side

51. Congenital torticollis can be noticed since:
    A. The 2nd month of life
    B. 2nd–3rd week of life
    C. Birth

52. Assessment of the child with torticollis includes:
    A. Anamnesis, observation of posture and facial asymmetries
    B. Anamnesis, primitive reflexes, biological age vs. chronological age, symmetric and asymmetric cervical reflexes
    C. Muscle strength, neck mobility, motor performance, postural reactions

53. Spasmodic torticollis is generated by:
    A. Affectation of SCM intrauterine/ at birth, specific head position in lateral FL on the same side and rotation to the opposite side

B. Hyperkinetic dystonia type muscle contracture, determining a distorted, pathological posture, expressed by forced turning or bending of the head
C. Orthopedic or neurological lesions which can occur at the cervical spine level

54. Ocular torticollis
A. Rarely occurs before the age of 18 months
B. Is not influenced by the covering of any eye
C. Occurs during the first 6 months after birth

55. Congenital torticollis
A. Occurs during the first 6 months after birth
B. Is not influenced by the covering of any eye
C. Passive or active straightening of the head is difficult or impossible

56. Unlike congenital torticollis, in the case of ocular torticollis, the following can be noticed
A. The head can be easily straightened passively or actively, and even turned to the opposite side
B. Diplopia when straightening the head or bending it to the opposite side
C. The head straightens when the paretic eye is covered, except when secondary skeletal changes occur

57. In retrocollis:
A. The head is bent towards the occiput side
B. The head is forced flexed
C. The head is forced extended

58. In laterocollis
A. The head is bent towards the occiput side
B. The head is forced flexed
C. The head is forced extended

59. In anterocollis
A. The head is bent towards the occiput side
B. The head is forced extended
C. The head is forced flexed

60. In the child suffering of torticollis, the following can be noticed:
A. Specific head position, permanent turning of the head towards one armpit, a hard protrusion on the SCM muscle
B. Inability or lack of desire to turn the head to one side, raised shoulder on one side
C. Tendency to hold the head in an angle, so they can look forward

61. In the child suffering of torticollis, the following can occur in compensation:
A. Congenitally crooked leg
B. Scoliosis
C. Compensatory genu valgum

62. In the child suffering of torticollis, the motion range testing is made for:
    A. Head and torso and upper limbs rotation and lateral flexion
    B. Head rotation and lateral flexion – with the help of the arthrodial protractor
    C. Head flexion and extension, as well as torso rotation

63. Testing muscle strength with the Scale implies:
    A. Holding the baby horizontally suspended at torso level, without head support, and estimating the degree of lateral raise according to MFS
    B. Holding the position for 5 sec., for each level, to get the score
    C. Holding the baby vertically suspended at axillary level, without head support, and estimating the degree of lateral raise according to MFS

64. At the age of 2 months, a healthy baby will:
    A. Reach level 1 of muscle strength scale, both on the left and on the right side
    B. Reach level 3 of muscle strength scale, both on the left and on the right side
    C. Reach level 1 of muscle strength scale, only on one side

65. Factors such as muscle tone, muscle strength imbalance, abnormal postural patterns, lack of cervical mobility, secondary fascial restrictions, can delay the acquiring of certain abilities such as:
    A. Turning the head towards the involved side, stretching the upper limb towards the ipsilateral side
    B. Changing the torso weight load, crawling/sitting/ transition moves from one position into another
    C. Rolling, ventral decubitus with support on forearms/arms

66. In the child with torticollis, the immobilization of the cervical area lead to:
    A. Injury of the lumbar plexus
    B. Torso rigidity and asymmetrical motor development
    C. Scoliosis

67. Testing the motor performance of a child with torticollis must include:
    A. Head control, head and torso posture
    B. Postural tone, flexibility/ strength fine and gross motor abilities
    C. Reflexes, recovery reactions

68. In the child with torticollis, the assessment of postural reactions includes the assessment of 3 response groups:
    A. Primitive postural reflexes
    B. Head straightening reactions, protective reactions
    C. Balance reactions

69. The complete response of the recovery reaction is:
    A. Protective support reaction
    B. Head alignment to the vertical line and of the mouth on the vertical line
    C. Upper and lower limbs alignment, in relation to the head

70. The complete response of the rotational recovery reaction is:
    A. Returning of body parts to the normal alignment after the rotation of a body segment
    B. Head alignment to the vertical line and of the mouth on the vertical line
    C. Arms extension in the direction in which the body is destabilized

71. Children with torticollis
    A. Will be incapable to raise their heads laterally towards the unaffected side and will react excessively by raising their heads laterally towards the affected side
    B. The trunk response will be absent in the postural reactions on the affected side
    C. Will have difficulties in actively rotating their heads towards the affected side

72. The therapeutic protocol in the case of the child with torticollis comprises:
    A. Massage, SCM stretching, active and passive neck and torso movements
    B. Exercises to tone the torso and neck muscles, antigravity exercises, visual exercises to promote the active head rotation
    C. Positioning and maneuvering the child to improve symmetry and promote the head movements towards the mid line, recovery reactions/postural education

73. The manual stretching of the neck muscles is performed in the following order:
    A. Rotation, lateral flexion and then for flexion/extension
    B. Lateral flexion, then for rotation and then for flexion/extension
    C. Lateral flexion, flexion/extension and then for rotation

74. For lower torso rotation (guided rolling):
    A. The upper and lower limbs are used to guide the movement of passing from dorsal decubitus into lateral decubitus and then into ventral decubitus on both sides
    B. The scapular belt is used to guide the movement of passing from dorsal decubitus into lateral decubitus and then into ventral decubitus on both sides
    C. The pelvis is used to guide the movement of passing from dorsal decubitus into lateral decubitus and then into ventral decubitus on both sides

75. In the child with torticollis, the exercises on the ramp or pillow from ventral decubitus:
    A. Encourage head/neck rotation and extension
    B. Facilitate the increase of cervical spine mobility
    C. Facilitate the loading of upper torso weight

76. In the child with torticollis, the visual exercises encourage:
    A. Disappearance of diplopia and ocular torticollis amelioration
    B. The promotion of following to the right-left side with the eyes, with fluent movements, using objects which stimulate seeing and hearing
    C. Following objects with the eyes in all positions specific to the neuro-motor development stages: dorsal, lateral, ventral decubitus, all fours, supported sitting, independent sitting, standing

77. In the child with torticollis, the time spent in ventral decubitus during play, by using an inclined plane, allows:

A. The assistance of neck and back muscles' development
B. Toy manipulation
C. Loading the weight on limbs in ventral decubitus

78. For the transportation of the child with torticollis:

A. The child will be positioned with his/her back to the carrier, with the ear on the side opposite to torticollis supported on the carrier's forearm, the forearm of other upper limb will be placed between the child's legs and the hand will support the body
B. The child will be positioned with the face towards the carrier, in lateral decubitus, with the ear from the side with torticollis supported on the carrier's forearm

79. Adjusting the environment for the child with torticollis implies:

A. Positioning the child in a chair/ changing table so as the activities in the room would challenge the child to look towards the side with torticollis
B. Placing the toys on the side with torticollis, so as the child would look at them and reach for them towards the side with torticollis
C. Positioning the child in a chair/ changing table so as the activities in the room would challenge the child to look towards the side opposite to torticollis

80. When the child is picked up from the floor, from the stroller or the changing table:

A. The child is rolled towards the side with torticollis and then picked up
B. The child is rolled towards the side opposite to torticollis and then picked up
C. The child is picked up and then rolled on the side with torticollis

81. The brachial plexus is:

A. A network of nerves C5–T1, which ensure movement and sensitivity on shoulder, arm and hand level
B. A network of nerves C5–T1, , which ensure movement and sensitivity on shoulder, arm and hand level and the sympathetic innervation of the skin and blood vessels at this level
C. A network of nerves C2–T2, which ensure the motor, sensitive and vegetative innervation of the fingers and fist, as well as the innervation of the neck and occipital area

82. Avulsion is:

A. The nerve is ruptured, but not at spinal cord level, being considered the most serious type of brachial plexus lesion
B. Lesions which cause fibrous tissue, which compresses the nerve, with good healing chances
C. A nerve is pulled at the spinal cord level, being considered the most serious type of brachial plexus lesion

83. The upper limb position with the shoulder in ADD and RI; elbow extended and forearm pronated, is encountered in:

A. Erb paralysis
B. Klumpke paralysis
C. Erb-Duchenne-Klupke

84. The affectation of the first flexor muscles, fingers' long flexor, hand's intrinsic muscles, occurs in:

A. Erb paralysis
B. Klumpke paralysis
C. Erb-Duchenne-Klupke

85. To test the upper limb function in brachial plexus paralysis, the following is used:

A. The drawer test
B. The flexion test
C. The towel test

86. The rehabilitation protocol for brachial plexus includes:

A. Joint mobilization, active movement facilitation
B. Muscle toning, exercises with load
C. Sensorial awareness promotion, scapula stabilization, orthotics, games, taping

87. Stage 1 of the child's development is known as:

A. Stage 1 of flexion/ stage of disorganized movement
B. Stage 1 of extension/ stage of disorganized movement
C. Stage 1 of coordination

88. In the first stage of development, the following tone persists:

A. Of extension
B. Of flexion
C. Of rolling

89. The child must be able to hold the low doll posture at:

A. 5 months
B. 1 month
C. 4 months

90. For the rolling to be possible, the disappearance of the following is necessary

A. Extensors' tone
B. Cervical tonic reflexes
C. Posture reflexes

91. The Landau reflex becomes pathogenic after the age of :

A. 1 year
B. 6 months
C. 1.5 years

92. In the case of Lang Down syndrome,
    A. Instead of chromosome 21, instead of three, there are two chromosomes (trisomy)
    B. Instead of chromosome 21, instead of two, there are three chromosomes (trisomy)
    C. Instead of chromosome 23, instead of three, there are two chromosomes (trisomy)

93. The characteristic signs for Lang Down syndrome are:
    A. Big tongue and fallen mouth, mental retardation, muscle hypotonia
    B. Small stature, mongoloid facies, clamped eyes
    C. Ligamentary and articular hyperlaxity, poor balance, obesity

94. In children with Lang Down syndrome, the following activities for gross motility are indicated:
    A. Articular compression, exercises with the upper limb and lower limb, placing very small sacks of sand on the upper limb/lower limb
    B. Swinging from sitting on a Bobath ball, dragging some weights, walking on heels or various surfaces, jumping, climbing stairs up and down
    C. Swinging from sitting on a Bobath ball, walking on heels or various surfaces, long jumps from the spot, climbing stairs up and down, Castillio- Morales exercises, horse riding, articular compression, dancing

95. In children with Lang Down syndrome, the following activities for fine motility are indicated:
    A. Small, repetitive movements, grabbing small objects placed towards the mid line of the body
    B. Deep pressure massage and brushing of palms and soles
    C. Tracing some circles around the mouth with the thumb

96. The characteristics of the child with Down syndrome which can be influenced through physiotherapy are:
    A. Muscle hypotonia, ligamentary hyperlaxity, joint hypermobility
    B. Slight to moderate obesity, poorly developed respiratory and cardiovascular systems
    C. Poor balance, perception difficulties

97. Muscle hypotonia, ligamentary hyperlaxity and joint hypermobility favor the following:
    A. Joint dislocation or sub-luxation, hyperlordosis, kyphosis, flat foot, forward projected head, atlantoaxial instability
    B. Decrease of effort capacity
    C. Lack of coordination and sensitivity disturbance

98. The motility of the child with Down syndrome is tested through activities such as:
    A. Ozeretzki interdigital movements
    B. Rolling from one side to the other, passing from sitting in decubitus, climbing on a chair from the floor, then sitting on the chair
    C. Standing, independent walking, squatting – standing up in orthostatism

99. The physiotherapeutic objectives for the child with Down syndrome are:
    A. Muscle toning, practice of manipulation, prehension, resistance, coordination development
    B. Stimulation of locomotion techniques: rolling, crawling, standing up in orthostatism, passing over obstacles, throwing, catching
    C. Rehabilitation of uniform, staccato, diaphragmatic breathing, balance between inhaling and exhaling, breathing linked with speaking

100. Physiotherapy for the child with Down syndrome addresses the following:
    A. Active, global gait patterns of neuromotor reeducation
    B. Stimulation of return venous circulation
    C. Gross motor functions such as crawling, walking, kicking and cycling

101. Occupational therapy of the child with Down syndrome addresses the following:
    A. Muscle strength increase
    B. Movements of fine motility such as prehension, cutting and
    C. Joint mobility increase

102. For muscle toning, the exercises provide correct resistance:
    A. If the muscles become tired after 10–12 repetitions
    B. If the muscles become tired after 15–20 repetitions
    C. If the muscles become tired after 5–10 repetitions

103. So that the standing up-sitting on a 20 cm high chair exercise would be good:
    A. 20–25 repetitions must be done with good control before the exercise would become difficult
    B. 15–20 repetitions must be done with good control before the exercise would become difficult
    C. 10–12 repetitions must be done with good control before the exercise would become difficult

104. For maximum efficiency, the following rule is applied
    A. "25 repetitions before being tired", 3 sets of 10 repetitions, twice/week
    B. "10 repetitions before being tired", 3 sets of 10 repetitions, twice/week
    C. "10 repetitions before being tired", 3 sets of 15 repetitions, twice/week

105. In order to train the resistance of the child with Down syndrome:
    A. The activity should be adapted so as it could be done 20–30 times before tiredness onset
    B. The activity should be adapted so as it could be done 30 times before tiredness onset
    C. The activity should be adapted so as it could be done 30–50 times before tiredness onset

106. The gross motility in the new-born is stimulated through:
    A. Vigorous general massage, with light pressure for the deep skeletal muscles
    B. Longer sessions in ventral decubitus
    C. The child is laid on a towel or blanket, the edges of the towel are lifted, to stimulate the baby to grab it/ to pass in sitting position (in 5–6 months old babies)

107. The child signals that he is ready to crawl:
    A. When he can stand in all fours
    B. When he is capable to sit unsupported
    C. When swimming movements occur, at approx. 9 months

108. Gross motility in older children with Down syndrome is stimulated through:
    A. Joint compression, dragging some weights
    B. Very small sand bags placed on the upper limbs/ lower limbs and the child is helped to raise the limbs
    C. Swinging from sitting position on the Bobath ball, walking on heels

109. For the sensorial stimulation of the child with Down syndrome, the followings are used:
    A. Household activities, activities with both hands
    B. Swinging and balance exercises, wrapping the body in a blanket
    C. Exercises with small weights

110. To exercise fine motility:
    A. Stretching exercises
    B. Small, repetitive moves which allow us to write, grab small objects, type on the computer
    C. Polymetric and coordination exercises

111. Progressive muscular dystrophy:
    A. Manifests in both sexes and consists in replacing the muscle fibers with conjunctive or fatty tissue
    B. Manifests in girls and consists in replacing the muscle fibers with conjunctive or fatty tissue
    C. Manifests in boys and consists in replacing the muscle fibers with conjunctive or fatty tissue

112. In progressive muscular dystrophy:
    A. The affectation is symmetrical, the main symptom is the muscle strength deficit, the small muscles and small joints are affected first
    B. The affectation is symmetrical, the main symptom is the muscle strength deficit, the scapular girdle and the pelvic girdle are the first affected
    C. The affectation is asymmetrical, the main symptom is joint hyperlaxity and muscle pain, the scapular belt and the upper limbs' joints are the first affected

113. The characteristic sign of progressive muscle dystrophy is:
    A. Gower sign
    B. Muscular dystrophy
    C. The drawer sign

114. The general objectives of physiotherapy in progressive muscular dystrophy are:
    A. Stabilization and keeping the functional level and state, readjustment to the new locomotion and daily living conditions

B. Avoiding the occurrence of muscle contractures and vicious attitudes, respiratory education and reeducation, avoiding muscle degradation towards atrophy
C. Limiting inactivity during the day, training the joints through passive movements if the child reached the stroller, rebalancing of agonist-antagonistic muscles

115. Other signs of progressive muscular dystrophy:
A. Delayed neuromuscular development, muscular pseudohypertrophy of the shank and deltoid
B. Difficult start, "swaying" walk, tendency to fall, joint stiffness
C. Muscle pain/ muscle asthenia, muscle contractures

116. Warning signs regarding progressive muscular dystrophy
A. Muscular weakness at face level, difficult deglutition/ food suction
B. Inability to close the eyes, to whistle, difficulty in climbing stairs
C. The sign "slides through the fingers"

117. In progressive muscular dystrophy, stretching is made:
A. For the postural muscles and cervical area
B. Regularly for ankle, knee, hip and in advanced stages, stretching for the upper limbs – especially fingers, fist, elbow, shoulder
C. 4–6 times per week

118. The submaximal (easy), functional activities for muscle strengthening consist in:
A. Exercises in the pool, games, recreational exercises in community
B. Exercises with heavy weights
C. Aerobic exercises (they have the role to reduce body fat accumulation, to reduce cardiovascular risks)

119. In training the children with progressive muscular dystrophy, the followings are not indicated:
A. High resistance exercises
B. Excentric exercises
C. Stretching exercises

120. In children with progressive muscle dystrophy, the flexibility exercises are for:
A. Hip extensors, elbow extensors, shoulder extensors, dorsiflexors
B. Hand and fist extensors, back extensors
C. Shoulder flexors and extensors, elbow flexors, plantar flexors, intrinsic hand flexors, knee flexors, hip flexors

121. Spina bifida is:
A. A congenital abnormality of the new-born manifested by cerebrospinal fluid accumulation at spinal cord level, forming a cyst which presses on the spinal cord, leading to the occurrence of neurological disorders, the spinal cord portion in this area can have an abnormal development or can be affected

B. A congenital abnormality of the new-born manifested by the absence of posterior vertebral arcs closing over the spinal cord (medullary canal), the spinal cord portion in this area can have an abnormal development or can be affected
C. A congenital abnormality of the new-born manifested by the lack of cerebrospinal fluid, distruction of intervertebral discs with pressure on the spinal cord, leading to the occurrence of neurological disorders

122. Forms of spina bifida aperta are:
A. spina bifida oculta and myelomeningocele
B. myelomeningocele
C. meningocele

123. Spina bifida oculta affects:
A. Only the bone structures which cover the spinal cord, being noticeable the presence of a hairy portion or of a swelling; usually, there are no clinical manifestations
B. Bone structures which cover the spinal cord, being noticeable the presence of a swelling which contains only cerebrospinal fluid, without nervous elements; usually, there are no clinical manifestations
C. Bone structures which cover the spinal cord, being noticeable the presence of a swelling which contains cerebrospinal fluid and nervous elements/it can be open or covered with skin; causes permanent disability which can vary from medium to severe

124. Spina bifida meningocele affects:
A. Only the bone structures which cover the spinal cord, being noticeable the presence of a hairy portion or of a swelling; usually, there are no clinical manifestations
B. Bone structures which cover the spinal cord, being noticeable the presence of a swelling which contains only cerebrospinal fluid, without nervous elements; usually, there are no clinical manifestations
C. Bone structures which cover the spinal cord, being noticeable the presence of a swelling which contains cerebrospinal fluid and nervous elements/it can be open or covered with skin; causes permanent disability which can vary from medium to severe

125. Spina bifida myelomeningocele
A. Affects only the bone structures which cover the spinal cord, being noticeable the presence of a hairy portion or of a swelling; usually, there are no clinical manifestations
B. Affects the bone structures which cover the spinal cord, being noticeable the presence of a swelling which contains cerebrospinal fluid and nervous elements
C. It can be open or covered with skin; causes permanent disability which can vary from medium to severe

126. Muscular hypotonia in spina bifida can be:
A. Spastic, if the spinal cord is damaged down from spina bifida
B. Spastic, if the spinal cord is damaged up from spina bifida and flaccid, if the spinal cord is abnormally formed up from spina bifida
C. Flaccid if the spinal cord is abnormally formed under the spina bifida level

127. Except muscle hypotonia, spina bifida is also manifested through:
    A. Muscle contractures, severe mobility limitations
    B. Hip luxation, obesity, sensitivity disorders, lack of bladder and annal sphincter control
    C. Learning difficulties, allergy to latex, vertebral statics disorder

128. The vertebral statics disorders encountered in spina bifida are:
    A. Exclusively scoliosis
    B. Kyphosis, scoliosis, hyperlordosis
    C. Only kyphosis and hyperlordosis

129. The Arnold Chiari malformation is
    A. A rare condition in which the spinal cord cells reach the posterior area of the brain and cerebellum, determining the occurrence of an occipital protuberance
    B. A rare condition, but common in children with spina bifida oculta, in which the cells from the posterior area of the brain and cerebellum reach into the spinal canal from the neck area
    C. A rare condition, but common in children with myelomeningocele, in which the cells from the posterior area of the brain and cerebellum reach into the spinal canal from the neck area

130. This condition may lead to:
    A. Spinal cord compression, determining a variety of symptoms such as difficulties in eating, deglutition, breathing; chocking, limbs' rigidity
    B. Spinal cord compression, determining a variety of symptoms such as hemiparesis or tetraparesis, seeing disorders, facial hemiparesis
    C. Spinal cord compression, determining a variety of symptoms such as difficulties in eating, chocking, hemiparesis or tetraparesis, seeing disorders

131. Congenital hydrocephalus
    A. Cells' migration from the posterior area of the head and cerebellum into the spinal canal and accumulation of cerebrospinal fluid at brain level
    B. Cells' migration from the posterior area of the head and cerebellum into the spinal canal
    C. Excessive accumulation, at brain level, of cerebrospinal fluid, present at birth

132. The symptoms of hydrocephalus are:
    A. Increased cranial diameter, a full, soft and compact portion on the child's head
    B. Prominent veins on scalp level
    C. Irritability, sleepiness, convulsions, vomiting

133. A characteristic sign of hydrocephalus is:
    A. Eyelid ptosis
    B. Strabismus
    C. Sun setting of the eyes

134. In the child with spina bifida, the motor disability occurs:
    A. In the body parts situated under the localization level of spina bifida
    B. In the body parts situated above the localization level of spina bifida
    C. In the body parts situated above and under the localization level of spina bifida

135. If spina bifida is localized at the thoracic spine level:
    A. The children will not stand on their own, for standing, he will need splints and crutches, wheelchair to move around
    B. They will develop bone malformations: kyphosis, scoliosis, hip luxations, contractures at the knee level, crooked leg
    C. They will not stand on their own , they need crutches and harness for walking, will probably need a wheelchair; will develop bone deformities: hip luxations, crooked leg, contractures at the knee level, urinary and fecal incontinence

136. If spina bifida is localized at the upper lumbar spine level (L1 – L3):
    A. The children will not stand on their own, they need crutches and harness for walking, will probably need wheelchair; suffer of urinary and fecal incontinence
    B. They will develop bone malformations: hip luxations, crooked leg, contractures at the knee level
    C. The children will have the possibility to move around, but with help, will need harness, they may need wheelchair; bone deformities: hip contracture in flexion, hip luxation, crooked leg, talus valgus, urinary incontinence

137. If spina bifida is localized at the mid lumbar spine level (L3 – L4)
    A. The children might have the possibility to move around, but with help, they need harness for walking, will probably need wheelchair; hip contracture in flexion, hip luxation, crooked leg, talus valgus, urinary incontinence
    B. They will stand in orthostatism in time, walking may be delayed, they may need harness for walking, but not crutches; bone deformities: crooked leg, deformities of the leg and toes; they may be able to control bowel and bladder voidings
    C. The children will not stand on their own, for orthostatism, he will need splints and crutches, wheelchair to move around, bone deformities: kyphosis, scoliosis, hip luxations, contractures at the knee level, crooked leg

138. If spina bifida is localized at the lower lumbar spine and sacrum (L5 – S1 – S5):
    A. The children might have the possibility to move around, but with help, they need harness for walking, they may not need a wheelchair; bone deformities: hip contracture in flexion, hip luxation, crooked leg, talus valgus, urinary incontinence
    B. They will stand in orthostatism in time, walking may be delayed, they may need harness for walking, but not crutches, they may be able to control bowel and bladder voidings
    C. They will develop bone deformities: crooked leg, leg and toes' deformities

139. Surgery in hydrocephalus consists in:
    A. Extraction of cerebrospinal fluid

B. Lobotomy
C. Introduction of a shunt to drain the cerebrospinal fluid

140. In the new-born with hydrocephalus, the following is assessed:
A. Presence of movement at joint level
B. Range of motion
C. Presence of sensitivity

141. An indicator of sensitivity assessment is:
A. Lack of movement or lack of reaction in the segment stimulated by pinching and stinging
B. Verbal indicator and crying, to see if the child reacts to touching: pinching and stinging
C. Facial aspect, crying, breathing and moving the respective segment, to see if the child reacts to touching: pinching and stinging

142. In the older child with spina bifida, the following will be assessed:
A. The progress in the child's development, the change of mobility and sensitivity at lower limb level
B. The progress in the child's development, the change of mobility and sensitivity at lower limb level; progression of the degree of contractures and deformities; changes in shape of the spine
C. Urinary and intestinal control related problems

143. Maintaining the ventral decubitus posture in the child with spina bifida:
A. It will be adopted with care, only under a specialist's direct supervision
B. It is a posture to be avoided in the physiotherapeutic management of the child with spina bifida because it increases lumbar lordosis, where spina bifida is mostly localized
C. It will encourage the child to raise his head from the bed, to reach out for toys, to roll and to support himself, first on the forearms and then on the extended upper limbs

144. Maintaining the sitting position, in purposeful activities:
A. It is a posture to be avoided because it increases lumbar lordosis and compression in the area where spina bifida is mostly localized
B. It helps improving balance in sitting, enhances the upper limbs' toning and the hand's motor control
C. It helps improving the gait and maintaining certain postures such as knight and low doll posture

145. The purpose of orthotics is to:
A. Allow the patient to function at a maximum level in relation to the existent neuronal lesion and with his intelligence; it provides a normal developmental progression;
B. Allow the patient to walk and participate in age related activities, reduce the energy used to maintain mobility
C. Increase muscle strength and motion range by promoting normal developmental progression and participating in age related activities

146. In cerebral palsy, the muscles of the upper limbs most sensitive to muscle retracture are:
    A. The longissimus dorsal, teres major, pectoral, flexor carpi radialis
    B. Brachial biceps, anterior brachial, brachioradial, pronator teres, pronator quadratus
    C. Palmaris longus, flexor carpi ulnaris

147. In cerebral palsy, the muscles of the lower limbs most sensitive to muscle retracture are:
    A. Rectus femoris, gracilis, tensor fascia lata, gluteus maximus, medius and minimus, femoral biceps, triceps surae, biceps femoris, triceps surae, gemellus muscles and soleus muscle
    B. Thigh adductors: long, short, pectineus, anterior thigh muscles
    C. Semitendinosus, semimembranosus and biceps femoris, triceps surae, gemelli and soleus muscle

148. The neuroproprioceptive facilitation techniques are:
    A. Vojta, Bobath, NPF, Kabat
    B. Kabat, NPF
    C. Castilio Morales, FNP, Kabat

149. The pyramidal syndrome is represented by:
    A. Infantile spastic hemiplegia, spastic diplagia
    B. Spastic paraplegia, spastic quadriplegia, monoplegia, triplegia
    C. Athetosis, pyramidal-extrapyramidal syndrome, cerebral stiffness syndrome

150. The kinetic objectives important in cerebral palsy are:
    A. Spasticity decrease, contracture and deformity prevention
    B. Reflex tonic activity inhibition or suppression, sensitivity and proprioception reeducation
    C. Motility development in its normal evolution sequences, balance reeducation

Correct answers:

A,B; 2. C; 3. B; 4. C; 5. A,B; 6. A; 7. B,C; 8. B; 9. A; 10. A,B; 11. A; 12. B,C; 13. C; 14. A; 15. A,B; 16. C; 17. A,B,C; 18. A,B,C; 19. A,B; 20. A; 21. B; 22. C; 23. A; 24. C; 25. A,B; 26. C; 27. B,C; 28. A,B,C; 29. B; 30. B; 31. A,B,C; 32. B; 33. A,B,C; 34. A; 35. C; 36. B; 37. A; 38. C; 39. B; 40. A; 41. A,B; 42. C; 43. A; 44. A; 45. C; 46. A,C; 47. B,C; 48. A,C; 49. A,B,C; 50. C; 51. B; 52. A,C; 53. B; 54. A; 55. A,B,C; 56. A,B,C; 57. C; 58. A; 59. C; 60. A,B,C;61. B; 62. B; 63. A,B; 64. A; 65. A,B,C; 66. B,C; 67. A,B,C; 68. B,C; 69. B; 70. A;71. A,B,C; 72. A,B,C; 73. B; 74. C;75. A,C; 76. B,C; 77. A,B,C; 78. A,B; 79. A,B; 80. B; 81. A,B; 82. C; 83. A; 84. B; 85. C; 86. A,B,C; 87. A; 88. A; 89. C; 90. B; 91. C; 92. B; 93. A,B,C; 94. A,B; 95. A,B,C; 96. A,B,C; 97. A; 98; 99. A,B,C ; 100. A,C; 101. B; 102. A; 103. C; 104. B; 105. A; 106. A,B,C; 107. C; 108. A,B.C; 109. A,B; 110. B; 111C; 112. B; 113. A; 114. A,B,C; 115. A,B.C; 116. A,B,C; 117. B,C; 118. A,C; 119. A,B; 120. C;121. B; 122. B,C; 123. A; 124. B; 125. B,C; 126. A,C; 127. A,B,C; 128. B; 129. C; 130. A; 131. C; 132. A,B,C; 133. C;134. A; 135. A,B; 136. A,B; 137. A; 138. B,C; 139. C; 140. A,B,C; 141. C, 142. A,B,C; 143. C; 144. B; 145. A,B; 146. A,B,C; 147. B,C; 148. B; 149. A,B; 150. A,B,C.

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PHYSIOTHERAPY IN RHEUMATOLOGIC DISORDERS

1. How is the patient's first contact with the specialist named?
    A. Triage
    B. Direct contact
    C. Paraclinical examination
    D. Patient examination
    E. Lab examination

2. Examination may be:
    A. Subjective exam
    B. Segments' exam
    C. Superficial exam
    D. Objective exam
    E. Exam from distance

3. The subjective exam traces:
    A. The localization of suffering
    B. Pain irradiation
    C. Pain intensity
    D. Adjustment to pain
    E. Accompanying phenomena (warmth, redness)

4. The objective exam traces:
    A. General posture
    B. Segment posture
    C. Joint mobility
    D. Conditions of muscle contracture
    E. Pain in various central nervous system segments

5. Palpation traces:
    A. Muscle atrophy
    B. Articular changes
    C. Muscle spasms
    D. Pain
    E. Appetence or inappetence

6. The mobilization of a joint or segment traces:
    A. Objective sign of mobility
    B. Subjective sign
    C. Sign of functional impotence

D. Sign of joint anatomy modification
E. Sign of bone structure alert

7. The paraclinical exam traces:
A. Biological investigations
B. Detection of rheumatoid factors
C. Detection of sufferings at the level of other apparatuses and systems
D. Articular pain treatment
E. Muscle pain treatment

8. The imaging exam traces:
A. Localization of pain
B. Articular alerts
C. Muscular alerts
D. Neighboring organs' alerts
E. Blood composition alerts

9. Which are the imaging investigations used in rheumatology?
A. Radiography
B. Ultrasound
C. Arthrography
D. Mammography
E. ESR

10. The final evaluation traces:
A. Improvement of functional condition
B. Increase of patient's hypermobility
C. Recommendation of (kinetic) treatment at home
D. Patient's retirement
E. Need of surgery (if it is the case)

11. The principle "Primum non nocere!" in rheumatology:
A. Is applicable to any treatment form
B. Can be ignored
C. Is indifferent
D. Is translated by "rather than to harm him, better do not do anything to him"
E. Is not important for the patient's quality of life

12. Individualization of treatment:
A. Is important in treating rheumatic conditions
B. Is important in treating associated disorders
C. Is important in dosing effort
D. Corresponds to the principle "the disease is treated, not the illness"
E. Is based on group work (same exercises, same dosage)

13. Effort progressiveness and grading:
    A. Are applied according to the patient's tolerance to effort
    B. Take into consideration the patient's capacity to assimilate the kinetic program
    C. Refer to the physiotherapist's competences to treat the existing pathology
    D. Are not important in the kinetic program
    E. Are due to the shortening of the total treatment time compared to the increase of effort intensity

14. Which are the associated therapeutic means in the treatment of rheumatic disorders?
    A. Physiotherapeutic procedures
    B. Medicinal treatment
    C. Spirometry
    D. Chemotherapy
    E. Occupational therapy

15. Which are the kinetic objectives in rheumatology?
    A. Pain alleviation through relaxation at central nervous system and local level
    B. Emphasizing the effects of distress
    C. Reeducation of skin sensitivity
    D. Bowel transit improvement
    E. Formation of correct body posture reflex in statics/dynamics

16.The followings represent kinetic objectives in rheumatology:
    A. Effort training increase with monitoring the subjective parameters
    B. Muscle toning under circumstances of periarticular muscles shortening
    C. Muscle toning in acute/subacute periods
    D. Maintaining joint mobility in acute/subacute periods
    E. Maintaining normal muscle resistance in joints overlying and underlying the affected joint

17. The degenerative diseases of the spine affect:
    A. The blood
    B. The bone
    C. The intervertebral disc
    D. The periarticular soft tissues
    E. Teguments

18. In the degenerative diseases of the spine, the intervertebral disc destruction:
    A. Affects the nucleus pulposus (osteochondrosis, disc arthrosis)
    B. Increases as a result of water imbibing
    C. Affects the discs fibrous ring
    D. Affects the spinal cords grey matter
    E. Determines the ossification of the posterior longitudinal ligament

19. The intervertebral discs pathology refers to:
    A. Pain felt after child birth
    B. Cartilage metabolic abnormalities
    C. Loss of nucleus pulposus' imbibing power
    D. Heart rate increase in rest and effort
    E. Iliofemoral ligament inflammation

20. In disc hernia, acute phase, the following is recommended:
    A. Anakinetic treatment
    B. Cryotherapy
    C. Kinetic treatment to increase the torso's muscle strength
    D. Antalgic posturing
    E. Neuro-motor reeducation methods

21. In disc hernia, sub-acute phase, the following is recommended:
    A. Kinetic treatment with partial disc load
    B. Kinetic treatment to increase the torso's muscle resistance
    C. Underwater elongations
    D. Periarticular soft tissue stretching
    E. Therapeutic swimming in thermal water (over 37º C)

22. In disc hernia, chronic phase, the following is recommended:
    A. Local cryotherapy
    B. Anakinetic techniques
    C. Underwater elongations
    D. Periarticular soft tissue stretching
    E. Therapeutic swimming

23. Disc hernias:
    A. The most often encountered are the posterior-lateral ones
    B. Determine a disc-radicular mechanical conflict
    C. The ones with compression and radicular affectation are severe
    D. Of disc arthrosis type present motor and sensory deficit
    E. Without sensory deficit, require surgery

24. Cervical arthrosis:
    A. Is the degenerative rheumatic disease of the spine
    B. Is determined by the articular cartilage wearing
    C. Determines cervical disc arthrosis, with or without disc hernia
    D. Determines hydrocephalus
    E. Determines intervertebral ligaments' degeneration

25. Non-radicular chronic cervical pain:
    A. Is determined by incipient disc arthrosis plus posterior inter-apophyseal arthrosis
    B. Is clinically manifested through vertebral torticollis with bilateral neck tension
    C. Is clinically manifested through pain in the lower jaw and oral cavity
    D. Is clinically manifested through nape stiffness and "sand in the nape" sensation
    E. Influences the bilateral limitation of upper limbs movements

26. Stiffening acute cervical pain (vertebrogenic acute torticollis):
    A. Is determined by a disc protrusion plus posterior inter-apophyseal arthrosis
    B. Is clinically manifested through intense pain intense and one directional movement limitation
    C. Its evolution can be towards stiffening of the entire spine and sometimes of the belts
    D. Is produced by infectious factors (bacteria)
    E. Is contagious only through direct contact

27. In cervical-brachial neuralgia:
    A. The morphological substratum is muscular, determined by a partial rupture
    B. The morphological substratum is determined by a partial fracture of the spinal bodies
    C. Its clinical manifestations are of pain, which become worse when coughing, sneezing
    D. Its clinical manifestations consist in periods of feverishness
    E. Objectively, pain decrease is noticed at pressure on the vertex

28. In vertebral-basilar insufficiency:
    A. The morphological substratum is given by uncarthrosis
    B. The phenomena claimed by the patient are mostly objective: decrease of tegumentary sensitivity and decrease of muscle strength in the cervical area
    C. Objectively, a rough vestibular system is noticed
    D. Objectively, the patient claims paresthesia in the hands
    E. Visual acuteness decreases

29. Chronic Dorsarthrosis:
    A. Is manifested through inflammation of the anterior common ligament
    B. Is determined by an anterior disc hernia
    C. Is determined by a dorsal disc arthrosis or arthrosis of costotransverse and costovertebral joints
    D. Is clinically manifested through pain with irradiation in the ipsilateral lower limb
    E. Is found through a blood lab exam (ASLO and/or VSH)

30. Dorsalgo – stiffening acute dorsalgia:
    A. Is caused by disc protrusion and hernia in the thoracic area
    B. Is emphasized in the torso's torsion, head's flexion or upper limbs' raising movements
    C. Determines changes of the gait biomechanics (example – limping gait)
    D. Objectively, pain is noticed at spinous processes percussion or of the paravertebral muscles
    E. Determines respiratory disorders of obstructive type

31. Schmorl senile kyphosis:
    A. Is determined by thoracic veno-lymphatic circulatory disorders
    B. Has as morphological substratum the degeneration of the fibrous ring in the dorsal region
    C. Determines the anterior clamping of the discal space
    D. Determines anterior osteophytosis
    E. It is emphasized the reduction of "S" scoliosis

32. Disc arthrosis:
    A. Determines respiratory disorders of obstructive type
    B. Determines spine disorders of degenerative
    C. Negatively influences the biological samples of unspecific inflammation (urine, blood)
    D. Determines intrasomatic hernias (Schmorl nodules)
    E. Determines osteoporosis of vertebral bodies

33. Lumbar clinical syndromes – *Spinal syndrome*:
    A. Determines vicious attitudes (scoliosis, hyper lordosis, lordosis flattening)
    B. Determines painful manifestations which distally irradiate on the lower limbs
    C. Limits the flexion and lateral movements of the (lumbar) spine
    D. Determines concordance between heart rate and respiratory rate
    E. Produces symmetrical and simultaneous movements of belts and lower limbs

34. Lumbar clinical syndromes – *Dural syndrome*:
    A. Interests the spine' grey matter from the lumbar area
    B. Interests the L1-S5 nerve roots
    C. The pain can increase when coughing, sneezing
    D. The pain can increase when pressing on the vertex
    E. The pain can increase by head flexion, shoulder blades' adduction or Lasegue sign

35. Capsulo-ligamentar acute lumbago:
    A. Is characterized by mechanical type pain which decreases in mobilization and increases in rest
    B. Objectively, it can be noticed: scoliosis or even lumbar kyphosis or both
    C. Subjectively, it can be noticed: flexion and extension limitation, as well as inflexion on the affected side
    D. A lumbar inflammation is noticed, which irradiates on one or both lower limbs
    E. In the chronic stage, it can be radiologically noticed a dilatation of the intervertebral disc

36. In the painful syndromes of fascial origin (myofascial syndromes):
    A. The morphological substratum is provided by type 1 osteoporosis
    B. The manifestations are on the painful articular area or on the vertebral bodies
    C. Pain is felt in aponeurosis, ligaments, capsules, periostum and muscles
    D. The lower limbs muscles become atrophied
    E. Pain can be alleviated through cryotherapy and massage followed by stretching maneuvers

37. Lumbar disc hernia with radicular affectation (lombosciatica):
    A. Results from a disc-radicular conflict consecutive to intrarahidian hernia at the level of L4–L5 or L5–S1 intervertebral discs
    B. Pain can be localized strictly in the lumbar area or it can irradiate laterally to the buttock or in the ipsilateral lower limb
    C. L1–L3 vertebral discs are affected
    D. The pain distribution in the leg for L4 discopathy is internal malleolus and the shank's anterointernal face
    E. The suffering increases in effort, traumatisms, trepidations

38. In lumbar disc hernia with radicular affectation (lombosciatica):
    A. It can be objectively noticed a lumbar scoliosis
    B. It can be objectively noticed the lumbar paravertebral muscle contracture, uni or bilateral
    C. To objectivize pain, the Lasegue sign is used, which consists in the interested lower limb internal rotation
    D. It can be noticed the hypertrophy with hypotonia of the interested lower limb's calf muscles
    E. The motor deficit signs are: walking on heels for L4–L5 and walking on tiptoes for L5–S1

39. Physiotherapy in cervical discopathies:
    A. Uses, to start with, antalgic physiotherapy procedures
    B. Recommends that the exercises would be done from positions with large support surfaces
    C. Uses normal (maximum) joint range of motion
    D. Uses stretching techniques
    E. Recommends that the exercises would be done in breathing rhythm

40. Physiotherapy in dorsal discopathies recommends:
    A. Paravertebral muscles' toning in shortening circumstances
    B. Mechanical compression decrease through spine tractions-elongations
    C. Correction of wrong spine positions
    D. Avoidance of jobs which require the overuse of the spine
    E. The use of isometric techniques with the challenge of the Valsalva phenomenon

41. Physiotherapy in lumbar discopathies:
    A. Recommends avoiding to lift weights and prolonged torso bending
    B. Recommends therapeutic swimming in thermal water in the acute stages
    C. Will be oriented towards weight loss and toning of the abdominal muscles
    D. Recommends prolonged walking as a form of compression on the lumbar roots
    E. Recommends slight jumps, on the spot, without extra loading

42. Physiotherapy in lombosciatica through disc hernia recommends:
    A. The use, in the first phase, of anakinetic techniques
    B. Joint mobilization and that of the lumbar muscles
    C. Relaxation of paravertebral and abdominal muscles

D. In chronic lumbar pain, the use of underwater elongations in thermal water
E. Decrease of body weight

43. Compatibility of Williams and McKenzie kinetic programs in the lumbar spine's degenerative disc disorders:
A. Is encountered at the beginning of the kinetic treatment
B. Both methods have exercises mostly with lumbar spine flexion movements
C. Both methods are based on dynamic exercises in the closed kinematic chain
D. Both methods aim at the recovery of the non-painful movements of the lumbar spine
E. The exercises from one method or the other are recommended according to the migration direction of nucleus pulposus

44. The Williams kinetic treatment program in the lumbar spine's degenerative disc disorders:
A. In phase 1, the aim is the reflex relaxation of paravertebral muscles through abdominal and iliopsoas muscles contraction
B. In phase 1, the aim is to obtain as fast as possible the vertical position
C. In phase 2, the aim is the partial load of lumbar vertebral discs
D. In phase 1, the aim is to recover the torsion movements of the lumbar spine
E. The exercises aim at increasing the distance between the edges of the vertebral bodies in their posterior side

45. The McKenzie kinetic treatment program in the lumbar spine's degenerative disc disorders:
A. The physiological explanation consists in facilitating the return of nucleus pulposus in the center of the fibrous ring through the active spine extension movement
B. The method forces the nucleus pulposus to follow the centripetal way, from the disc periphery (where it migrated) towards the inner par**t**
C. This method is indicated when at radicular disc level an inflammation onsets and the pain became acute and persistent
D. This method is indicated when paresthesia occurred on various muscle groups of the affected lower limb, even though the pain does not become worse
E. This method is indicated in the stage in which the nucleus pulposus is not totally deteriorated yet and has not penetrated the edges of the fibrous ring, without the production of local inflammation

46. The kinetic treatment for the rehabilitation of operated low discopathies:
A. In the post-surgery stage, the patient is taught to execute isometric muscle contractions of the femoral quadriceps, abdominal, gluteal muscles, muscles of the calf and of the foot
B. The actual recovery stage starts after 5 days post-surgery
C. The rehabilitation stage is begun with verticalization and spine load
D. In the recovery stage, the patient learns to "straighten" the spine, recreating the physiological curvatures, breathing abdominally and thoracically
E. In the functional readjustment stage the aim is the recreation of the lumbar curvature, its mobility and stability

47. Ankylosing spondylitis:
    A. Is an inflammatory rheumatic disease with the compulsory affectation of the sacroiliac joints
    B. Is a degenerative rheumatic disease with the affectation of the peripheral (distal)
    C. The onset of spondylitis is at the age of 0–5 years
    D. Statistically, it is encountered more in young men than in women
    E. It is also named ankylopoetica spondylitis, Bechterew disease or rheumatoid spondylitis

48. In the etiopathology of ankylosing spondylitis:
    A. The causes of the inflammatory process occurrence are known
    B. The causes of the inflammatory process occurrence are not known
    C. Is associated with the HLA – B27 phenotype
    D. The regional inflammation occurs based on the assumed feminine preponderance and on a corticosuprarenal suffering as predisposing factor
    E. The role of non-infectious factors link the ankylosing spondylitis to the degenerative pathology of the kidneys

49. Clinically, the ankylosing spondylitis:
    A. Has an evolution which descendently affects the spine, its debut being in the cervical or thoracic spine
    B. Has an evolution which starts with the sacroiliac joint affectation, then the dorsolumbar spine is affected and, finally, the cervical spine
    C. Has as dominant signs: pain, morning stiffness and limitation of spine mobility
    D. Is determined through imaging and radiological exam
    E. It mainly insets unilaterally on the sacroiliac and lumbar joints

50. The affectation of the entire spine in ankylosing spondylitis:
    A. Corresponds to the debut phase of the disease
    B. It occurs over a long period of time, of 10–30 years
    C. In the late evolution phases, the deformities give the patient a specific posture, the so called "skier's posture"
    D. In the incipient phases, uni or bilateral talalgia, which usually lingers, with or without calcaneal spurs, is encountered in the radiological exam
    E. The ossification of the longitudinal and interspinous ligaments does not onset, not even in the advanced stages

51. The contribution of radiology in diagnosing ankylosing spondylitis:
    A. Is insignificant compared to other diagnosing means
    B. In stage 1, osteophytes and syndesmophytes are noticed, as an expression of ossification at the level of the vertebral bodies of the cervical spine
    C. The existence of 2 lateral, opaque lines, visible on the front radiology ("tram tracks" sign) shows the bone ankylosis of the interapophyseal joints
    D. In stage 2, the "covered by clouds" or "tiger" aspect of the sacroiliac joint shows the occurrence of an osteoarticular reshuffling process
    E. The occurrence on the frontal spine X-ray of an opaque line (the "electric wire" sign) shows the ossification of the longitudinal and interspinous ligaments

52. Sacroiliitis in debut is manifested through:
    A. Lumbar, dorsal or cervical nocturnal spine pain
    B. Pain in the buttock (uni or bilateral) produced or intensified through the sacroiliac joints' mobilization
    C. Increased VSH
    D. Nocturnal abdominal pain
    E. Paresthesia's of the upper or lower limbs

53. In the clinical examination of the patient with ankylosing spondylitis, it is noticed that:
    A. The joint mobility of cervical-dorsal-lumbar spine rotation increases
    B. The Schober test is positive
    C. The thorax ampliation decreases as the disease evolves
    D. The chin-sternum distance increases as the disease evolves
    E. The occiput-wall distance increases as the disease evolves

54. The kinetic treatment in ankylosing spondylitis recommends:
    A. In acute phases, total bed rest
    B. In chronic phases, only exercises to increase the breathing amplitude
    C. In chronic phases, prolonged posturing in armchair
    D. Thoracic type breathing exercises
    E. Hydro physiotherapy in the painful (acute) phases

55. The shoulder's chronic arthritis:
    A. The inflammation processes affect the bones and joint cartilage
    B. The scapulohumeral periarthritis is a condition within abarticular rheumatism
    C. The immobilization in functional position is made with the arm and elbow close to the body
    D. The immobilization in functional position is made with the arm on the horizontal and the forearm in 90 degrees flexion
    E. The degenerative lesions of the supraspinous tendon are frequent

56. The clinical aspects of the scapulohumeral periarthritis:
    A. Is due to glenohumeral joint lesions
    B. Is due to lesions of bones adjacent to the shoulder joints
    C. Is due to lesions of the tendons of the shoulder's periarticular muscles
    D. Is due to lesions of the subacromiodeltoid bursa
    E. Refers to the atrophy of the supraspinous and brachial biceps muscles

57. The favoring factors in scapulohumeral periarthritis are:
    A. Diabetes mellitus and obesity
    B. Traumatisms or microtraumatisms at the shoulder joints level
    C. Microtraumatisms and cold exposure at shoulder joints level
    D. Calcification of the subacromiodeltoid bursa
    E. Alcoholic intoxication and toxic environment (fine powders)

58. From clinical point of view, the scapulohumeral periarthritis includes:
    A. Non painful insidious form
    B. Acute painful shoulder (subacromiodeltoid bursitis)
    C. Simple painful shoulder (supraspinous and bicipital tendinitis)
    D. Subacute feverish form
    E. Retractile capsulitis

59. Tendinitis of the supraspinous from the scapulohumeral periarthritis:
    A. Corresponds to the stage of articular cartilage modification
    B. Corresponds to the simple painful shoulder
    C. Severely limits the movements of the shoulder joints (over 50%)
    D. Is emphasized through scapulo-humeral X-ray
    E. Presents pain referred in the trapeze muscle, upper part

60. Subacromyo-deltoidal bursitis from scapulohumeral periarthritis:
    A. The specific signs are pain in countered supination, with elbow at 90° and pain in arm flexion with extended elbow, with forearm in supination
    B. Corresponds to stage 1 from scapulohumeral periarthritis, respectively the stage of simple painful shoulder
    C. The anatomopathological substratum is either an acute tendinitis, around a tendinous calcification, or a subacromio-deltoidal bursitis
    D. The pain irradiates towards the nape or the subclavicular fossa and especially on the radial edge of the upper limb, towards the hand
    E. The shoulder's active articular mobility is slightly limited by pin at the end of the motion range

61. Rotators' cap tear:
    A. Corresponds to stage 1 from scapulohumeral periarthritis
    B. Corresponds to the predominantly limited functional form, the stage of pseudo-paralytic shoulder
    C. The active movements are of the same amplitude with the passive movements from the shoulder joint
    D. Is clinically manifested through pain and muscle strength decrease
    E. The evolution is towards spontaneous healing

62. Retractile capsulitis:
    A. Corresponds to the hypersensitive shoulder stage
    B. Corresponds to the blocked shoulder stage
    C. The anatomical substratum is represented by rotator muscles' aponeurosis
    D. The joint's active, as well as passive, movements are conserved
    E. Produces functional impotence at elbow and hand level

63. In scapulohumeral periarthritis:
    A. Affectation is simultaneously bilateral
    B. Dupuytren disease is produced secondarily
    C. Physiotherapy is applied especially in acute phases through dynamic movements
    D. Fighting pain in acute-subacute phases is made through immobilization and posturing
    E. The scapulohumeral joint posturing is made in 70° abduction, to prevent shoulder blocking caused by supraspinous tendinitis

64. Regaining mobility in the scapular belt joints in various forms of scapulohumeral periarthritis is made:
    A. By adopting certain functional postures in the chronic and remission phases
    B. Through passive mobilizations in the acute phase
    C. Through sliding techniques of the scapula on the thorax and of the humerus in the glenoid cavity
    D. Through traction techniques in the subacromio-subdeltoidal joint
    E. Through combined movements of extension + abduction + external rotation of the shoulder

65. Abarticular elbow rheumatisms are:
    A. At the superior radio-cubital joint level
    B. Epicondylitis
    C. At the inferior radio-cubital joint level
    D. Epitrochlear disease
    E. Elbow pain

66. The kinetic treatment in rheumatic disorders of the elbow:
    A. In all rehabilitation phases, passive exercises are indicated
    B. In acute phases, exercises with opposing resistance are indicated
    C. Fighting pain through kinetic means is made through self-passive exercises
    D. Requires the use of splints for the recovery of muscle strength
    E. In secondary prophylaxis, muscle strengths with values of at least 4 are maintained

67. The hand presents lesion types determined by the inflammatory and degenerative rheumatisms:
    A. Acute articular rheumatism
    B. Dupuytren disease
    C. Psoriatic rheumatism
    D. Nosocomial infections
    E. Gout

68. The hand in rheumatoid polyarthritis:
    A. It is like a non-suppurative chronic polysynovitis
    B. It has a well-defined and known etiology
    C. It has an evolution towards deformations and ankyloses
    D. It presents a non-painful evolution
    E. It does not affect clamping and prehension

69. Other names that rheumatoid polyarthritis is known by:
    A. Raynaud disease
    B. Charcaut disease
    C. Polyarticular rheumatism
    D. Evolutive chronic polyarthritis
    E. Abarticular arthritis

70. The factors involved in triggering rheumatoid polyarthritis are:
    A. Raynaud disease
    B. Heredity
    C. Infections (streptococcus, staphylococcus)
    D. Posttraumatic conditions
    E. Blood diseases

71. Pathological anatomy in rheumatoid polyarthritis contains:
    A. Mobile joints' lesions
    B. Bones' lesions
    C. Affectations of the synovial membrane
    D. Deformations of the articular cartilage
    E. Nails deformations

72. Extra-articular lesions in rheumatoid polyarthritis contain:
    A. Lesions of articular cartilage
    B. Heart lesions (pericarditis, myocarditis, valvular lesions)
    C. Pulmonary lesions (pleuritis, pneumonitis)
    D. Lesions at the central nervous system
    E. Subcutaneous lesions

73. The clinical picture of rheumatoid polyarthritis contains:
    A. In the debut stage, peripheral tegumentary changes
    B. A sudden and feverish debut
    C. Progressive passing from one evolutive stage into another
    D. Morning articular stiffness
    E. Lack of affectation even in the manifest stages of muscle tone

74. ARA criteria (American Rheumatism Association) in rheumatoid polyarthritis are:
    A. Swelling of at least one joint for minimum 6 weeks
    B. Collagen changes
    C. Symmetrical joint swelling
    D. Morning stiffness
    E. Subcutaneous nodules

75. The physiotherapeutic treatment in rheumatoid arthritis comprises:
    A. Thermotherapy in acute phases
    B. Diet
    C. Diadynamic currents
    D. Articular tractions
    E. Interferential currents

76. The fist-hand lesions and deformations are:
    A. "gooseneck" deviation of fingers through hyperflexion at proximal interphalanges level and hyperextension of distal interphalanges occurring especially at the last fingers
    B. The shape of the metacarpal head with larger radial than cubital condyle
    C. Radial deviation of fingers
    D. Carpal tunnel tenosynovitis
    E. "Boutonniere" deformity through hyperextension of proximal interphalanges and flexion at distal interphalanges especially at the first fingers

77. Acute polyarticular rheumatism (Jaccoud arthritis) is characterized by:
    A. Cubital deviation of fingers
    B. Radiocarpal deformations
    C. Osteophytosis
    D. Hyperextension at the distal interphalangeal level
    E. Flexion at metacarpophalangeal level

78. Psoriatic rheumatism is characterized by:
    A. Inflammatory arthropathic syndrome
    B. Cutaneous changes
    C. Intraarticular deposits of sodium urate crystals
    D. Swelling of distal interphalangeal joints
    E. Presence of tofs at the interphalangeal level

79. The arthritic hand is characterized by:
    A. Functional impotence
    B. Hypertrophy of MCF
    C. Rhizarthrosis
    D. Tegumentar swelling
    E. Frequent associations with Heberden and Bouchard nodules

80. Evolution stages in "shoulder-hand" syndrome:
    A. They are five
    B. Diffusely swollen, warm hand, fingers in slight flexion, with pain in mobilization – in stage 3
    C. Swollen hand, but cold, moist, cyanotic, thenar and hypothenar muscle atrophy, brittle nails – in stage 1
    D. Thin, shiny, smooth skin, palmar aponeurosis, atrophy of intrinsic muscles – in stage 3
    E. They are three, each with 3–6 weeks duration

81. The objectives of fist and hand rehabilitation through physiotherapy specific means:
    A. In the chronic stage 4, it is recommended the use of terminal-lateral or subterminal-lateral prehension
    B. Maintaining and regaining joint mobility
    C. The physiotherapy program has as objectives: mobilization in hyperextension of the MCF and the restriction of thumb mobilization
    D. Maintaining, developing and improving handiness in various prehension forms
    E. Preventing the onset of deformities and ankyloses through long term immobilizations

82. Kinetic treatment of the hand in "gooseneck" deformity:
    A. The most frequent cause is the affectation of radio-carpal joints and subluxation on IFP level
    B. IF mobilization will be made only with the fist in flexion, to limit the extension in IFP
    C. During fist mobilization, the fingers will be kept in flexion
    D. During exercising IF in flexion and of the fist in extension, MCF are maintained in slight flexion
    E. As rest postures, elastic bandages are recommended over the radial-carpal joints

83. Kinetic treatment of the hand in "boutonniere" deformity:
    A. Gesture reeducation is necessary to prevent IFD hyperextension
    B. IFD flexion exercises are indicated and IFP extension with MCF in flexion is contraindicated
    C. MCF flexion is made with IF joints in rectitude with the cubital edge on the table against a resistance opposed by an elastic sponge
    D. In the IFP acute inflammatory flare, exercises in removable splints are recommended, with slight extension of the hand, IFP and IFD
    E. In the initial stage, the exercises are addressed especially to the fingers' deep flexor

84. Kinetic treatment in "Z" type thumb deformity:
    A. It will be avoided the use of latero-lateral prehension, which emphasizes the deformity
    B. Mainly, the opposition of the thumb is affected, the terminal thumb-digital clamp being inefficient
    C. In advanced phase, the superficial flexor of the thumb, the short abductor and the opposing of the 5^{th} finger will be exercised
    D. The thumb is mobilized in abduction and opposition, with partial or total immobilization of IF
    E. Rest is achieved with the thumb in flexion from all joints

85. The kinetic treatment of the hand in Dupuytren contracture:
    A. Post-operation exercises can be begun after 2 weeks with protective splint
    B. To tone the muscles, there are exercises with hands on the table, cubitally placed, fingers crossed and weights hanging from the fingers
    C. After taking out the surgical threads, passive and active HKT exercises are made at MCF and IFP level
    D. In cases when fingers' flexion is under 45°, ultrasound sessions are recommended
    E. In cases when fingers' flexion is under 45°, serial plaster cast is recommended to reduce flexion

86. Functional immobilization positions of the hand:
    A. The final immobilization of the index finger is made in flexion with MCF at 30–35°, IFP of 35° and IFD of 15 °
    B. The functional position of the thumb is in extension and adduction
    C. The last four fingers are temporarily immobilized: flexion of 50–80º in MCF, flexion of 10–40º in IFP and flexion of 10–20º in IFD
    D. In case of arthrodesis, the fist is fixed in 20–25° flexion and slight cubital inclination of 5–10°
    E. The fist's functional position is in dorsal flexion of 25–45° (in some cases up to 60°)

87. Primitive coxarthrosis:
    A. They are about 40–50% of the total number of coxarthrosis
    B. They occur at young adult age
    C. They are usually bilateral
    D. They have sudden, unexpected evolution
    E. Their causes are well defined

88. Secondary coxarthrosis:
    A. They can be caused by cervix fractures
    B. They can be caused by congenital hip luxation/subluxation
    C. They are not caused by simple coxofemoral dysplasia
    D. They are easy to recover
    E. They are very rare

89. In the treatment of the rheumatic hip, it is recommended:
    A. Alternation of walking with rest
    B. Daily, long walk
    C. Mobilization and toning exercises of the muscle groups which provide hip stability
    D. The use, in walking, of a cane held on the same side with the affected hip
    E. Prolonged posturing in sitting position

90. Coxitis from ankylosing spondylarthitis (rhizomelic form):
    A. Presents a hyperostheozing form
    B. Presents an ossifying form with bone ankylosis
    C. Is also named rheumatoid coxarthrosis
    D. Presents an osteoporotic form
    E. Presents an erosive and destructive form

91. The hygiene of hip joints refers to the recommendations provided to patients to:
    A. Avoid being overweight
    B. Alternate walking with light running
    C. Avoid carrying weights
    D. Correct the unevenness between the lengths of the lower limbs, starting from a difference higher than 2–3 cm
    E. Adopt a limping gait

92. The post-surgery treatment in coxarthrosis:
    A. Passes into the 2nd stage after 2–3 weeks
    B. Gradually loads the hip
    C. In phase 1, the operated lower limb is postured in slight adduction with extended knee
    D. In phase 1, to avoid the external rotation, the operated lower limb is positioned with a pillow laterally to the thigh
    E. Is begun from the 2nd day after the cast is hardened and the prosthesis is fixed

93. The rheumatologic pathology of the knee:
    A. Will determine the limit of joint mobility
    B. In internal meniscus tear, it will determine irreducible blockage on extension
    C. The cartilaginous lesions start by cracks at transverse and longitudinal mobilization of the knee cap
    D. In external meniscus tear, it will determine rare, incomplete blockages, more often in extension
    E. In the initial stage, it manifests a knee "locking" incapacity while walking

94. The kinetic treatment of the rheumatic knee:
    A. Has, as secondary prophylaxis, the gait with orthopedic shoes, without pads
    B. Has, as secondary prophylaxis, the avoidance of maintaining for a longer period of time a certain knee position
    C. Has, as secondary prophylaxis, the maintaining of maximum flexion positions
    D. Has as objective stability recovery in conditions of orthostatism and walking
    E. Has as objective the achievement of walking in quadruped

95. The objectives of rheumatic knee rehabilitation:
    A. For a normal gait, it is necessary to obtain a flexion of at least 90°
    B. It aims to recover passive stability through progressive, isometric muscle toning exercises
    C. To climb stairs up and down, it is necessary to obtain a flexion of at least 140°
    D. To ride the bicycle (the ergonomic one), it is necessary to obtain a flexion of at least 110º
    E. For a normal lower limb activity, a knee extension is necessary, till 0º

96. Rheumatic knee posturing:
    A. The objective is to avoid and prevent flexum onset
    B. To prevent extensum, the lower limb is placed flexed on the horizontal, with small support under the heel
    C. Can also be achieved in ventral decubitus, the thigh supported on the bed and the shank hangs freely, outside the bed
    D. With small sand bags placed on the thigh, but, to be efficient, they must produce pain on the entire lower limb
    E. Are of two types: in plaster cast and removable splints

97. General indications of knee secondary prophylaxis:
    A. Walking with shoes with pads is contraindicated
    B. It is recommended the prolonged maintenance of a certain knee position

C. To lubrify the joint, it is recommended to alternate rest with free flexion and extension moves
D. Avoiding prolonged orthostatism
E. Avoiding maximum flexion positions

98. The rheumatic foot:
A. In ankylosing arthritis, the hallux is most frequently affected when giving deformities of the hallux valgus, hallux flexus, hallux extensus type
B. The metatarsophalangeals and interphalangeals are rarely, or not at all, affected
C. In arthritis, more frequently are affected the metatarsophalangeals and interphalangeals
D. The muscle structures of the foot are affected
E. In gout, the topographic predilection is for MTF and IF of the hallux

99. The rheumatic round forefoot:
A. Determines in orthostatism that the toes are not in contact with the ground anymore
B. Walking may be possible only on heels
C. Is the slightest deformity of the rheumatoid foot
D. Associated hallux-varus, quintus-valgus
E. Associates digital hammer toes

100. Valgus flat foot:
A. Is favored by the retraction of the big plantar ligament
B. Leads to concavity reduction, abduction and supination of the forefoot
C. Is a frequent cause of tarsalgia and gait deficit
D. Is favored by hypertonia of posterior calf and lateral long peroneal muscles
E. Is not painful in the forms accompanied by extensors' contracture

Correct answers:

AB; 2.AD; 3.ABC,E; 4.ABCD; 5. ABCD; 6. ACD; 7.ABC; 8.BCD; 9.ABC; 10.ACE; 11.A; 12.ABC; 13.AB; 14.ABE; 15.AE; 16.ABDE; 17.BCD; 18.AC; 19.BC; 20.ABD; 21.A; 22.CDE; 23.ABC; 24.ACE; 25.ABD; 26.AB; 27.C; 28.AC; 29.C; 30.ABD; 31.BCD; 32.BD; 33.ABC; 34.CE; 35.B; 36.CE; 37.ABD; 38.ABE; 39.ABDE; 40.BCD; 41.AC; 42.ABDE; 43.DE; 44.ACE; 45.ABE; 46.ABDE; 47.ADE; 48.BC; 49.BC; 50.BC; 51.CDE; 52.ABC; 53.BCE; 54.D; 55.BE; 56.ACD; 57.BCD; 58.BCE; 59.B; 60.CD; 61.BD; 62.B; 63.D; 64.CE; 65.BDE; 66.E; 67.ABCE; 68.AC; 69.BD; 70.BC; 71.ACD; 72.BCE; 73.CD; 74.ACDE; 75.CE; 76.BD; 77.ADE; 78.ABD; 79.BCE; 80.D; 81.BD; 82.CD; 83.ACE; 84.ABD; 85.CDE; 86.AC; 87.AC; 88.AB; 89.AC; 90.ABE; 91. AC; 92.BDE; 93.ACDE; 94.BD; 95.ADE; 96.AC; 97.CDE; 98.CE; 99.ABE; 100.BC

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PHYSIOTHERAPY IN ORTHOPEDIC-TRAUMATIC DISORDERS

1. Which are the physical type factors which can produce traumatic lesions?
   A. Temperature, UV or IR radiations, water, acids
   B. Corrosive substances, temperature, cuts
   C. UV or IR radiations, water, temperature
   D. Different forms of radiation, heat, snow

2. Mechanical factors can produce the following types of traumatisms:
   A. Burns, electric shocks, lacerations, concussions
   B. Cuts, crushing, amputation
   C. Lacerations, fractures, frostbites, irradiation
   D. Fractures, amputations, lacerations, crushing

3. Which are the determining factors which lead to the increase of sports traumatisms incidence?
   A. The athlete's state of fatigue, the coach's methodic mistakes, mistakes in the recovery process, the opponent's tough play, improper physical training
   B. Decreased physical fitness (by lack of training, fatigue or overtraining); the existence of a previous untreated lesion; insufficient warm-up; not wearing the protection gear; being overweight; nutrition deficiencies
   C. The existence of previous untreated lesions; insufficient warm-up; not wearing the protection gear; general low stamina (by lack of training, fatigue or overtraining)
   D. The opponent's tough play, improper physical training, the existence of a previous untreated lesion; insufficient warm-up; not wearing the protection gear

4. Which of the following definitions correspond to hyperfunctional lesions:
   A. They are minor intensity, but permanent traumatisms, repeated within certain movements specific to the sporting event, thus generating the microscopic sublayer of certain secondary macrotraumatic lesions (myositis, myoentesitis, tendinitis, teosinovitis, sinovitis, periostitis, bursitis, periostitis, epiphisitis, apophisitis, capsulitis, periarthritis)
   B. They are traumatisms determined by the opponent's tough play, characterized by large surface and moderate depth
   C. They are changes of biochemical and histochemical enzymatic type, localized at the level of certain anatomical formations, the traumatic element not existing
   D. They are pure traumatic lesions, acute or chronic, direct consequence of repeated micro-traumatisms on one hand, or of the acute ones becoming chronic, on the other hand

5. Favoring factors which lead to the occurrence of athletes traumatisms refer to:
   A. Presence of playing rules which allow the opponent's tough play

B. Presence of congenital physical or organic deficiencies
C. Presence of certain gained physical deficiencies, noticed in the athlete after the accident occurrence
D. Presence of chronic and/or acute traumatic lesions

6. Favoring factors which lead to traumatism occurrence in athletes can be:
A. Local (genu valgum, varum, flat foot, congenital joint laxity, etc.);
B. Muscular (hypertrophy, atrophy, hypotrophy or muscle ischemia)
C. General (general low stamina; existence of a previous untreated lesion; insufficient warm-up; not wearing the protection gear; being overweight);
D. General (nutrition deficiencies; muscle hypertrophy; decrease of muscle reflexes caused by doping; resuming the sports activity before complete healing after an accident; non-sportive life, etc.);

7. The purely macrotraumatic type disorders are:
A. A. Fissures, arthroses, chronic rheumatism, meniscus lesions, tendinitis
B. B. Fissures, meniscus lesions, ligamentary pulls, luxations, muscle tears
C. C. Fissures, coxofemoral algia, muscle atrophy, ankylosis, flat foot
D. D. Fissures, degenerative rheumatism, epycondilitis, meniscus lesions

8. The most frequent errors encountered in the athlete's training program:
A. Approaching a wrong method in various periods of the athlete's training
B. Uneven training of certain agonistic groups at the expense of the antagonist groups
C. The training or playing field from the point of view of surface composition, hardness or elasticity
D. Fatigue in acute form, especially when overtraining

9. Which of the following traumatisms are specific to joints?
A. Meniscus lesions, luxations, disjunctions, sprains, posttraumatic knee instability
B. Luxations, fissures, apophisitis, concussions, muscle tears, ligament pulls
C. Ligament pulls, wounds, nerve elongations, fractures
D. Luxations, enthesitis, muscle tears, sprains, myositis

10. Which of the following statements are false?
A. In the hot season, with high temperatures, without proper hydration, they can become stressful for the competitors
B. The most significant cutaneous and pulmonary liquid losses are encountered in the resistance races (marathon, cycling)
C. The most significant liquid losses are encountered in the speed races (100 m sprint, 400 m hurdles)
D. The low environmental temperature, the increased air humidity and, especially, their association increase muscle elasticity

11. Which of the following statements are true?
    A. Sudden change of training surface predisposes to traumatisms
    B. Together with temperature increase, the collagen viscosity increases as well
    C. The use of improper equipment leads to the occurrence of microtraumatisms
    D. Together with temperature increase, the collagen viscosity decreases

12. Which of the following statements are false?
    A. Incorrect nutrition habits can be involved in the occurrence of stress fractures
    B. Incorrect nutrition habits can be involved in the occurrence of muscle cramps
    C. Stress fractures' occurrence is due to overeating and the food is reach in vitamins and minerals
    D. The muscle tissue of children is less resistant to tear than that of the adults

13. Which of the following statements are true?
    A. 2/3 of the people traumatized during sports activities are men
    B. Men and women are involved in high performance activities in approximately equal number
    C. The people most predisposed to traumatisms are the adolescents and young adults
    D. In the case of playing surface change, the joints and muscles do not need to be prepared for the new conditions

14. Which of the following statements are false?
    A. Big height, above average, is tightly connected to the occurrence of macrotraumatisms and joint overwork
    B. The presence of physical deficiencies (genu varum, genu valgum, etc.) at the level of the lower limbs are not incriminated in sports traumatology
    C. Applying additional stress on the athlete, above his physiological limits and respective structures, leads to musculoskeletal traumatisms
    D. The predisposition to muscle pulls and tears occurs more frequently at the beginning of the training

15. Which of the following statements are false?
    A. A previous traumatisms can lead to muscular imbalances
    B. Beginners are more predisposed to traumatisms because they lack specific coordination
    C. The lifted weight does not represent an additional factor which can lead to the occurrence of traumatisms in sports
    D. Drugs and psychotropic substances determine the increase of long term coordination capacity

16. The hematoma is:
    A. An accumulation of serous liquid produced by lesions to the lymphatic vessels
    B. A disorder which implies the presence of certain continuity solutions at tegument level or the lack of continuity of skin, mucosa or tissues
    C. A collection of blood, calcium salts and serous liquid, produced after certain fractures
    D. A collection of blood in an organ or in a tissue, occurred after hemorrhage

17. The sprains are:
    A. Excessive stretches of the muscular tissue with the interruption of anatomic continuity
    B. Acute articular traumatisms produced through violent moves, with range which surpasses the physiological limits, but do not take the joint surface out of the normal anatomic position
    C. Articular and muscle lesions which have as consequence severe strength decrease
    D. Complex joint lesions which imply the dislocation of articular surfaces and extended periarticular and articular lesions

18. Depending on severity, how many ranking degrees do sprains have?
    A. 2
    B. 5
    C. 4
    D. 3

19. Which are the contraindications in case of sprain?
    A. Ceasing effort, cold compresses, immobilization in elastic bandage
    B. Continuing effort, massage, local heat immediately after the sprain was produced
    C. Massage with ice, taking pain killers and anti-inflammatory medicines, segmental rest
    D. Applying cold compresses, taking effort supporting substances

20. The main regions which suffer contusions are:
    A. Knee, ankle, anterior face of the arm
    B. Knee, elbow, hip
    C. Knee, posterior face of the arm, shoulder
    D. Knee, anterior region of the thigh, ankle

21. The main regions which suffer contusions are:
    A. Knee, ankle, anterior face of the arm
    B. Knee, elbow, hip
    C. Knee, posterior face of the arm, shoulder
    D. Knee, anterior region of the thigh, ankle

22. The main types of contusion are:
    A. Ecchymosis
    B. Epycondilitis
    C. Seroma
    D. Hematoma

23. Posttraumatic seroma is:
    A. An accumulation of serous liquid through the tangential action of the traumatism which leads to the occurrence of a shearing move of teguments in the underlying plan
    B. The result of a more intense traumatism through the tear of larger vessels within the concussed tissues

C. The result of capillary lesions as a result of a moderate traumatism at the place of action
D. A serous collection which resembles a soft flattened tumor which does not produce palpable crepitus

24. There are considered recent plagues the ones produced:
A. During the first 6–8 hours from traumatism
B. During the first 1–2 hours from traumatism
C. During the first hour from traumatism
D. During the first 24 hours from traumatism

25. The contussed plague is produced through:
A. Stinging
B. Cutting
C. Hitting with a hard object
D. Hitting on a hard object

26. Plague treatment involves:
A. Applying direct pressure (even the raising of the harmed area can be useful)
B. Cleaning with water and soap
C. Applying a relaxing massage around the plague
D. Applying creams with antibiotic and sterile bandage

27. Muscle pulls and tears are most often localized in:
A. The rowers' pectoralis and deltoid muscles
B. The footballers' and athletes' pectoralis and deltoid muscles
C. The weight lifters' anterior thigh region
D. The rowers' anterior thigh region

28. Which of the following statements are true?
A. Muscle tears represent excessive stretches of the muscle tissue with the interruption of anatomical continuity
B. Muscle tears represent excessive stretches of the muscle tissue without the interruption of anatomical continuity
C. In stretching, the muscle tissue continuity is kept, the lesions are microscopical and interest the intracellular formations
D. In stretching, the muscle tissue continuity is not kept, the lesions are macroscopical and interest the cellular formations

29. Which are the steps to be followed in treating muscle pulls, acute phase?
A. Applying warm compresses, rest, drainage massage, posturing
B. Applying ice for 10–15 minutes, effleurage type massage, electrotherapy, rest
C. Rest, applying ice for 10–15 minutes, local compression and elevation of the affected limb
D. Rest, applying ice, drainage massage, electrotherapy, kinesiotaping

30. What is forbidden during the first days after the muscle tear?
    A. Applying warmth
    B. Applying ice for 10–15 minutes
    C. Massage
    D. Continuing effort

31. Which of the following statements are true?
    A. In case of pulled muscle tears (over a quarter of the muscle diameter), the treatment consists in surgical intervention with muscle integrity recovery
    B. Muscle pulls are healed shortly without consequences, in 10–15 days
    C. Resuming training after muscle pulls is allowed even before the total disappearance of pain
    D. Ice application is done to reduce the edema by restricting the blood flow in the area of the lesion

32. Which are the main signs (symptoms) of a 2nd degree sprain?
    A. Pain, slight swelling, discomfort or functional impotence, normally colored teguments
    B. Pain, significant swelling, functional impotence, purple color teguments in the area
    C. Pain, difficult walking, slight swelling, normally colored teguments
    D. Pain, functional discomfort, abundant sweating, pruritus at the level of the articular region

33. Which of the following structures are harmed in luxations?
    A. Joint capsule, ligaments, soft parts around the twisted joint
    B. Bone diaphysis of the segments proximally to the twisted joint
    C. Bone diaphysis of the segments distally to the twisted joint
    D. Ligaments, joint capsule, vessels, nerves

34. Which are the subjective signs (symptoms) in case of luxation?
    A. Deformity of the region
    B. Intense pain
    C. Grange in the anatomical relations of the region
    D. Shortening of the affected segment

35. Which is the correct intervention order in case of luxation?
    A. Immobilization in a sling, applying ice, massage of the region
    B. Fighting pain, reducing the luxation, segment immobilization
    C. Segment immobilization, reducing the luxation, fighting pain
    D. Applying ice, segment immobilization, antideclive posturing

36. Diastasis and disjunction are specific to the following joints:
    A. Scapulo-humeral
    B. Coxo-femoral
    C. Sacro-iliac
    D. Acromio-clavicular

37. Which of the following statements are true?
    A. Arthroses represent degenerative lesions of articular components (distruction of the joint cartilages and fibrocartilages and prolipheration of the underlying bone tissue)
    B. Bursites are clinically present under the form of a moderate hydarthrosis and joint blockages caused by the interpositioning of these bodies between the joint surfaces
    C. Disjunctions and diastasis are traumatic disorders which interest the fixed joints of synarthrosis type
    D. Bursitis treatment consists in evacuating punctions, application of compressive bandages, roentgen therapy and regional rest

38. Within bone traumatisms, the followings are included:
    A. Apophysitis and tendonistis
    B. Periostitis and apophysitis
    C. Fractures and fissures
    D. Apophysitis and sprains

39. Place in decreasing order of frequency of tibia and peroneus fractures in the following sports:
    A. Boxing, gymnastics, football
    B. Boxing, football, gymnastics
    C. Football, gymnastics, boxing
    D. Football, boxing, gymnastics

40. Place in the correct order of succession the phases of the repairing process of traumatic lesions:
    A. Collagenic phase, scar maturation phase, precollagenic phase
    B. Scar maturation phase, collagenic phase, precollagenic phase
    C. Precollagenic phase, scar maturation phase, collagenic phase
    D. Precollagenic phase, collagenic phase, scar maturation phase

41. In which of the phases of the traumatic lesions repairing process predominates catabolism as a means of "tissular local digestion"?
    A. Precollagenic phase
    B. All phases
    C. Scar maturation phase
    D. Collagenic phase

42. Which of the following statements is characteristic to the scar maturation phase?
    A. Venous circulation is different from the arterial one
    B. The formation of vascular buds takes place from the main peripheral area (neovessels)
    C. Devascularization of the area takes place until the level of normal vascularization for the respective region (neovessels' regression)
    D. Hypercoagulability occurs

43. Which are the factors which influence the defense-healing process evolution?
    A. The patient's nutrition state
    B. The etiological agent of the aggression
    C. The preexisting morphofunctional condition of the aggressed area
    D. The tolerance to effort degree

44. Which of the following physiotherapy means are used to relieve pain?
    A. Mechanotherapy, hydrotherapy, analgesic medication
    B. Analgesic medication, underwater shower, thermotherapy
    C. Thermotherapy, antialgic postures, diadynamic currents
    D. Analgesic medication, antialgic postures, diadynamic currents

45. Which of the following statements are false?
    A. The repairing process starts after the first 24–48 hours from the aggression
    B. Each of these phases, except the maturation one, contain: vascular phenomena, hemostatic-fibrinolytic phenomena, cytological phenomena, metabolic phenomena
    C. Maturation consists in a sequence of phenomena which lead to cell depletion and mature collagen enrichment
    D. Maturation is over, on average, between the 6^{th} and the 8^{th} month (with extreme limits 10–12 months)

46. What is the osteon made of?
    A. Haversian canal
    B. Golgi organ
    C. The gaps between lamellae
    D. Canaliculi

47. Which is the correct order of bone repairing phases?
    A. Formation of hematoma, formation of fibrocartilaginous callus, formation of bone callus, bone remodeling
    B. Formation of hematoma, formation of bone callus, bone remodeling, formation of fibrocartilaginous callus
    C. Formation of fibrocartilaginous callus, formation of hematoma, formation of bone callus, bone remodeling
    D. Formation of bone callus, formation of hematoma, formation of fibrocartilaginous callus, bone remodeling

48. Which of the following statements are true?
    A. Bone fractures, well covered by muscle masses, heal sooner than the less covered ones
    B. Fractures without displacement, with intact periosteum, heal approximately twice sooner than fractures with displacement
    C. Where the blood supply is insufficient, bone repairment is accelerated
    D. With age increase, a fracture's healing period decreases

49. To alleviate pain, the following means are indicated:
    A. Tapotement type massage, short waves, hot water compresses
    B. Antideclive postures, mechanical vibrations, cryotherapy
    C. Infrared rays (IR), effleurage type massage, diadynamic currents, antalgic positioning
    D. Galvanic baths, active movements with resistance, hydrotherapy

50. Which of the following granular plaques has a favorable prognosis?
    A. Hypertrophic granular plaque
    B. Atonic granular plague
    C. All
    D. Normotone granular plague

51. In the case of an inflammatory process, it is good to avoid:
    A. Applying paraffin
    B. Ice massage
    C. Articular loading
    D. Relaxing articular posturing

52. The meniscus lesions are part of the following types of closed joint traumatisms:
    A. Closed capsule-ligamentary traumatisms
    B. Closed joint fractures
    C. Epiphyseal joint traumatisms
    D. Fibrocartilaginous joint traumatisms

53. Fractures have as certainty symptomatology, the followings:
    A. Deformation of the region
    B. Shortening of the anatomic segment
    C. Bone crepitation
    D. Lack of movement transmission beyond the fracture

54. Which of the following types of joint mobilizations can produce adherence tears with the induction of joint stiffness?
    A. Joint mobilization under anesthesia
    B. Continuous tractions
    C. Discontinuous tractions
    D. Passive mobilizations on elbow flexion extension

55. Passive mobilizations are not recommended at:
    A. Shoulder
    B. Elbow
    C. Hip
    D. Ankle

56. The sequence for developing muscle strength is:
    A. Eccentric contraction, isometric contraction, concentric contraction
    B. Isometric contraction, concentric contraction, eccentric contraction
    C. Eccentric contraction, concentric contraction, isometric contraction
    D. Concentric contraction, eccentric contraction, isometric contraction

57. The isometric contraction is forbidden to individuals who have the following tensional values:
    A. 110/60
    B. 170/100
    C. 135/75
    D. 120/80

58. Which is the natural order of applying rehabilitation means in the case of musculo-tendinous retractures?
    A. Massage-heat-physiotherapy
    B. Massage-physiotherapy-heat
    C. Heat-physiotherapy-massage
    D. Physiotherapy-heat-massage

59. In which of the following sports most frequently occur lesions of the shoulder?
    A. Tennis, polo, volleyball
    B. handball, tennis, rugby
    C. Football, skiing, boxing
    D. Hockey, cycling, gymnastics

60. Codman type exercises are used for:
    A. Hip
    B. Fist
    C. Ankle
    D. Shoulder

61. The decoaptation techniques are used for:
    A. Muscle strength recovery
    B. Joint mobility recovery
    C. Coordination recovery
    D. Ability recovery

62. Which of the elbow luxation is the most frequent?
    A. Lateral luxation
    B. Anterior luxation
    C. Posterior luxation
    D. All

63. The lesion of which peripheral nerve is associated to the hand in "gooseneck"?
    A. Radial
    B. Median
    C. Cubital
    D. All

64. For the facilitation of return circulation and for fighting edema, the following postures are indicated:
    A. Of rest
    B. Alternating
    C. Declive
    D. Antideclive

65. Which is the main objective in posttraumatic hip rehabilitation?
    A. Regaining articular range of motion
    B. Regaining stability
    C. Gait recovery
    D. Coordination recovery

66. Which of the following muscle groups provide the support phase during walking?
    A. Hip abductors
    B. Hip adductors
    C. Hip extensors
    D. Hip flexors

67. Which of the following activities are contraindicated in the case of hip disorders?
    A. Riding the bicycle
    B. Walking on rough terrain
    C. Walking long distances
    D. Walking with cane support

68. The knee's passive stability is provided by:
    A. Capsule-ligament apparatus
    B. Quadriceps
    C. Alignment of bone heads which participate to the joint composition
    D. Ischial calf muscles and triceps surae

69. Knee locking, made on the last 15º–20º of extension is provided by:
    A. Right femoral
    B. Internal vastus
    C. Extern vastus
    D. Ischial calf muscles

70. The sport with the least frequent meniscal lesions is
    A. Football
    B. Skiing
    C. Cycling
    D. Handball

71. The Achilean tendon rupture does not allow:
    A. Foot eversion
    B. Foot extension
    C. Foot inversion
    D. Foot flexion

72. Algoneurodystrophy can have:
    A. 3 phases
    B. 2 phases
    C. 5 phases
    D. 4 phases

73. Skin traumatisms can result in:
    A. Discolorations, avulsions, combustion
    B. Abrasions, fractures, sprains
    C. Abrasions, freezes, loss of substance
    D. Discolorations, arthritis, periostitis

74. The main sequelae of the tegument is:
    A. Vicious callus
    B. Graft plague
    C. Scar
    D. Local vascular microthrombosis

75. The granular plague can be:
    A. Hypertrophic
    B. Normotone
    C. Hyperelastic
    D. Atone

76. Which of the following statements are true?
    A. The normotone granular plague is supple, clean, slightly bleeding, does not have pregnant inflammatory aspect
    B. The normotone granular plague is characterized by superinfection with the disappearance of the local protection barrier
    C. The hypertrophic granular plague is supple, has a bland smell, without inflammatory reactions
    D. The hypertrophic granular plague determines skin hyper allergic reactions, being exuberant and is slightly bleeding

77. Which of the following scar types are characterized by the excess formation of scar tissue which can determine fixations in all possible plans and direction?

A. Ulcerated scar
B. Atrophic scar
C. Hypertrophic scar
D. Keloid scar

78. Which of the following sequelae is not articular?

A. Stiffness
B. Pseudo arthrosis
C. Laxity
D. Ankyloses

79. Which of the following rehabilitation means is beneficial in diminishing pain intensity?

A. Tapotement and kneading type massage
B. Low frequency currents
C. Antalgic posturing
D. Mobilizations under anesthesia

80. To fight inflammation, the followings are forbidden:

A. Cryotherapy
B. High frequency electrotherapy
C. Rest and relaxed posture
D. Neutral thermotherapy

81. The low frequency electrotherapy used to relieve pain is represented by:

A. Trabert currents
B. Diadynamic currents
C. Infrared radiation
D. Ultrasound

82. Which of the following means for regaining mobility should be avoided in the rehabilitation process?

A. Passive mobilizations
B. Discontinuous tractions
C. Joint mobilization under anesthesia
D. Active mobilizations

83. Which of the following actions is considered self-passive mobilization?

A. Pressure of the body upon a joint which must be corrected
B. Tractions with the healthy limb of the affected one with a winch mechanism
C. Lifting weights with the affected limb
D. Relaxation of the affected limb, the physiotherapist doing various maneuvers with it

84. Passive mobilization has the purpose to:
    A. Elongate a retractured muscle or tendon
    B. Recover a lost motor image
    C. Recover muscle strength
    D. Avoid ankyloses onset

85. Under what circumstances are active-passive mobilizations used?
    A. The patient has sufficient muscle strength to mobilize the affected segment against gravity
    B. The patient is afraid to mobilize the segment on his own (pain, inhibition)
    C. The patient has insufficient muscle strength to mobilize the affected segment against gravity
    D. The patient has the necessary strength to initiate the movement, but it is insufficient to finalize it in the entire range

86. Active mobilization within medical rehabilitation can be achieved through:
    A. Hydro-physiotherapy
    B. Tractions in axis
    C. Winch therapy
    D. Mechanotherapy

87. The existence of joint stability implies:
    A. Non-painful joint, fixed by strong muscles, with abnormal mobility
    B. Non-painful joint, fixed by not very strong muscles, but with integral joint capsules and ligaments
    C. Non-painful joint, fixed by strong muscles, with integral joint capsules and ligaments
    D. Joint with bearable pain, good muscles, with mobility close to the normal limits on all possible movement directions

88. Which of the following posttraumatic muscular sequelae occur as a result of blood flow reduction in a certain area?
    A. Muscular atrophy
    B. Muscular hematoma
    C. Muscular ischemia
    D. Muscular tear

89. Which of the following posttraumatic muscular sequelae is characterized by increased resistance to passive stretching, being irreversible?
    A. Muscular contracture
    B. Muscular stiffness
    C. Atrophy caused by immobilization
    D. Muscular hematoma

90. In case of an instable joint, the followings are forbidden:
A. Isometric exercises
B. Hydro-physiotherapy
C. Free active exercises
D. Eccentric exercises

91. For tissue stretching, the following sequence is used:
A. Massage-heat-traction
B. Traction-heat-massage
C. Traction-massage-heat
D. Heat-traction-massage

92. The definition "…is the muscle's capacity to perform a movement or activity over a longer period of time or to sustain a contraction for a longer period of time" is given to:
A. Muscle strength
B. Execution speed
C. Muscle endurance
D. Muscle elasticity

93. Which of the following bone sequelae represents a posttraumatic deformity through a fracture displacement which changes the normal anatomic relations, leading to malalignement:
A. Osteoporosis caused by immobilization
B. Subperiosteally ossification
C. Ischemic aseptic necrosis
D. Vicious callus

94. Which of the following bone sequelae presents itself as a false joint?
A. Pseudo arthrosis
B. Vicious callus
C. Subperiosteally ossification
D. Osteoporosis caused by immobilization

95. According to the moment when the peripheral nerve is harmed, the lesions can be:
A. Primary
B. Tardy
C. Ordinary
D. Secondary

96. In the lesion of the peripheral nerve, the following manifestations do not occur:
A. Muscular hypotonia
B. Abolishment of the osteotendinous reflex
C. Hypertrophy of the affected muscles
D. Specific postural deviations

97. In the posttraumatic lesions of the peripheral nerves, the following can occur:
    A. Motor deficit
    B. Cognitive disorders
    C. sensitivity disorders
    D. Vasculo-trophic disorders

98. Which of the following statements are true?
    A. Splints can be used in the rehabilitation of patients with peripheral nerve paralysis to avoid deformities and vicious attitudes
    B. Massage represents a kinetic means used in paralysis rehabilitation
    C. It is necessary to increase the strength of the paralyzed muscles' antagonists
    D. The neuroproprioceptive facilitation techniques are used without results in the rehabilitation of paralysis caused by the peripheral nerves' lesion

99. Which of the following statements are true?
    A. Once denervated, the muscle can no longer be recovered
    B. The regeneration speed is variable according to the nerve
    C. Prolonged immobilization can lead to the occurrence of osteoporosis
    D. When the peripheral nerve is affected, the muscle stretch reflex is not abolished

100. Which of the following statements are true?
    A. Neurotmesis occurs when the nerve is caught in the callus or scar
    B. Axonotmesis is an intermediary lesion from gravity point of view
    C. Neurapraxia is the most severe lesion
    D. Neurapraxia is characterized by paralysis onset

Correct answers:

1.CD; 2.BD; 3.A; 4.C; 5.BC; 6.AC; 7.B; 8.ABD; 9.A; 10.CD; 11.ACD; 12.CD; 13.ABC; 14.B; 15.CD; 16.D; 17.B; 18.D; 19.BD; 20.B; 21.B; 22.ACD; 23.AD; 24.A; 25.CD; 26.ABD; 27.AC; 28.AC; 29.C; 30.ACD; 31.ABD; 32.B; 33.AD, 34.B; 35.B; 36.CD; 37.ACD; 38.BC; 39.C; 40.D; 41.A, 42.C; 43.BC; 44.C. 45.B; 46.ACD; 47.A; 48.AB; 49.C; 50.D; 51.AC; 52.D; 53.CD; 54.AD; 55.B; 56.A; 57.B; 58.A; 59.AB; 60.D; 61.B; 62.C; 63.A; 64.D, 65.B; 66.A; 67.BC; 68.AC; 69.B; 70.C; 71.B; 72.A; 73.AC; 74.C; 75.ABD; 76.AD; 77.C; 78.B; 79.BC; 80.B; 81.AB; 82.C; 83.AB; 84.ABD; 85.BCD; 86.ACD; 87.C; 88.C; 89.B; 90.D; 91.A; 92.C; 93.D; 94.A; 95.ABD; 96.C; 97.ACD; 98.AB; 99.AD; 100.BD.

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PHYSIOTHERAPY IN CARDIORESPIRATORY DISORDERS

1. Which of the following statements regarding the bronchial tree are not true?
    A. The last ramifications of the bronchial tree are alveolar ducts
    B. The alveolar ducts are ending through the alveolar sac which contains alveoli
    C. From the alveolar ducts, the respiratory bronchioles start
    D. The main bronchus is divided in bronchi which, in turn, are divided in bronchioles
    E. The walls of the alveolar sacs are not devised into pulmonary alveoli

2. Pulmonary acinus – structure through which the gaseous exchange is made – is:
    A. The lung's morpho-functional unit which, from anatomic point of view, is the region serviced by only one terminal bronchiolus out of which 2–3 generations of respiratory bronchioles derive.
    B. The lung's morpho-functional unit which, from anatomic point of view, is the region serviced by several terminal bronchioles out of which 2–3 generations of respiratory bronchioles derive.
    C. The lung's morpho-functional unit which, from physiological point of view, is the region serviced by only one terminal bronchiolus out of which 2–3 generations of respiratory bronchioles derive.
    D. The lung's morpho-functional unit which, from anatomic point of view, is the region serviced by several terminal bronchioles out of which only one bronchiolus derives.
    E. The terminal bronchiolus, together with the respiratory bronchioles and their ramifications – alveolar ducts, alveolar sacs and pulmonary alveoli.

3. Alveolo-capillary membrane:
    A. Is in the bronchial tree and pulmonary alveoli
    B. Is around the pulmonary alveoli
    C. Is represented by a rich capillary network
    D. At its level, the gaseous exchange between alveoli and blood take place
    E. Is also named respiratory membrane

4. From functional point of view, breathing represents:
    A. O_2 and CO_2 diffusion between pulmonary alveoli and blood
    B. Pulmonary ventilation
    C. CO transportation through blood
    D. O2 and CO2 transportation through blood and bodily fluids from and to the cells
    E. Ventilation regulation

5. Pulmonary ventilation does not imply:
    A. Gaseous exchanges in both directions between pulmonary alveoli and atmosphere because of the pressure gradient

B. O_2 transportation through blood and bodily fluids to the cells
C. CO_2 transportation through blood and bodily fluids from the cells
D. Mechanical process through which the gaseous exchange is provided between atmosphere and lungs
E. Cyclic variations of the thoracic cage's volume followed by the movements in the opposite way of the lungs

6. Regarding the pulmonary ventilation, the following statements are true:
A. It comprises cyclic variations of the thoracic cage's volume followed by the movements in the same way of the lungs
B. Lungs dimensions' variation through distension and retraction
C. Participation of pleura to the lungs' movements in the opposite way of the thoracic cage's moves
D. Participation of pleura to the lungs' movements in the same way of the thoracic cage's moves
E. Two movements in the same way of the thoraco-pulmonary system, defined as the inspiration movement and expiration movement

7. The mechanics of pulmonary ventilation implies:
A. Change of the longitudinal diameter of the thoracic cage as a result of rib movement and antero-posterior and transverse axes through the diaphragm movement
B. Change of the longitudinal diameter of the thoracic cage as a result of diaphragm movement and of antero-posterior and transverse axes through the rib movement
C. Variations of the thoracic cage volume only under the action of the diaphragm
D. Contraction of certain thoracic and abdominal muscle groups in rest breathing
E. Pressure gradient (pressure difference between atmosphere and lung) which determines air flow from the environment with high pressure towards the environment with low pressure

8. Exhaling = decrease in volume of the thoracic cage and lungs caused by:
A. Diaphragm flattening
B. Return of the diaphragm to dome shape
C. Contraction of the external intercostal muscles, obliquely inserted (up-down; posterior-anterior) and which elevate the ribs
D. The elasticity force of costal and lungs' cartilages
E. Lowering the ribs in the direction of the weight force

9. Which of the following statements regarding the diaphragm contraction are not true:
A. Pulls downwards the lungs' basal face
B. Pulls upwards the lungs' basal face
C. Determines the elongation of the thoracic cage
D. Determines the shortening of the thoracic cage
E. Represents the main way of lung expansion in rest breathing

10. In rest breathing:
    A. The thoracic cage is shortening
    B. The thoracic cage is elongating
    C. The diaphragm is contracting
    D. The diaphragm is relaxing
    E. The costal grid is raising

11. During calm exhaling, it takes place:
    A. Lungs compression
    B. Lungs elastic retraction
    C. External intercostals' contraction
    D. Diaphragm contraction
    E. Diaphragm relaxation

12. Which of the following statements regarding pleural pressure are not true:
    A. It is the pressure from the space between the parietal and visceral pleura
    B. It varies with the breathing phases
    C. It does not vary with the breathing phases
    D. Normally, it is higher than atmosphere pressure

13. The muscles which do not interfere in exhaling are:
    A. Straight abdominal muscles
    B. The muscles which determine the raising of the ribs
    C. The diaphragm
    D. The neck muscles
    E. The muscles which determine the lowering of the ribs

14. The pulmonary elastic (rebound) forces which are at the basis of exhaling are:
    A. The elastic forces of the pulmonary tissue itself
    B. The elastic forces produced by surfactant's superficial tension
    C. The elastic forces produced by the tensio-active liquid's superficial tension which pads internally the alveolar walls
    D. The elastic forces produced by the tensio-active liquid's superficial tension which pads internally other pulmonary aerial spaces
    E. The elastic forces produced by the tensio-active liquid's superficial tension which pads externally the alveolar walls

15. Ventilation regulation is not accomplished:
    A. By the nervous centers from the mesencephalon
    B. By the nervous centers from the bulb and bridge
    C. By the nervous centers from diencephalon
    D. Based on the stimuli received from chemoreceptors from the bulb and bridge

16. Which of the following statements regarding the diaphragm are not true:
    A. It separates the thoracic cavity from the abdominal one
    B. It separates the thoracic cavity from the pelvic one
    C. It presents three orifices which enable the passing of the aorta, esophagus and vena cava
    D. It is a musculo-aponeurotic formation
    E. It is innervated by the phrenic nerves and T6-T10 intercostal nerves

17. The greater (systemic) circulation provides the movement of blood from:
    A. The right ventricle to the lung through the pulmonary arteries and then in the left atrium through the pulmonary veins
    B. The left atrium towards the arteries, arterioles, capillaries, venules, veins, getting into the right ventricle
    C. The left ventricle to the lung through the pulmonary arteries and then in the right atrium through the pulmonary veins
    D. The left ventricle towards the arteries, arterioles, capillaries, venules, veins, getting into the right atrium
    E. The left ventricle towards the arteries, arterioles, capillaries, venules, veins, getting into the right ventricle.

18. The lesser (pulmonary) circulation provides the movement of blood from:
    A. The right ventricle to the lung through the pulmonary arteries and then in the left ventricle through the pulmonary veins
    B. The right ventricle to the lung through the pulmonary arteries and then in the left atrium through the pulmonary veins
    C. The right atrium to the lung through the pulmonary arteries and then in the left ventricle through the pulmonary veins
    D. The right atrium to the lung through the pulmonary arteries and then in the left atrium through the pulmonary veins
    E. The left ventricle to the lung through the pulmonary arteries and then in the left atrium through the pulmonary veins

19. The following statements are true, but less:
    A. The heart is made up of three layers which are overlapping from the outside to the inside: pericardium, myocardium, endocardium
    B. The serous pericardium is inside the fibrous pericardium and is made up of two layers: an internal one (visceral), epicardium – which pads the internal surface of the myocardium; an external one (parietal) – which pads the external surface of the fibrous pericardium
    C. The myocardium is made up of the contractile myocardium and the embrionary myocardium
    D. Between the two layers of the serous pericardium, there is the pericardial cavity which contains a small quantity of pericardial liquid
    E. The serous pericardium is inside the fibrous pericardium and is made up of two layers: an internal one (visceral), epicardium – which pads the external surface of the myocardium; an external one (parietal) – which pads the internal surface of the fibrous pericardium

20. Which of the following statements regarding the cardiovascular system's functions are not true:
    A. It provides nutrition to the tissues and removal of the catabolism products
    B. It provides proper blood flow form the point of view of pressure and quantity, related to the tissular necessities
    C. Provides the bidirectional gaseous exchange between the body and the air in the atmosphere
    D. Provides the transportation of hormones, the immune system's cells and other mediators
    E. Interferes in maintaining hydro-electrolytic balance

21. Which of the following statements regarding the hearing are true:
    A. A pump which provides blood ejection into the systemic circulation and into the pulmonary circulation
    B. Has its own network of blood vessels: coronary system which provides the oxygen supply and nutritional substances
    C. Cavitary organ, equipped with valves situated in the abdominal cavity
    D. It is the only muscular organ which contracts rhythmically
    E. At the base of the heart, there are the ventricles and, towards the top, there are the atriums

22. Which of the following features do not belong to the myocardium?
    A. Excitability (responds to a stimulus through a propagated action potential)
    B. Automatism (selfexcitation) – the capacity of pacemaker cells to generate impulses
    C. Plasticity (maintains constant blood pressure in various degrees of distension)
    D. Conductivity (conducts the stimuli generated at cardiac level)
    E. Contractility (responds to stimuli through a contraction)

23. Which of the following statements are true:
    A. Extrinsic innervation of the heart (till entering the organ) is made through the cardiac plexus, being double: sympathetic and parasympathetic (nerve X)
    B. Parasympathetic PNS (vagus nerve and its mediator acetylcholine) has stimulating effects upon the features of the myocardium. If the parasympathetic dominates chronically the heart activity, then there onsets tachycardia, excitability disorders and high blood pressure
    C. Parasympathetic PNS (vagus nerve and its mediator acetylcholine) has depressing effects upon the features of the myocardium. Under strong stimulation circumstances, it determines severe bradycardia or even the heart stops
    D. Sympathetic SNS (through its mediators, adrenaline and noradrenaline) has depressing effects upon the features of the myocardium. Under strong stimulation circumstances, it determines severe bradycardia or even the heart stops.
    E. Sympathetic SNS (through its mediators, adrenaline and noradrenaline) has stimulating effects upon the features of the myocardium. If the sympathetic dominates chronically the heart activity, then there onsets tachycardia, excitability disorders and high blood pressure.

24. Blood circulation is influenced by the peripheral resistance (liquid friction on the vessels' walls) .Which of the following statements are not true:
    A. Blood with increased viscosity, blood vessels with diminished diameter and extended on a large surface (long) can sensibly slow down the blood circulation

B. Blood with increased viscosity, blood vessels with diminished diameter and extended on a large surface (long) can increase arterial pressure and resistance
C. Blood with low viscosity, blood vessels with large diameter and extended on a small surface (short) can reduce arterial pressure and resistance
D. Blood with increased viscosity, blood vessels with diminished diameter and extended on a large surface (long) can reduce arterial pressure and resistance
E. Blood with increased viscosity, blood vessels with diminished diameter and extended on a large surface (long) can sensibly increase the blood circulation

25. Determining factors of arterial pressure are:
A. Cardiac pump – determines maximum blood pressure
B. Stress
C. Peripheral vascular resistance
D. Volume
E. Physical exercise

26. The following valves are opening during the ventricular systole:
A. Bicuspid – between LA and LV
B. Tricuspid – between RA and RV
C. Aortic – between LV and aorta
D. Pulmonary – between RV and pulmonary aorta
E. Mitral – between LA and LV

27. The following valves are not opening during the ventricular diastole:
A. Mitral – between LA and LV
B. Tricuspid – between RA and RV
C. Bicuspid – between LA and LV
D. Aortic – between LV and aorta
E. Pulmonary – between RV and pulmonary aorta

28. Which of the following statements referring to the ventricular diastole are not true:
A. The semilunar valves are opening
B. The atrio-ventricular valves are closing
C. The ventricles become, for a short period of time, some closed cavities
D. The intraventricular pressure becomes inferior to the one in the large arteries
E. The semilunar valves are closing

29. Which of the following statements regarding the valvular system are not true:
A. The tricuspid valvula and the mitral one have the same role, namely to direct the blood flow in the right side of the heart, only from the atrium in the ventricle, preventing it in the other way.
B. Each valve has two cusps, except the tricuspid valve which has three cusps.
C. The cardiac valves cat feature two types of dysfunctions: insufficiency: the valves' opening is reduced and is made with difficulty and stenosis: the valves do not close completely, determining blood discharge (regurgitation)

D. The heart's valvular system is made up of atrio-ventricular and sigmoid valves
E. The aortic valve and the pulmonary valve compose the atrio-ventricular valves, while the bicuspid valve and the tricuspid valve compose the sigmoid valves

30. The main cause for the blood returning to the heart is:
A. Thoracic aspiration
B. Cardiac pump
C. Abdominal press
D. Muscular pump
E. Gravity

31. Which of the following statements are not true:
A. The division of cardiac muscle mass in two separate syncytial territories allows the atriums to contract a little bit sooner than the ventricles, important fact for the ventricular pump efficiency
B. The depolarization of a cardiac cell is not transmitted to the adjacent cells, which changes the myocardium in a functional syncytium.
C. The heart functions as two syncytia: an atrial one and a ventricular one, isolated from electrical point of view.
D. The adult myocardium has a role in generating and transmitting contraction stimuli, being formed of: Keith-Flack sinoatrial node (SA) and the atrio-ventricular conduction system
E. There is only one functional electrical connection between the atriums and ventricles: the atrio-ventricular node and its continuation, the His atrio-ventricular fascicle

32. Which of the following statements are true:
A. The heart has the feature of being excitable only in the relaxation phase (diastole) and inexcitable in the contraction phase (systole)
B. During systole, the heart is in the absolute refractory state; irrespective of how strong the stimulus is, it remains without effect
C. Excitability is the cardiac muscle cell's feature to respond to a stimulus through a contraction
D. Excitability is the cardiac muscle cell's feature of self-excitation
E. Excitability is the cardiac muscle cell's feature to respond to a stimulus through a propagated action potential

33. Which of the following statements regarding inotropism are not true:
A. The capacity to respond to stimuli through a contraction
B. The capacity to respond to stimuli through a systole
C. The capacity to maintain a basal contractile tone
D. The capacity to respond to stimuli through a process of shortening the sarcomere and, through this, of the myofibrils and cardiac fiber
E. The capacity to respond to stimuli through developing tension between the ends of its fibers

34. The ventilation functional tests:

A. Are important in diagnosing certain pulmonary diseases or quantifying some which are already known; the pulmonary function in time and the treatment efficacy cannot be evaluated.
B. Are important in evaluating the capacity to adjust to effort; measure the maximum performance of the thoraco-pulmonary pump.
C. Detect the presence/absence of the dysfunction suggested by anamnesis or clinical exam, by other diagnosing tests, thoracic radiography, sanguine gases; the dysfunction degree cannot be established
D. Evaluate the potential effects or monitor the response to professional or environmental noxae such as asbestos, dust, silicium, which can affect the lungs
E. Evaluate an individual's ventilation system before a surgical intervention; evaluate the risk of surgical interventions which are known to affect the pulmonary function

35. Which of the following statements regarding spirometry are not true:

A. The results are interpreted in relation to the reference values and the limits which are considered normal
B. It represents a highly accurate paraclinical investigation and with predictive value
C. The determination of pulmonary volumes is obtained by determining the speed of air expulsion from the lung
D. The determination of pulmonary debits is obtained by quantifying the gas volume from the lung under various circumstances
E. Establishes which is the absorption degree of blood gases, at lung level; analyzes gas diffusion, measures the quantity of oxygen and other gases which reaches the alveoli in one minute.

36. The air volume contained in the lungs at the end of a maximum inhaling, defined as the total pulmonary capacity (TPC), is calculated as follows:

A. Vital Capacity (VC) + Residual Functional Capacity (RFC)
B. Residual Volume (RV) + Exhaling Reserve Volume (ERV)
C. Inhaling Reserve Volume (IRV) + Exhaling Reserve Volume (ERV)
D. Vital Capacity (VC) + Residual Volume (RV)
E. Inhaling Capacity (IC) + Residual Functional Capacity (RFC)

37. The air volume which cannot be ejected from the lungs, even after a maximum exhaling effort, defined as residual volume (RV) is:

A. Total Pulmonary Capacity (TPC) – [(Exhaling Reserve Volume (ERV) + Inhaling Reserve Volume (IRV) + Current Volume (CV)]
B. Residual Functional Capacity (RFC) – Exhaling Reserve Volume (ERV)
C. Total Pulmonary Capacity (TPC) – Vital Capacity (VC)
D. Total Pulmonary Capacity (TPC) – [Inhaling Reserve Volume (IRV) + Tidal Volume (TV)]
E. Total Pulmonary Capacity (TPC) – Inhaling Capacity (IC) – Exhaling Reserve Volume (ERV)

38. Which of the following statements regarding the vital capacity (VC) are not true:
    A. It varies in value depending on the individual's age, sex and size (height, body surface, weight).
    B. Increases proportionally with age and decreases with height.
    C. The patient's determined value must be correlated with the standard value and assessed only like this
    D. It is preferred that the "forced vital capacity" (FVC) would be recorded, not the simple VC.
    E. In severe bronco-pulmonary diseases, VC and FVC are equal
    F. Normal VC = 80–120% of the ideal VC

39. The decrease of VC denotes:
    A. The limitation of possibilities of thoracic expansion increase, of pulmonary expansion increase or both
    B. The increase of ventilation work and the definition of the obstructive syndrome
    C. The impossibility to increase ventilation per minute (in effort)
    D. The increase of respiratory frequency and the definition of the restrictive syndrome
    E. The limitation, during inhaling, of thoracic ampliation, of pulmonary ampliation or both

40. Which of the following statements regarding the Maximum Exhaling Volume in a Second (MEVS) are incorrect:
    A. It allows the evaluation of indirect maximum ventilation which indicates the ventilation adjustment degree during physical effort
    B. The patient's determined MEVS should not be related to the standard value and assessed only like this
    C. Together with VC and BPI, it establishes the type of ventilation dysfunction and severity of the disease
    D. MEVS decrease denotes the decrease of contraction force of the ventilation muscles, the increase of elastic rebound of parenchyma, the increase of resistance to flow, opposed by the air ways' peripheral segment
    E. MEVS decrease is encountered in the restrictive syndrome and obstructive syndrome

41. Which of the following statements regarding the Tiffeneau index (MEVS/ FVC%) are not true:
    A. MEVS/ FVC% under the predicted value denotes that the strength of the respiratory muscles is very low and the capacity to perform forced, fast exhaling is also decreased → restrictive syndrome
    B. MEVS/ FVC% under the predicted value denotes that the strength of the respiratory muscles is very low and the capacity to perform forced, fast exhaling is also decreased → obstructive syndrome
    C. Normal or increased MEVS/ FVC% denotes that the strength of the respiratory muscles is preserved, the thoracic wall is abnormally stiff, so the exhaling position in rest cannot be reached → obstructive syndrome
    D. MEVS/ FVC% under the predicted value denotes the slowing down of the air flow, primary sign of bronchial obstruction
    E. Named the bronchial permeability index (BPI) = the percentage from the forced vital capacity, represented by the exhale in the first second

42. Which of the statements are correct:
    A. The decrease of indirect maximum ventilation (Vmx) indicates insufficient neuromuscular reserve, abnormal respiratory mechanics, or improper effort capacity (but FEV1 and FVC are normal)
    B. Maximum ventilation debit per minute (Maximum ventilation) (MMV; Vmax); the ventilated air volume between a maximal inhale, followed by a maximal exhale (hyperventilation; calculated with the formula: MEVSx30) is related to the predicted values
    C. Vmx indicates the ventilation adjustment degree during physical effort; it is calculated with the help of MEVS
    D. Very low MEVS (under 1200 ml or under 40–35%from the theoretical value) is almost certainly accompanied by hypoxia, so there is pulmonary insufficiency
    E. The decrease of Indirect maximum ventilation (Vmx) assesses the extent to which the pump's kinetics is disturbed = ventilation dysfunction and it does not necessarily reveal the alteration of the mechanical properties (pump's dynamics) which are not emphasized by the thoraco-pulmonary mechanics tests

43. Which of the statements are correct:
    A. Respiratory frequency (RF) provides indications about the respiratory range of motion, rhythm and frequency.
    B. RF assessed in rest, during physical effort and after finishing it, provides part of the requirements necessary for elaborating prophylaxis/treatment/rehabilitation programs
    C. The respiratory frequency is controlled by the respiratory center from the bulb and is regulated according to the level of carbon dioxide from the blood, rather than by the oxygen concentration
    D. RF provides an overall image of the health condition and varies according to age, fitness level, but not to gender
    E. Alveolar hyperventilation (acceleration of breathing, determining the increase of air quantity which ventilates the lungs) occurs when arterial PCO2 ($PaCO_2$) increases over the normal limit of 37–43 mmHg.

44. Which of the statements are incorrect:
    A. Hyperventilation refers to acceleration of breathing, determining the increase of air quantity which ventilates the lungs, fact which determines a low level of carbon dioxide in blood
    B. Alveolar hypoventilation refers to the decrease of air quantity which ventilates the lungs and which participates to gaseous exchanges, so it is the result of alteration of external ventilation (abnormal composition or abnormal volume of air at alveolar level)
    C. Hypoventilation = ↑$PaCO_2$ >44mmHg (respiratory acidosis, alternatively hypocapnia) hypoventilation →hypoxia
    D. Hyperventilation = ↓$PaCO_2$ <36mmHg (respiratory alkalosis, alternatively hypocapnia) hyperventilation →hypoxemia
    E. Acidosis is defined as ↑pH over 7.42; alkalosis is defined as ↓pH under 7.38

45. Respiratory insufficiency is:
    A. Pathological condition, congenital or gained, characterized by a tightness of the heart's pulmonary valvula (between the right ventricle and the trunk of the pulmonary artery), determining a pulmonary arterial blood reflux towards the right ventricle and being able to engage a dilatation of the same ventricle
    B. Incapacity, acute or chronic, of the lungs to provide their function, which means a decrease of CO_2 concentration in the blood and, sometimes, an increase of O_2 concentration in the blood
    C. Incapacity, acute or chronic, of the lungs to provide their function, which means a decrease of O_2 concentration in the blood and, sometimes, an increase of CO_2 concentration in the blood
    D. Capacity, acute or chronic, of the lungs to provide their function, which means a decrease of O_2 concentration in the blood and, sometimes, an increase of CO_2 concentration in the blood
    E. Improper gas exchange by the respiratory system, the consequence being the impossibility to keep at normal values the arterial levels of O_2 ($\downarrow PaO_2 < 60mmHg$) și a CO_2 (+/- $PaCO2 >$ 45 mmHg)

46. Which of the statements referring to the Cardiac Frequency (CF) are incorrect:
    A. It provides indications referring to the health condition and permeability of blood vessels, heart rate and strength of heart beats, number of heart beats per minute
    B. Determined in rest, during physical effort and after finishing it, it provides a large part of the requirements necessary for establishing the physiotherapy program
    C. It accelerates at effort or stress under the effect of a stimulation of the pneumogastric nerve (or vagus)
    D. It accelerates at effort or stress under the effect of a stimulation of the sympathetic nerve or of certain hormones' action (adrenaline, noradrenaline) upon the sinus node.
    E. Depending on the obtained CF at the end of the effort test, the tests are classified as: maximal tests: carried on until the optimal maximum frequency is achieved or until the subject's exhaustion; and submaximal tests: carried on until the theoretical maximum cardiac frequency is achieved

47. Which of the statements referring to arterial blood pressure (ABP) are incorrect:
    A. It provides indications referring to peripheral resistance, blood quantity in the arteries, blood viscosity, heart's contraction force, elasticity of arterial walls
    B. It represents the pressure applied by the blood column on the vascular wall, especially on the tunica externa – endothelium during the rhythmic heart contraction and relaxation.
    C. Normally, SABP progressively decreases in effort with 8–10mmHg/effort stage (presenting variations between 165–220mmHg)
    D. Normally, DABP remains unchanged, decreases (in case of well adjustment to effort due to RPT decrease) or increases with maximum 10 mmHg compared to the initial values
    E. Exaggerated increase of SABP at effort indicates an increase of the effort threshold and a significant decrease of myocardial O_2 consumption

48. Counterindications of the effort test:
    A. Acute diseases or severe ischemic disorders
    B. Interstitial pulmonary disease
    C. Severe obstructive cardiomyopathy
    D. Revascularization (aortocoronary by-pass)
    E. Thromboembolic disorders

49. Bradycardia:
    A. Acceleration of cardiac frequency over 90 pulsations per minute; normal cardiac rhythm varies in most subjects from 60 to 90 pulsations per minute, with an average of 70 to 80
    B. Decrease of cardiac frequency under 60 beats per minute in adults and less than 80 beats per minute in children; in athletes and adolescents, it can reach a value of 40 beats per minute due to training and age
    C. Change of CF depending on breathing phases (frequency ↑ in inhale and ↓ in exhale); it occurs in children and young people, in individuals with vegetative disorders
    D. Abnormal cardiac contraction, occurring prematurely during the cardiac cycle

50. The cardiopulmonary functional exam, addition to the clinical diagnosis, is not necessary for:
    A. Knowing the severity of the disease and monitoring its evolution
    B. Individualizing of the physical training program
    C. Monitoring the effects achieved by applying different therapeutic measures
    D. Evaluating the tolerance to effort within the professional activity
    E. Evaluating growth and physical development, global and analytical assessment

51. Regarding measuring ABP at home, the following statements are incorrect:
    A. It is necessary for the evaluation of ABP variations, as well as for diagnosing and monitoring arterial hypertension
    B. The patient in sitting position and after rest for five minutes, in a quiet environment, with stretched arm and supported
    C. The use of a validated device and with periodically checked accuracy;
    D. Taking 2 measurements at 1 minute interval, the person being in sitting position; taking measurements twice a day, in the morning, after waking up, and in the evening, for 7 days (at least 4 days).
    E. The values measured at home are higher with 5–10mmHg than those taken in the doctor's office

52. The most important unchangeable cardiovascular risk factors are:
    A. Age
    B. Masculine sex
    C. heredity
    D. Arterial hypertension (AHT): defined as values of the ABP > 140/90 mmHg
    E. Dyslipidemia: increase of total cholesterol, of LDL of cholesterol and decrease of HDL cholesterol

53. From the pathological processes in the cardiovascular system, the disorders of the heart's functions are also a part, respectively the disorders of automatism, excitability and conductibility. In the excitability disorders, the followings cannot be found:

A. Sinus arrhythmia
B. Extra systole
C. Atrial and ventricular fibrillation
D. Flutter
E. Atrio-ventricular cardiac blocks

54. The changeable risk factors of terosclerosis are those listed, with the exception of:

A. Arterial hypertension
B. Hypercholesterolemia
C. Smoking
D. Physical effort
E. Obesity and sedentariness

55. In chronic obliterant arteriopathy of the lower limbs, the following statements are not true:

A. Occlusive disease which evolves with the progressive reduction of the arterial lumen, followed by the diminishing of the local blood flow; the etiology is atherosclerotic
B. Pain appears initially at effort (intermittent claudication); later, it appears in rest, too
C. The objective exam detects the diminishing or disappearance of the arterial pulse
D. The pain in rest appears in all stages of the disease
E. The pain in rest appears from the 3rd stage of the disease

56. The following statements are not correct:

A. Chronic vascular disease, of unknown etiology, characterized by thickening and stiffening of the arterial walls → progressive narrowing of the vascular lumen is named atherosclerosis
B. Atherosclerosis and arteriosclerosis represent the same type of disorder
C. The atheroma plate (composed of macrophages, smooth muscle cells, lipids and collagen) affects the intima of the systemic arteries, but not that of the veins
D. Age, sex, heredity and genetic disorders of the lipid metabolism (hypercholesterolemia) do not represent uninfluenceable risk factors of atherosclerosis
E. The atheroma plate affects especially the large arteries (elastic, conducting ones); the complications are the decrease of the blood flow, thrombosis, aneurysm

57. Ischemic cardiopathy

A. Is pathologically framed in the hyper function of the myocardium
B. Is a myocardia disorders caused by an imbalance between coronary blood flow and myocardia necessities, produced through changes in the coronary circulation
C. It can manifest itself through pectoral angina, ischemic cardiac insufficiency, myocardial infarction, cardiac arrhythmia, sudden coronary death
D. Smoking, drinking alcohol, arterial hypertension do not represent risk factors
E. Coronary atherosclerosis, coronary vasculitis, congenital abnormalities of the coronary circulation are part of the etiology

58. The following statements about the characteristics of pectoral angina are not correct:
    A. The patient claims moderate pain in the shoulder when dressing, combing the hair or when the upper limb is used by carrying heavy things; the pain can produce discomfort to the patient during sleeping, being intensified in certain positions
    B. The pain is localized retrosternally; sometimes, atypical localizations occur, too: in the right hemithorax, in the epigastric region (in the postero-inferior infarction), in the left upper limb, in the interscapulovertebral region
    C. The pain irradiates in the left shoulder and upper limb on the cubital edge till the last two fingers; some other times, it irradiates in the mandible and at neck level; there are atypical the pains in both shoulders or in the posterior region of the thorax
    D. The neural pain is sometimes described as a dagger, sharp, spasm-like; usually, the patient describes the pain in loop, along the intercostal space; sporadic episodes of acute pain can occur, which is uncomfortable, but constant; the can get more severe as a result of physical exercise, coughing or laughing.
    E. The pain has a constriction character, like a precordial claw or sometimes it is felt like a pressure or burn

59. Mild AHT-1st degree is defined through:
    A. SBP 160–179 and DBP 90–99 mmHg
    B. SBP 140–159 and DBP 90–99 mmHg
    C. SBP > 180 and DBP 100–109 mmHg
    D. SBP 140–159 and DBP > 110 mmHg
    E. SBP 169–179 and DBP 100–109 mmHg

60. In the acute myocardial infarction, the following statements are true:
    A. Angina can be described as discomfort, weight, pressure, burns, plenitude, squeezing, etc. as consequence of poor heart irrigation
    B. The acute myocardial infarction is the consequence of occlusion of one of the main coronary arteries
    C. The pain in acute myocardial infarction is atrocious, excruciating
    D. Angina is localized retrosternally, but it can irradiate towards the neck, lower jaw or arms
    E. In the acute myocardial infarction emergency hospitalization is not recommended
    F. In the acute myocardial infarction emergency hospitalization is recommended

61. Which of the following statements about pulse are not true:
    A. Frequency is assessed by counting the pulsations for one minute – with rare exceptions, it is equal with the frequency of cardiac contractions (adult 60–80p/m; elderly 80–90p/m);
    B. Rhythm is represented by the interval between two successive pulsations;
    C. Tension indicates the maximum pressure produced by the blood when flowing through arteries towards the other organs
    D. Amplitude refers to the size of the pulse wave
    E. Celerity (speed) indicates the fastness with which the pulsatile wave comes and goes

62. The followings are not risk factors for profound venous thrombosis:
    A. Prolonged immobilization
    B. Varicose veins
    C. Smoking
    D. Arterial hypertension
    E. obesity

63. The cardiovascular risk factors are:
    A. Age, sex, heredity
    B. HDL cholesterol, estrogens
    C. AHT, hypercholesterolemia, DZ, sedentariness, obesity, smoking, drugs
    D. Physical activity
    E. Professional exposure to air pollutants and improper microclimate conditions at the work place

64. Coronary patients' prolonged bed immobilization is followed by multiple complications:
    A. Cardiovascular deconditioning
    B. Venous and bronchial stasis
    C. Trophic disorders
    D. Amelioration of ejection fraction
    E. Psychic decompensations

65. The cardiovascular adjustments in rest record the following parameter modifications
    A. Cardiac frequency decrease
    B. Circulating blood volume decrease
    C. Blood pressure values' decrease
    D. Cardiac beat volume decrease
    E. Cardiac beat volume increase

66. The effects of physical exercise upon the cardiovascular system are the following:
    A. Blood debit decrease
    B. Circulating blood volume increase
    C. Diastolic tension decrease
    D. Improvement of return, venous and lymphatic circulation
    E. Myocardium capillarization decrease

67. The effects of training upon the cardiovascular apparatus are not:
    A. Rest bradycardia and relative in effort
    B. Systole elongation, as work economy, as well as diastole elongation, favoring the coronary flow
    C. Myocardial hypotrophy with weight increase of the heart
    D. O_2 consumption increase
    E. Regulating heart dilatation through the enlargement of its cavities; the large volume of the cavities and the large residual blood quantity provides the trained heart the possibility to eject in effort a higher systolic volume

68. In calm inhaling, normally, the following muscles interfere:
    A. Scalene
    B. Diaphragm
    C. Sternocleidomastoidiens
    D. Sacrospinals
    E. Intercostal (external) muscles

69. In forced exhaling, the following muscles do not interfere:
    A. Rectus adbominis
    B. Sternocleidomastoidiens
    C. Intercostal (external) muscles
    D. Abdominal oblique muscles
    E. Quadratus lumborum

70. Regarding breathing regulation, the following statements are not correct:
    A. Nervous regulation induces an arhythmical ventilation activity
    B. Nervous regulation provides ventilation adjustment, on the reflex path
    C. Neuro-humoral regulation adjusts the ventilation to the body's metabolic necessities
    D. The subcortical structures do not interfere in the regulation of breathing
    E. The cerebral cortex provides reflex control of breathing

71. In case of spirometry exploration of the respiratory function
    A. The vital capacity (VC) is represented by the total pulmonary capacity (TPC) – residual volume (RV)
    B. VC = volume of air mobilized during a maximum breathing
    C. VC is low in the obstructive respiratory syndrome (ORS)
    D. The total pulmonary capacity (TPC) is increased in the restrictive ventilation syndrome (RVS)
    E. Maximum ventilation represents the limit value up to which the ventilation per minute can increase

72. The restrictive ventilation syndrome is characterized by:
    A. Total pulmonary capacity (TPC) increase
    B. Thoracic expansion limitation of pulmonary or extra pulmonary cause
    C. Limit value increase up to which the ventilation per minute can increase
    D. MEVS decrease
    E. Current volume increase

73. The functional-respiratory consequences of RVS are:
    A. Pulmonary compliance decrease
    B. Deep, ample breathing
    C. Alveolar hyperventilation
    D. Ventilation work decrease
    E. Thoraco-pulmonary elasticity increase

74. Hypoventilation within the restrictive ventilation syndrome can be induced:
    A. Deficient respiratory muscles through neuromuscular diseases
    B. Ventilation stimuli decrease through central neurological diseases
    C. Ventilation stimuli decrease through peripheral neurological diseases
    D. Ventilation work increase through diseases of the thoracic wall
    E. Ventilation work increase through diseases of the lung

75. Alveolar hypoventilation changes the blood gases as follows:
    A. Alveolar pressure of CO_2 increases
    B. Blood pressure of CO_2 increases
    C. Alveolar pressure of CO_2 decreases
    D. Blood pressure of CO_2 decreases
    E. Alveolar pressure of O_2 increases

76. In obesity, the following statements are not correct:
    A. ORS onsets
    B. RVS onsets
    C. The thoracopulmonary system is mechanically overloaded
    D. Thoracic ampliance decreases
    E. VER increases

77. In kypho-scolioses, the respiratory functional investigations indicate:
    A. VC increase
    B. Increased total pulmonary capacity
    C. Increased maximum ventilation per minute
    D. Residual volume decreases
    E. Tachypnea

78. In ankylosing spondylitis, from respiratory point of view, the following occurs:
    A. VC decrease
    B. Maximum ventilation decrease
    C. Tachipnoea tendency with current volume increase
    D. Significant decrease of residual volume
    E. Pulmonary compliance decrease

79. Dyspnoea is not:
    A. Defined as “lack of air” or “thirst for air”
    B. An incapacity to ventilate enough air
    C. Symptom – subjective, the patient claiming heavy breathing and as sign – it objectivizes the changes in frequency and amplitude of the respiratory movements
    D. Defined as an accentuated tiredness condition
    E. Associates the decrease of respiratory muscles’ work for a normal ventilation

80. Dyspnoea
A. Is caused especially by hypercapnia
B. Can be emotionally induced
C. Associates the increase of respiratory muscles' work for a normal ventilation
D. Decreases the lung's mechanical work
E. Increases the CO2 level in blood

81. Which of the following criteria do not characterize the restrictive ventilation dysfunction:
A. It can be generated by parietal affectation: kypho-scoliosis, obesity, ankylosing spondylitis
B. Can occur in acute polyarticuloneuritis – Guillain-Barre syndrome
C. Implies the decrease of total pulmonary capacity
D. Decreased MEVS/VC% ratio
E. Increased current volume

82. The increase, several time, of the ventilation cost in the obstructive syndrome, clinically translates into:
A. Headache
B. Dyspnoea
C. Coughing
D. Expectoration
E. Fever

83. Which of the following mechanisms which produce obstructive ventilation dysfunctions are irreversible:
A. Mucus hyper secretion
B. Secretory cells' hypertrophy
C. Bronchospasm
D. Secretory cells' hyperplasia
E. Loss of air ways

84. Which of the following mechanisms which produce obstructive ventilation dysfunctions are not irreversible:
A. Disorders of the mucociliary apparatus
B. Dynamic narrowing from exhaling
C. Decrease of the elastic rebound
D. Bronchic fibrotic and perifibrotic process
E. Mucosa edema

85. Which of the following statements are correct
A. Dynamic narrowing from exhaling, it is the obstruction which occurs in inhaling
B. Mucus hyper secretion determines increases of resistance to flow
C. Mucus viscosity increase in the middle and large ways determines MEVS decrease
D. Mucus viscosity increase in the small ways, forming true blockages, completely suppresses their lumen
E. Mucus edema decreases considerably the bronchic caliber, determining important decreases of resistance to flow

86. The therapeutic and rehabilitation conclusions which should be considered in direct correlation with the disturbance of pulmonary volumes (one of the physiopathological processes determined by the obstructive syndrome) are:

A. Increase of bronchial diameter through aiming the reversible mechanisms
B. Increase of bronchial diameter through aiming the irreversible mechanisms
C. Decrease of air volume ejected from the lings in the first second of the maximum forced exhale which follows after a maximum inhale
D. Increase of dynamic obstruction from exhale
E. Increase of maximum air volume which can be ventilated in a minute

87. The therapeutic and rehabilitation conclusions which should be considered in direct correlation with the disturbance of ventilation work (one of the physiopathological processes determined by the obstructive syndrome) are:

A. Increase of dynamic resistance to the flow
B. Increase of pulmonary compliance and thoracic elasticity
C. Oxygen therapy
D. Decrease of pulmonary compliance and thoracic elasticity
E. Decrease of dynamic resistance to the flow

88. The rehabilitation program of the patient with restrictive respiratory dysfunction includes:

A. Bronchial disobstruction
B. Reduction of resistance to flux in the air ways
C. Treating the cause of STP mechanical overload
D. Muscle tone increase with emphasis on the inhale muscles
E. Increase of superior work

89. Restrictive respiratory dysfunction is defined as being:

A. The increase of resistance in the air ways to the passage of the air column
B. The existence of an intrabronchial foreign body
C. The affectation of thoraco-pulmonary system's maximum ampliance
D. The obstacle in the way of the flow through the air ways
E. Respiratory syndrome characterized through paroxistic dyspnea crises, which go into remission spontaneously or with treatment

90. The characteristics of the mixed ventilation dysfunctions:

A. Normal VC, MEVS decreases, MEVS/VC% decreases, indirect Vmx. decreases, TPC increases
B. VC decreases, MEVS decreases, MEVS/VC% decreases, indirect Vmx. decreases, TPC decreases
C. VC decreases, MEVS decreases, MEVS/VC% normal or increases, indirect Vmx. decreases, TPC decreases
D. Alteration of resistance to flow and alteration of compliance
E. Decrease of ventilation stimuli, impossibility to do system mobilization by deficient respiratory muscles, important increase of ventilation work

91. The characteristics of obstructive ventilation dysfunction are:
    A. VC decreases, MEVS decreases, MEVS/VC% decreases, indirect Vmx. decreases, TPC decreases
    B. Normal VC, MEVS decreases, MEVS/VC% decreases, indirect Vmx. decreases, TPC increases
    C. VC decreases, MEVS decreases, MEVS/VC% normal or increases, indirect Vmx. decreases, TPC decreases
    D. Alteration of resistance to flow and alteration of compliance
    E. The respiratory work increases due to the increase of respiratory ways' resistance, bradypnoea occurs and predominates the respiratory debit deficit

92. The characteristics of restrictive ventilation dysfunction are:
    A. VC decreases, MEVS decreases, MEVS/VC% decreases, indirect Vmx. decreases, TPC decreases
    B. Normal VC, MEVS decreases, MEVS/VC% decreases, indirect Vmx. decreases, TPC increases
    C. VC decreases, MEVS decreases, MEVS/VC% normal or increases, indirect Vmx. decreases, TPC decreases
    D. Alteration of resistance to flow and alteration of compliance
    E. The respiratory work increases due to the increase of respiratory ways' resistance, bradypnoea occurs and predominates the respiratory debit deficit.

93. It is known the fact that RDV aggravation means the onset of alveolar hypoventilation, of global pulmonary insufficiency. At the beginning, the desaturation occurs only in effort, then also in rest. Which of the following statements is false? Alveolar hypoventilation is determined by:
    A. Decrease of ventilation stimuli
    B. Acceleration of breathing with increase of the air quantity which ventilates the lungs and CO_2 decrease in blood
    C. Impossibility to do system mobilization by deficient respiratory muscles
    D. Important increase of ventilation work
    E. Inefficient O_2 release to the vital organs because of low CO_2 induced vasoconstriction

94. The patients who benefit of effort tolerance increase are:
    A. Cardiovascular patients, especially coronary after myocardial infarction
    B. Respiratory patients
    C. Those with sequelae after locomotion apparatus disorders
    D. Sedentary patients
    E. Patients with 3rd degree atrio-ventricular block

95. The training to effort methods use:
    A. Electrotherapy
    B. walking
    C. climbing stairs and slopes
    D. occupational therapy
    E. Cryotherapy

96. The tolerance increase to dosed effort is a method used in physiotherapy to accomplish the following objective:

A. Correction/maintaining the correctness of trunk posture
B. Increase of joint mobility
C. Increase (again) of muscle strength and resistance
D. Correction of respiratory deficit
E. Reeducation of sensitivity

97. Training to effort has the following effects:

A. The peripheral vascular resistance increases
B. The amplitude of ST segment' unevenness to effort decreases
C. The level of seric catecholamine and of seric lipids decreases
D. The O2 extraction from tissue level increases
E. The amplitude of ST segment' unevenness to effort increases

98. The frequency of effort sessions for cardio-pulmonary patients is of:

A. 1 per week
B. 3 per week
C. 5 per week
D. 6 per week
E. 10 per week

99. In the rehabilitation of cardiovascular patients, their effort is much limited by:

A. Disorder specific medication
B. Increased values of ABP
C. Increased values of CF
D. Increased values of RF
E. Remaining anginous threshold

100. During the period from 8 to 12 weeks post-infarction, the load level of physical exercises correlated with CF is:

A. 30% from the maximum frequency
B. 50% from the maximum frequency
C. 70–80% from the maximum frequency
D. 100% from the maximum frequency
E. 85% from the maximum frequency

101. To correct body posture and alignment, the following is not used:

A. Frenkel method
B. Correct and hypercorrect posturing, maintained through different correction methods
C. Passive, assisted active and active mobilizations
D. Isometric contractions
E. Proprioceptive facilitation technique

102. Respiratory reeducation does not have the following components:
A. Guidance of air at the level of the upper air ways
B. Costal respiratory reeducation
C. Diaphragmatic breathing reeducation
D. Breathing control and coordination
E. Correction of pathological curvatures

103. The therapeutic objectives of coronary patients can be achieved:
A. With medicines
B. Surgically
C. With physical training
D. With postural drainage
E. Cough reeducation.

104. The aerobic training is indicated for patients with coronary disorders because through the sanguine adaptive changes:
A. The thrombotic risk decreases
B. The thrombotic risk increases
C. Fibrinolysis increases
D. Prevents the occurrence of coronary ischemia;
E. Fibrinolysis decreases.

105. Which of the statements are true regarding the effects of massage at circulation level:
A. Circulation increases at venous level
B. Venous pressure slightly decreases
C. Blood flow increases are artery level
D. Blood flow decreases are artery level.
E. Inhibits vasomotility at capillary circulation level

106. The groups of pathologies for which dosed effort training is useful are
A. Rheumatic pathology
B. Digestive pathology
C. Renal pathology
D. Posttraumatic pathology
E. Cardio-vascular

107. Respiratory physiotherapy does not comprise:
A. Relaxation
B. Posturing
C. Correcting gymnastics
D. Cough education
E. Recovery of abilities

108. Relaxation for the bronchopulmonary patient

A. The body's O2 needs decrease and the CO2 production increases
B. Rebalances the respiratory muscles' tone
C. Rebalances the general muscle tone
D. Removes the inhibiting conditions which disturb the ventilation command
E. It is a therapeutic method counterindicated to asthma patients

109. In posturing for breathing facilitation

A. Pressure increases in the abdominal muscles
B. Viscera pressure decreases on the diaphragm
C. The inhaling muscles' hypertonia decreases from the superior thorax area
D. The ventilation volume decreases
E. The dead pulmonary space decreases

110. The respiratory musculature increases its work (to generate pressure increase to the air column which passes through the aerial ways with increased resistance in the obstructive syndrome) through the following modalities:

A. Contraction tension increase of muscles in activity
B. Contraction tension decrease of muscles in activity
C. Getting into contraction of the reserve inhaling muscles (muscles usually inactive in rest breathing)
D. Getting into contraction of the reserve exhaling muscles (muscles usually inactive in rest breathing)
E. Getting into contraction of the diaphragm muscle

111. The objectives of positioning in relaxing postures and breathing facilitation postures are the following, except:

A. Abdominal breathing facilitation
B. Abdominal-thoracic musculature relaxation
C. Promotion or blockage of return circulation – antideclive and proclive postures
D. Edema proliferation
E. Increase of cardiac output and improvement of organs' perfusion – Trendelenburg position

112. Within the assessment scale of dyspnea to effort degree, 3rd degree dyspnea occurs:

A. In usual activities: dressing, washing, speaking, etc.
B. In rest
C. In walking on flat terrain in the rhythm imposed by a healthy person
D. In climbing slopes and stairs (over 15–20 steps)
E. In walking on flat terrain in their own rhythm

113. Within the rehabilitation programs, relaxation is used as means, which does not have the following objectives:

A. Removal of a series of inhibiting conditions which disturb the ventilation command
B. Decrease of blood flow in the large muscle groups

C. Rebalancing the general muscle tone and, especially of the respiratory muscles, reinstalling antonia (harmonious tone regulation) in contrast with respiratory patient's paratonia (condition disturbed by muscular hyper or hypotonia)
D. Decrease of the heart's mechanical work through decrease of cardiac frequency
E. Muscle tension increase

114. The forced exhale test is made:
A. The patient blows through a tube introduced in a bottle with water. He blows slowly and continuously so as to form bubbles in a continuous string
B. At 15 cm from the mouth, a lit match is held and the patient attempts to put it off
C. At about 15 cm from the mouth, the patient holds a lit candle at which he blows, trying to keep the flame tilted, without putting it off
D. A forced maximum inhale is made, then forced exhale; this exhaling is listened with the stethoscope above the trachea and it is counted

115. The technique of tolerance to effort amelioration technique through walking:
A. During walking, the patient will keep the walking rhythm of his choice, gradually dosing the duration of walking
B. Walking is performed only on a slope
C. When the patient reaches approximately 15 minutes of continuous walking, on short distances, of 20–30 meters, more alert walking rhythms are introduced, boubling or tripling the usual rhythm
D. The session will be repeated 2–3 times per week

116. Relaxation:
A. Is extrinsic when the patient is dependent on an external factor
B. Through therapy with medicines, massage or hypnosis is an intrinsic relaxation
C. Through chromotherapy and melotherapy, it is an extrinsic relaxation
D. Selfinduced by the patient, it is extrinsic relaxation
E. The Jacobson progressive muscular relaxation in intrinsic relaxation

117. Very high intrapulmonary pressure, determined by coughing, can produce:
A. Blockage to the venous return
B. Decrease of central venous pressure
C. Accentuated decrease of the cardiac debit, with onset possibility of acute transitory cerebral circulatory insufficiency
D. Sudden increase of central venous pressure
E. Pneumothorax

118. Bronchial drainage, specific means in cardiopulmonary rehabilitation, does not have as objectives:
A. Amelioration of mucus hyper secretion and mucosa edema
B. Release of bronchioles and decrease of their resistance to flow
C. Decrease of mucus viscosity form the small, middle and large aerial ways

D. Decrease of MEVS
E. Facilitation of secretions evacuation

119. The main therapeutical-rehabilitation modalities through which the bronchial secretions' evacuation is achieved, with the purpose to deblock the respiratory ways of the patient with obstructive ventilation dysfunction, are:
A. Bronchial humidification
B. Postural drainage and cough education
C. The use of mucokinetic medication and medication specific to the patient with obstructive ventilation dysfunction
D. Relaxing posturing
E. Abdominal breathing exercises

120. The objectives of respiratory reeducation are:
A. Recovery of the thoracic rest position
B. Decrease of respiratory muscles' contraction force
C. Increased of mobilized air volumes, for the entire lung or only in certain pulmonary areas
D. Increase of dynamic resistances to flow
E. Ventilation control and increase in certain pulmonary areas

121. Among the respiratory reeducation objectives, we list:
A. Correction of the thoraco-abdominal kinetic system disorders
B. Increase of respiratory muscles' contraction force
C. Increase of respiratory muscles' resistance
D. Control and coordination of ventilation rhythm
E. Increase of dynamic resistances to flow

122. Diaphragmatic breathing:
A. Increases the ventilation of pulmonary bases
B. Decreases the maximum respiratory capacity
C. Increases VC and FVC
D. Increases the gaseous exchange
E. Influences the venous return

123. The guided ventilation components are:
A. Respiratory rhythm and ventilation frequency per minute
B. Current volume control is actually in close connection to frequency
C. The ratio between the respiratory times, as duration of the breaks between these times
D. The speed with which the air column enters and exits the lungs = air flow control
E. Breathing control in motion and effort

124. The effort intensity in cardiac and pulmonary patients is recommended to be:
A. 85% of the patient's tested functional capacity
B. 85% of the maximum oxygen consumption

C. 60–80% of the maximum oxygen consumption
D. 60–80% of the patient's tested functional capacity
E. 90% of the patient's tested functional capacity

125. The effects of training to increase tolerance to effort upon the respiratory system:
A. Ventilation amelioration through a better coordination of the thoraco-abdominal "motor pump", through a good training of the respiratory musculature, which leads to lower energy spending
B. Systole elongation, as work economy, as well as of the diastole, with favoring of the coronary flow
C. Increase of the pulmonary alveolocapillary exchange surface, with amelioration, in most cases, of the V/Q ratio (amelioration of oxygen diffusion)
D. Increase of O2peripheral extraction, improvement of its use in tissular breathing
E. Decrease of CF in rest and effort

126. Which of the following statements regarding supervised and dosed physical training for patients with cardiopulmonary affectation are true:
A. It unfolds in three phases: warm-up (minimum 5 min.); actual training (15–30 min. – standard cycloergometer, cycloergometer for arms, walking or their combinations); recovery and relaxation (minimum 5 min.)
B. The characteristics that the physical effort efficiency depends on: effort intensity and duration, as well as frequency of sessions
C. The exercise intensity is guided by the effort test performances, anaerobic threshold and MVO_2, with establishing a personalized protocol
D. If it is about cardiopulmonary patients who perform efforts of higher intensity and for longer periods of time, the recommended training frequency is of at least 3–5 sessions per week
E. If it is about cardiopulmonary patients whose effort is at the level of mobilizations from the bed, walking through the room, etc. (lower intensity efforts and for shorter periods of time), there are recommended daily sessions, sometimes repeated even during the same day

127. The heart's arterial circulation is
A. Provided by the coronary arteries
B. Double, nutritious and functional
C. Provided by the carotids
D. Provided by the superior mesenteric

128. Excitability (batmotrop function) is:
A. The state of myocardium in semicontraction during diastole, which persists even after denervation or taking the heart out of the body
B. The heart's feature to selfgenerate nervous impulses which produce selfpropagated action potentials
C. The myocardium's feature to conduct the excitation from the sino-atrial node to the atrio-ventricular node, then through the Hiss fascicle and Purkinje network

D. The myocardium's feature to contract under the action of a proper stimulus
E. The myocardium's capacity to respond specifically to a proper stimulus (of higher or equal intensity with the threshold), through an action potential followed by a contraction

129. Which of the statements about Puls-oxymetry are true:
A. It is an indicator of oxygenation , measuring the saturation of hemoglobin with oxygen, but it can also provide information related to the CO2 level
B. In COVID-19, it is used to detect respiratory insufficiency caused by pneumonia, the most frequent complication provided by the new virus
C. Invasive measurement method of arterial blood SpO2 saturation with O2 and of peripheral pulse frequency (eventually its shape)
D. It can be used to measure SaO2 for all patients with acute diseases, with severe dyspnea
E. It can detect even the smallest changes regarding the efficiency of oxygen transportation from the heart to extremities, including the upper and lower limbs

130. Which of the statements about Puls-oxymetry are not true:
A. It is an indicator of ventilation and can provide information about the CO2 level, of arterial pH or of bicarbonate concentration, and, that is why, it can be a substitute of arterial gasometry
B. The SpO2 values between 90–100% reflect optimum Hb saturation in O2
C. The optimum Hb saturation in O2 is reflected by the SpO2 values between 94–100%
D. Slight hypoxemia is defined by the SpO2 values between 93–88% and between 88–83%, it is medium hypoxemia
E. Severe hypoxemia is defined by the SpO2 values smaller than 83%.

Correct answers:

1.ACE; 2.AE; 3.BCDE; 4.ABDE; 5.BCE; 6.ABD; 7.BE; 8.BDE; 9.BD; 10.BCE; 11.ABE; 12.CD; 13.BCD; 14.E; 15.AC; 16.B; 17.D; 18.B; 19.B; 20.C;21.ABD; 22.C; 23.ACE; 24.D; 25.ACD; 26.CD; 27.DE; 28.AB; 29.ABCE; 30.B; 31.BD; 32.ABE; 33.C; 34.BDE; 35.CDE; 36.DE; 37.ABCE; 38.BE, 39.ACDE; 40.BD; 41.AC; 42.ACDE; 43.ABC; 44.CDE; 45.CE; 46.CE; 47.CE; 48.ACE; 49.B; 50.E; 51.BE; 52.ABC; 53.AE; 54.D; 55.D; 56.BD; 57.BCE; 58.AD; 59.B; 60.ABDF; 61.C; 62.D; 63.AC; 64.ABCE; 65.ACE; 66.BCD; 67.CD; 68.ABE; 69.BC; 70.ADE; 71.ABE; 72.BD; 73.A; 74.ABCDE; 75.AB; 76.AE; 77.DE; 78.ABE; 79.DE; 80.ABCE; 81.DE; 82.B; 83.BDE; 84.ABE; 85.BCD; 86.AE; 87.BE; 88.CD; 89.C; 90.BD; 91.BE; 92.C; 93.BE; 94.ABCD; 95.BCD; 96.D; 97.BCD; 98.B; 99.E; 100.C; 101.A; 102.E; 103.ABC; 104.ACD; 105.AC; 106.E; 107.E; 108.BCD; 109.BCE; 110.ACD; 111. D; 112.E; 113.BE; 114.D; 115.AC; 116. AE; 117.ACDE; 118.D; 119.ABC; 120.ACE; 121.ABCD; 122. ACDE; 123.ABCDE; 124.CD; 125.ACD; 126.ABCDE; 127.A; 128.E; 129. BDE; 130.AB

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MEASUREMENT AND EVALUATION IN PHYSIOTHERAPY

1. Patient evaluation in the process of kinetic assistance is made at least:
    A. 4 times
    B. 2 times
    C. 5 times
    D. 3 times

2. For the evaluation scales to be standardized, they should meet the following requirements:
    A. Sensitivity
    B. Difficulty
    C. Reproductibility
    D. Continuity

3. Reproductibility of an evaluation scale indicates:
    A. Achieving identical or similar results if applied to the same individual, but by different testers
    B. Eventual changes in the measured element can be recorded
    C. It can quantify the changes occurred in the evaluation process in positive or negative way
    D. The results achieved in evaluation can be compared with standard values

4. In which of the following evaluation stages the physiotherapist makes contact with the patient for the first time:
    A. Triage
    B. Anamnesis
    C. Initial interview
    D. Objective information

5. In which data analysis stage the following is achieved:
    A. Establishing of functional diagnosis
    B. Establishing of functional residue
    C. Establishing of patient's problems list (minor and major)
    D. Establishing of the rehabilitation program objectives

6. When the patient is reevaluated:
    A. The achieved objectives are eliminated and new ones are added
    B. It is required the possibility to discharge the patient
    C. Corrections of the rehabilitation program are made according to previous observations
    D. It is required the patient's or family's approval to continue the rehabilitation program

7. Which of the conditions necessary to achieve anthropometrical measurements are considered to be false statements:

A. The subject should be dressed as comfortable as possible
B. The subject should present a medical certificate which states his health condition
C. The light should come from the lateral side to better emphasize the bone references
D. The light should come from behind the patient for good visibility of the references

8. Within the anthropometrical measurements, the longitudinal dimensions are:

A. Bust, upper limbs' length, height
B. Bust, size, shank perimeter
C. Bust, neck length, lower limbs' length
D. Bust, height, thoracic perimeter

9. Which of the following anthropometrical measurements can be achieved with the help of the waist-meter:

A. Height
B. Size
C. Bust
D. Torso

10. Somatoscopy represents:

A. Visual examination of body alignment, both in rest and in dynamics
B. Gathering data regarding age, gender, occupation, working conditions, associated diseases
C. Objective examination of the locomotion apparatus
D. Examination of various body segments' coordination capacity

11. At the patient's examination from the front, the plumb line passes through the following references:

A. Vertex, middle of the sternum, pubic symphysis, internal femoral condyles
B. Vertex, middle of the forehead, middle of the shoulder, through the external malleoli
C. Vertex, middle of the lips, great femoral trochanter, anterior to the external malleoli
D. Vertex, middle of the nose, spinal apophysis, posterior to the patella

12. In sagittal plan, the spine deviations towards flexion are named:

A. Scolioses
B. Kyphoses
C. Lordoses
D. Kyphoscolioses

13. In order to determine the cervical lordotic attitude, the functional test is:

A. Global spine flexion
B. Hanging
C. Cervical spine flexion
D. Head flexion with spine stretching in axis

14. A scoliosis is non-compensated when:
    A. The plumb line passes through the middle of the interbuttocks groove
    B. The primary spine curvature generates a second secondary spine curvature
    C. The primary spine curvature does not generate a second curvature, the compensation being made on other levels
    D. We have scoliosis in "C" (left or right)

15. In the hollow foot, the tubercle of the navicular bone is:
    A. At 1/3 under the Feiss line
    B. At 2/3 under the Feiss line
    C. Above the Feiss line
    D. On the ground

16. In accomplishing goniometry:
    A. The goniometer axis is placed in the center of the tested joint
    B. The goniometer is placed by pressing on the tested segments
    C. The fixed arm and the mobile one follow certain bone references
    D. Articular testing is achieved after testing muscle strength

17. Goniometry can be achieved through the following methods:
    A. Through direct, subjective, "eyeballing" evaluation
    B. By measuring the distance between 2 points marked on the tested segment
    C. By comparing 2 radiographies at the level of maximum movement range
    D. With the special compass

18. The functioning position of a joint represents:
    A. The maximum amplitude of a joint on a movement direction
    B. The maximum joint utility position, which provides functional independence to the individual
    C. Articular position in which the patient feels relaxed
    D. Maximum portance position of a joint

19. Articular stiffness represents:
    A. The joint capacity to move in all allowed motion directions and plans
    B. Total absence of any motion in the respective joint
    C. Decrease of movement capacity, determining articular amplitude deficit
    D. The possibility to accomplish movement in the joint over the limit considered normal

20. The joint mobility scale contains:
    A. 2 levels of hypomobility and 3 levels of hypermobility
    B. 2 levels of hypomobility and 2 levels of hypermobility
    C. 3 levels of hypomobility and 3 levels of hypermobility
    D. 4 levels of hypomobility and 3 levels of hypermobility

21. In hip flexion (thigh on trunk), the goniometric axis in placed:
    A. In the hip joint center on the lateral face
    B. In the hip joint center on the medial face
    C. In the hip joint center on the anterior face
    D. In the hip joint center on the posterior face

22. In hip abduction, the fixed arm of the goniometer:
    A. Follows the antero-posterior iliac spines
    B. Is a line, parallel with the antero-superior spines, distal to those
    C. Is a line, parallel with the antero-superior spines, proximal to those
    D. Follows the median line of the thigh on the anterior face

23. In goniometry, the mobile arm of the goniometer:
    A. Is on the median line of the fixed segment of the joint to be tested
    B. It moves together with mobile segment of the joint to be tested
    C. Is on the median line of the mobile segment of the joint to be tested
    D. Is on the fixed segment of the joint to be tested

24. In the shoulder's internal rotation goniometry:
    A. The patient is in dorsal decubitus with the arm abducted to 90º, the physiotherapist ipsilateral, the goniometer axis in the center of the elbow joint on the anterior face, the fixed arm is perpendicular on the ground, the mobile arm follows the median line of the forearm's lateral face
    B. The patient is in dorsal decubitus with the arm abducted to 90º, elbow flexed to 90º, the physiotherapist ipsilateral, the goniometer axis in the center of the elbow joint on the anterior face, the fixed arm is perpendicular on the ground, the mobile arm follows the median line of the forearm's lateral face
    C. The patient is in dorsal decubitus with the arm abducted to 90º, elbow flexed to 90º, the physiotherapist ipsilateral, the goniometer axis in the center of the elbow joint on the anterior face, the fixed arm is perpendicular on the ground, the mobile arm follows the median line of the forearm's dorsal face
    D. The patient is in dorsal decubitus with the arm abducted to 90º, elbow flexed to 90º, the physiotherapist ipsilateral, the goniometer axis in the center of the elbow joint on the dorsal face, the fixed arm is perpendicular on the ground, the mobile arm follows the median line of the forearm's dorsal face

25. In knee flexion goniometry:
    A. The patient is in ventral decubitus, physiotherapist contralateral, the goniometer axis in the center of the knee joint on the lateral face, the fixed arm of the goniometer follows the median line of the thigh's lateral face and the mobile arm follows the median line of the shank's lateral face
    B. The patient is in ventral decubitus, physiotherapist ipsilateral, the goniometer axis in the center of the knee joint on the lateral face, the fixed arm of the goniometer follows the median line of the thigh's lateral face and the mobile arm follows the median line of the shank's lateral face

C. The patient is in ventral decubitus, physiotherapist contralateral, the goniometer axis in the center of the knee joint on the anterior face, the fixed arm of the goniometer follows the median line of the thigh's lateral face and the mobile arm follows the median line of the shank's lateral face
D. The patient is in ventral decubitus, physiotherapist contralateral, the goniometer axis in the center of the knee joint on the lateral face, the fixed arm of the goniometer follows the median line of the thigh's lateral face and the mobile arm follows the median line of the shank's lateral face

26. In which of the following movements, to achieve goniometrization, it is necessary the use of a reference-object (pen, pencil, marker, etc.):
A. Fist abduction
B. Forearm supination
C. Forearm pronation
D. Fist flexion

27. The elbow extension movement has normal value of joint amplitude of:
A. 120º
B. -20º
C. 0º
D. 90º

28. The shoulder flexion movement has normal value of joint amplitude of:
A. 170–180º
B. 150–160º
C. 90º
D. 110–120º

29. In ankle flexion goniometrization:
A. The patient is in ventral decubitus, physiotherapist ipsilateral, the goniometer axis in the center of the ankle joint on the lateral face, the fixed arm of the goniometer follows the median line of the shank's lateral face, the mobile arm follows the median line of the 5th metatarsus
B. The patient is in ventral decubitus, the knee and ankle at 90º, the physiotherapist ipsilateral, the goniometer axis in the center of the ankle joint on the lateral face, the fixed arm of the goniometer follows the median line of the shank's lateral face, the mobile arm follows the median line of the 5th metatarsus
C. The patient is in ventral decubitus, the knee and ankle at 90º, the physiotherapist ipsilateral, the goniometer axis in the center of the ankle joint on the lateral face, the fixed arm of the goniometer follows the median line of the shank's lateral face, the mobile arm follows the median line of the 5th metacarpus
D. The patient is in ventral decubitus, the knee and ankle at 90º, the physiotherapist ipsilateral, the goniometer axis in the center of the ankle joint on the anterior face, the fixed arm of the goniometer follows the median line of the shank's lateral face, the mobile arm follows the median line of the 5th metatarsus

30. In fist abduction goniometrization, the fixed arm of the goniometer follows:
    A. The median line of the 5th metacarpus' lateral face
    B. The median line of the 3rd metacarpus' anterior face
    C. The median line of the forearm's lateral face
    D. The median line of the forearm's dorsal face

31. In fist adduction goniometrization, the mobile arm of the goniometer follows:
    A. The median line of the 5th finger's lateral face
    B. The median line of the 5th metacarpus' dorsal face
    C. The median line of the 3rd metacarpus' lateral face
    D. The median line of the 3rd metacarpus' dorsal face

32. In trunk rotation goniometrization, the mobile arm of the goniometer:
    A. Is parallel to the ground
    B. Is perpendicular on the ground
    C. Follows the shoulder line
    D. Follows the median line of the trunk's lateral face

33. In thigh adduction goniometrization, the mobile arm of the goniometer follows:
    A. The median line of the thigh's anterior face
    B. The median line of the thigh's posterior face
    C. The median line of the thigh's lateral face
    D. The line which connects the 2 antero-superior iliac apophyses

34. How is named the fascia which covers the muscle fiber:
    A. Common fascia
    B. Perimisium
    C. Endomisium
    D. Epimisium

35. The purpose of the muscular estimate is to:
    A. Establish the functional diagnosis
    B. Establish the time of an isometric contraction
    C. Contribute to the establishing of rehabilitation programs
    D. Determine the number of muscle fibers which work simultaneously in an isometric contraction

36. Which are the conditions required for muscle testing:
    A. A patient who should have the necessary patience for muscular evaluation
    B. A physiotherapist who should know the functional anatomy and biomechanics
    C. The patient's cooperation, the testing being an active process
    D. It is always made before the joint estimate

37. At force 3 (F3), the muscle to be tested:
    A. Performs the segment movement on its entire range, in a position in which gravity is removed
    B. Performs the segment movement on its entire range, in an antigravity position, with slight resistance
    C. Performs the segment movement on its entire range, in an antigravity position, the movement being free
    D. Performs the segment movement on its entire range, in an antigravity position, with maximum resistance

38. At force -3 (F3-), the muscle to be tested:
    A. Performs the segment movement from a position in which gravity is removed, on half of the motion range
    B. Performs the segment movement from a position in which gravity is removed, on more than half of the motion range
    C. Performs the segment movement from an antigravity position, without the physiotherapist's resistance, on more than half of the motion range
    D. Performs the segment movement from an antigravity position, with the physiotherapist's medium resistance, on more than half of the motion range

39. At force +2 (F2+), the muscle to be tested:
    A. Performs the segment movement from a position in which gravity is removed, on half of the motion range
    B. Performs the segment movement from an antigravity position, without the physiotherapist's resistance, on half of the motion range
    C. Performs the segment movement from a position in which gravity is removed, on more than half of the motion range
    D. Performs the segment movement from an antigravity position, without the physiotherapist's resistance, on more than half of the motion range

40. Quoting the muscle strength with "+" and "-" is made to:
    A. Standardize the evaluation scale
    B. Increase the evaluation scale sensitiveness
    C. More clearly distinguish the muscle strengths
    D. Provide validity to an evaluation scale

41. To perform correct muscle testing, the following is necessary:
    A. The patient should be explained what flexion, extension, abduction, adduction, internal rotation and external rotation mean
    B. Demonstrating the movement to be performed
    C. Correct performance of grips
    D. Physiotherapist's short, firm, clear command

42. The shoulder flexion movement is made by the muscles:
    A. Pectoralis major and deltoid middle fibers
    B. Coracobrachialis and deltoid anterior fibers
    C. Trapezius superior fibers and scapula elevator
    D. Biceps brachii and brachio-radialis

43. Ankle eversion movement is made by the muscles:
    A. Posterior tibialis and gastrocnemius
    B. Long and short peroneus
    C. Anterior and solear tibialis
    D. Flexorum digitorum

44. When testing the shoulder's internal rotator muscles' strength for F2, the patient is in the following position:
    A. Dorsal decubitus with arm abducted to 90º externally rotated, elbow flexed at 90º, palm towards the patient
    B. Dorsal decubitus with arm abducted to 90º, elbow flexed at 90º, pronated forearm
    C. Ventral decubitus, arm hanging by the bed side, shoulder externally rotated, flexed at 90º
    D. Ventral decubitus, arm hanging by the bed side, shoulder internally rotated, flexed at 90º

45. When testing the trapezius muscles - superior fiber and scapula elevator, for F3, the patient is in the following position:
    A. Sitting, with arm hanging outside the support area
    B. Dorsal decubitus with arm abducted to 90º
    C. Ventral decubitus
    D. Sitting, with arm flexed to 90º

46. When testing knee extension for F3, the physiotherapist performs:
    A. Proximal counter-grip of thigh on anterior face
    B. Counter-grip in the distal third of the thigh on anterior face, grip in the distal third of the shank on anterior face
    C. Counter-grip in the distal third of the thigh on anterior face
    D. Counter-grip in the distal third of the thigh on anterior face, grip in the distal third of the shank on lateral face

47. When testing hip abduction for F4, the physiotherapist:
    A. Supports in abduction, with one hand, he opposite lower limb, with the other hand, performs the grip in the distal third of the thigh on lateral face
    B. Supports in abduction, with one hand, he opposite lower limb, with the other hand, performs the grip in the distal third of the thigh on medial face
    C. Performs counter-grip at hip level, on lateral face, and grip in the distal third of the thigh on medial face
    D. Performs counter-grip at hip level, on lateral face, and grip in the distal third of the thigh on lateral face

48. When testing the hip internal rotation for F2, the patient's position is:
    A. Dorsal decubitus, with hip flexed to 90º
    B. Dorsal decubitus, with hip and knee flexed to 90º
    C. Ventral decubitus, with knee flexed to 90º
    D. Lateral decubitus, with knee flexed to 90º

49. When testing torso flexion for F2, the patient:
    A. Flexes the torso until the scapular spina is raised from the support area
    B. Flexes the torso until the inferior angle of the scapula is raised from the support area
    C. Flexes the torso till the maximum allowed level
    D. Flexes and rotates the torso to the right or left

50. For the elbow extension movement, for F4, the physiotherapist performs the grip and counter-grip in:
    A. Distal third of forearm, respectively distal third of arm on dorsal face
    B. Distal third of forearm, respectively proximal third of arm on dorsal face
    C. Proximal third of forearm, respectively distal third of arm on dorsal face
    D. Proximal third of forearm, respectively proximal third of arm on dorsal face

51. Gait:
    A. Is an involuntary motor skill
    B. Is learned and gradually improved
    C. One is born with the skill of walking
    D. Is an voluntary motor skill

52. Which of the following statements are characteristics and, at the same time, objectives in gait recovery:
    A. Stability in the lower limb joints
    B. Movement speed
    C. Good mobility in the lower limb joints
    D. Coordination of lower limbs and of the entire body

53. Why is gait evaluation important:
    A. It represents a rehabilitation method of some deficits (cardio-vascular apparatus)
    B. To see if the patient can manage his job on his own
    C. It can indicate the exteriorization of a disorder (coxarthrosis)
    D. It indicates the patient's capacity to perceive certain stimuli from the outside

54. Which are the gait parameters:
    A. Step length
    B. Distance in frontal plan between the lower limbs (on the motion axis)
    C. Walking rhythm
    D. Capacity to climb stairs up and down

55. Which is the gait measurement unit:
    A. Step length
    B. Stepping cycle
    C. Walking rhythm
    D. Speed of motion

56. Place the gait phases in correct order, the initial position being of orthostatism:
    A. Support on one leg, support on two legs, swing
    B. Swing, support on two legs, support on one leg
    C. Support on two legs, swing, support on one leg
    D. Support on two legs, support on one leg, swing

57. "Trendelemburg" gait is characterized by:
    A. Swinging gait on the back with affectation of hip extensors
    B. "Duck"-like swinging gait, in the bilateral affectation of hip abductors
    C. Gait with lateral leaning of the torso on the side of the support leg in unilateral affectation of hip abductors
    D. Gait with lateral leaning of the torso on the side of the support leg in unilateral affectation of hip adductors and extensors

58. "Hypodynamic" gait is characteristic to the patients:
    A. With spastic tetraparesis
    B. With hemiplegia
    C. Asthenic or in recovery
    D. With type 2 diabetes

59. "Mowing" gait is a spastic walk characteristic to the patients:
    A. With spastic tetraparesis
    B. With Parkinson's disease
    C. With hemiplegia
    D. Elderly, with atherosclerosis

60. To perform prehension, the hand is divided into 3 movement elements, the first being formed of:
    A. Thumb, 3rd metacarpus and the joints between them
    B. Index
    C. Thumb, 1st metacarpus and the joints between them
    D. Fingers 3–5, corresponding metacarpals and the joints between them

61. The termino-terminal clamp is achieved when:
    A. We hold a book with the first 3 fingers
    B. We hold a pen or brush in hand
    C. We grab a needle
    D. We grab a plate

62. Recognizing numbers or letters written on the patient's body part is named:
    A. Dermolexia
    B. Myo-artro-kinetic sense
    C. Barestesia
    D. Stereognosis

63. The discrimination test of two points is part of:
    A. Tactile sensitivity
    B. Superficial sensitivity
    C. Deep sensitivity
    D. All of the above

64. Vibratory sensitivity is measured with:
    E. Weber compass
    F. Diapason
    G. A blunt object
    H. A piece of cotton

65. In which of the following situations, the sensitivity decrease is named hypoesthesia:
    A. In case of painful sensitivity
    B. In case of thermal sensitivity
    C. In case of tactile sensitivity
    D. In case of stereognosic sensitivity

66. The sense of body scheme which provides indications about the proprioceptive capacity is named:
    A. Stereognosic sensitivity
    B. Kinesthesic sensitivity
    C. Barestesic sensitivity
    D. Myo-artro-kinetic sense

67. The effort capacity represents:
    A. The possibility to make effort under stressful circumstances
    B. Maximum quantity of mechanical work made per time unit
    C. Minimum quantity of mechanical work made per time unit
    D. Quantity and quality of motor act made by patients with cardiac disorders

68. In physical effort:
    A. Homeostasis modification is produced to cover the muscular needs
    B. No homeostasis modification is produced to cover the muscular needs
    C. Modifications occur on the level of the cardio-vascular system
    D. Modifications occur on respiratory level

69. The metabolic equivalent represents:
    A. The body's oxygen intake in rest
    B. The body's maximum level of oxygen intake
    C. Oxygen intake in maximal effort
    D. Oxygen intake in sub-maximal effort

70. Which are the effort indicators:
    A. Effort volume
    B. Effort intensity
    C. Effort requirement
    D. Load intensity

71. The effort volume is provided by:
    A. Functional values (puls, arterial blood pressure, respiratory frequency)
    B. Sum of movement distances in running, cycling, etc.
    C. Movement speed
    D. Work time (series, repetitions, sessions, etc.)

72. Load intensity is provided by:
    A. Respiratory frequency
    B. Tempo (rhythm)
    C. Puls
    D. Movement speed

73. Effort intensity is provided by:
    A. Movement speed
    B. Power units (watts, kgf/minute, etc.)
    C. Tempo (rhythm)
    D. Cardiac frequency

74. Effort complexity is provided by:
    A. Number of motor actions performed simultaneously
    B. Sum of all repetitions of a motor act
    C. Sum of covered distances
    D. Frequency of physiotherapy sessions

75. Submaximal effort tests imply:
    A. Reaching 50–60% of the maximum aerobic capacity
    B. Reaching 40–50% of the maximum aerobic capacity
    C. Reaching 60–70% of the maximum aerobic capacity
    D. Reaching 80–90% of the maximum aerobic capacity

76. Oculo-cardiac reflex:
    A. Establishes the patient's vagotone vegetative or sympathetic tone predominance
    B. Implies performing 30 squats in 45 seconds
    C. Implies applying pressure on the eye bulbs, with closed eyes, until painful, over a minimum period of 30 seconds
    D. Implies applying pressure on the eye bulbs, with closed eyes, until painful, over a minimum period of 60 seconds

77. Which of the following effort tests assesses the body adjustment to effort, being named "fitness assessment test":
    A. Oculo-cardiac reflex
    B. Ruffier-Dikson test
    C. Pachon-Martinet test
    D. Fox test

78. 4^{th} degree dyspnea occurs when:
    A. Patient is in rest
    B. Patient walks on flat terrain in his own rhythm
    C. Patient performs the DLAs
    D. Patient climbs up stairs

79. The match test in respiratory function assessment indicates:
    A. Air flow control
    B. Dyspnea degree
    C. Breathing rhythm
    D. Respiratory frequency

80. Voluntary apnea is counter-indicated in:
    A. Severe respiratory insufficiency
    B. Major disorders of cardio-respiratory centers
    C. Disorders of vertebral statics
    D. Coordination disorders

81. The upper limb length is measured between:
    A. Acromial point and radial point
    B. Acromial point and dactylion
    C. Radial point and stylion
    D. Acromial point and stylion

82. The palm length is measured between:
    A. Middle of the line which connects the radial-ulnar styloid and dactylion apophyses
    B. Middle of the line which connects the radial-ulnar styloid apophyses and the radial point
    C. Middle of the line which connects the radial-ulnar styloid and tibial sphyrion apophyses
    D. Middle of the line which connects the radial-ulnar styloid and vertex apophyses

83. The thorax perimeter in deep inhaling:
    A. Is smaller than in deep exhaling
    B. Is smaller than in normal inhaling, but bigger than in deep exhaling
    C. Is bigger than in deep exhaling, but equal with the one in normal inhaling
    D. Is bigger than in deep exhaling and normal inhaling

84. In the relation between amplitude and body height:
    A. In women, the amplitude overpasses height by 3–4 cm
    B. In men, the amplitude overpasses height by 3–4 cm
    C. In women, the amplitude is equal or slightly smaller than height
    D. In men, the amplitude is equal or slightly smaller than height

85. To assess thoracic elasticity, the followings are considered:
    A. Thoracic perimeter in deep inhaling and exhaling
    B. Thoracic perimeter in deep inhaling and rest
    C. Thoracic perimeter in deep exhaling and rest
    D. All three above

86. The cerebral constitutional type is characterized by:
    A. Fatty deposit tendencies on abdomen and thighs and predisposition for respiratory diseases
    B. Without fatty deposit tendencies and predisposition for respiratory diseases
    C. Without fatty deposit tendencies and predisposition for nervous diseases
    D. Fatty deposit tendencies on abdomen and thighs and predisposition for nervous diseases

87. The active elements of posture are represented by the neuro-myo-arthro-kinetic apparatus through:
    A. Exteroceptors
    B. Proprioceptors
    C. Integrity of articular capsules and ligaments
    D. Degree of muscle tone

88. Palpation is a semiological method based on information obtained through:
    A. Hitting a body part with the fingers
    B. Assessment of noises at the air ways level
    C. Examiner's tactile sensitivity
    D. Assessment of muscle tone changes

89. In unbalanced scoliosis, the plumb line passes:
    A. Alongside the inter-buttocks groove
    B. To the left of the inter-buttocks groove
    C. To the right of the inter-buttocks groove
    D. All of the above

90. The pelvis is retroversed if:
    A. The distance between the umbilicus line and the postero-superior iliac spina line decreases
    B. The distance between the umbilicus line and the postero-superior iliac spina line increases
    C. The distance between the umbilicus line and the antero-superior iliac spina line decreases
    D. All of the above

91. In genu varum:
    A. The external angle between the thigh and shank is smaller than 180°
    B. The external angle between the thigh and shank is bigger than 180°
    C. Knees are ”in X”
    D. Knees are ”in O”

92. 2nd degree flat foot according to Feiss' line is when:
    A. The navicular bone tubercle is at 1/3 from the floor
    B. The navicular bone tubercle is at 2/3 from the floor
    C. The navicular bone tubercle is above the line
    D. The navicular bone tubercle is on the floor

93. At the functional test, the functional flat foot:
    A. The sole remains flat even after weight discharge
    B. Under the body weight, the sole becomes flat, but after discharge, it gets back to normal
    C. The sole remains hollow under body weight
    D. None of the above is correct

94. Articular range means:
    A. Mobilization capacity of a joint in all movement directions and axes
    B. Capacity of a joint to mobilize over the physiological limit in a movement direction
    C. Mobilization capacity of a joint on a certain movement direction, till the maximum point, considered normal for the respective joint
    D. Capacity of a joint to return to normal movement after a traumatic type lesion

95. Joint hyperlaxity is:
    A. Abnormality characterized by mobility deficit
    B. Abnormality characterized by lack of muscle strength
    C. Abnormality characterized by excess of mobility
    D. Total absence of movement in the joint

96. Muscle strength can be tested:
    A. With the dynamometer
    B. Manually
    C. On a strength scale from 0 to 5
    D. By goniometrization

97. Trendelemburg gait:
    A. Occurs in muscle strength reeducation in the hip abductors
    B. If the swinging (duck) walk occurs bilaterally
    C. Occurs in hip extensors' paralysis
    D. If unilaterally occurs the lateral leaning of the trunk towards the support limb

98. Spastic gait includes:
    A. Mowing gait
    B. Ebrios gait
    C. Scissors gait
    D. Ataxic gait

99. Referred pain:
    A. Has the origin point in one area, but it is perceived in another area
    B. Has the origin in the viscera and deep somatic structures
    C. Nociceptive excitation acts along the painful transmission paths with origin in the any point from nerve to cortex
    D. Has 2 forms dermatomic and sclerotomic

100. The energetic support needed to perform physical exercises is provided by:
    A. Phosphagenes system (ATP-CP)
    B. Food quantity ingested before effort
    C. Anaerobic glycolytic system
    D. Anaerobic (oxidative) system

Correct answers:

1. B; 2. A,C; 3.A; 4.C; 5.A,B,D; 6. A,C; 7. B,C; 8. A,C; 9.A,C; 10.A; 11.A; 12.B; 13.D; 14.C,D; 15.C; 16.A,C; 17.A,B,C; 18.B; 19.C; 20.C; 21.A; 22.B; 23.B,C; 24.D; 25.B; 26.B,C; 27.C; 28.A; 29.B; 30.D; 31.D; 32.C; 33.A; 34.C; 35.A,C; 36.B,C; 37.C; 38.C; 39.B; 40.B,C; 41.B,C,D; 42.B; 43.B; 44.C; 45.A; 46.C; 47.B; 48.B; 49.A; 50.A; 51.B,D; 52.A,C,D; 53.A,C; 54.A,B,C; 55.B; 56.D; 57.B,C; 58.C; 59.C; 60.C; 61.C; 62A; 63.A,B; 64.B; 65.A,B,C; 66.B; 67.B; 68.A,C,D; 69.A; 70.A,B,D; 71.B,D; 72.A,C; 73.A,B,C; 74.A; 75.D; 76.A,C; 77.B; 78.C; 79.A; 80.A,B; 81.B; 82.A; 83.D; 84 BC; 85.A; 86.C; 87.ABD; 88.CD; 89.BC; 90.A; 91.BD; 92. A; 93.B; 94.C; 95.C; 96.ABC; 97.ABD; 98.AC, 99.AB; 100.ABD.

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PHYSIOTHERAPY IN GERIATRICS–GERONTOLOGY

1. Geriatrics studies:
   A. Adults
   B. Elderly individual, normal aspects
   C. Elderly diseased individual
   D. Diseased children

2. Gerontology is the science which studies:
   A. Elderly diseased individual
   B. Pregnant women
   C. Diseased adults
   D. From biological point of view the elderly individual, normal aspects

3. Which are life's important stages?
   A. First age (0–20/24 years; childhood, puberty, adolescence), second age (20/24–65 years; youth, maturity, climacterium), third age (from 65 years till death; presenescence, senescence).
   B. baptism, marriage, giving birth for women, Death
   C. First age (0–2 years; babies), second age (3–6 years, preschool children), third age (7–18 years, school children), fourth age (19–25 years; students), fifth age (25–65 years; working adults), sixth age (from 65 years till death; pensioners)
   D. Birth, baptism, marriage, giving birth for women, retirement death

4. The characteristics of the 3rd age are:
   A. The body, psychic and sexual organs develop; they get pimples, boys' voices become deeper and their facial hair starts growing; occurs the desire for independence and for freedom to make decisions
   B. fragile age, of involution, represents some sort of wisdom age, waiting room for death and estimates; withdrawal, professional detachment. Period of adjustment to a new activity schedule (familial and social)
   C. The relationships change, the professional area becomes smaller, other activities are also left out. Going out becomes conditioned by nice, sunny weather and by mood
   D. The breasts are developing in girls, hair appears in the pubic and axillary areas

5. The stages of the involution age are:
   A. terminal stage; first stage – the stage of great old age or long-lived persons over 85 years; 2nd stage – stage of medium old age, 75–85 years; 3rd stage – adjustment stage or passing stage towards old age, 65–75 years
   B. 1st age (0–20/24 years; childhood, puberty, adolescence), second age (20/24–65 years; youth, maturity, climacterium), third age (from 65 years till death; presenescence, senescence)

C. 1st stage – adjustment stage or passing stage towards old age, 65–75 years; 2nd stage – stage of medium old age, 75–85 years; 3rd stage – the stage of great old age or long-lived persons over 85 years; terminal stage
D. presenescence, senescence, retirement, death

6. Senescence:
A. Is the fear of death
B. In biological terms, it is represented by the processes which take place during an individual's life's post-maturity period, process through which gradually decreases the body's capacity to adjust to environmental variations and through which increases the probability (increases the risk) of death
C. In medical terms, it is represented by the processes which change (gradually and irreversibly) a young, healthy adult into a disabled old person who progressively is more and more sensitive to most disease forms: infectious, neoplasic and degenerative
D. Is a neurodegenerative disease which affects the brain, especially memory

7. The theories of senescence currently fit in two main categories:
A. Aging – genetically programed process
B. Loss of short term memory; loss of long term memory
C. Fear of death: biological death and psychological death
D. Aging – the result of critical lesions accumulation at the level of cellular and tissular components

8. The genetics theories are:
A. Wearing-out theory
B. Programed longevity
C. Immunological theory
D. Endocrine theory

9. Lesions theories include the followings:
A. Wearing-out theory, metabolic rate theory, glycolysis theory, activity theory
B. Wearing-out theory, metabolic rate theory, immunological theory
C. Wearing-out theory, metabolic rate theory, cross-linking theory
D. Free radicals theory, somatic DNA deterioration theory

10. Activity theory:
A. Emphasizes the importance of continuous social life
B. Suggests that retirement cannot be so harmful if the individual keeps actively other roles, such as family roles, recreational roles, volunteering and community roles
C. Claims that from the physical activities, the vital parts from cells and tissues are wearing out, leading to aging
D. Claims that the greater an individual's activity, work volume is, the shorter the lifespan will be

11. Which of the following statements are true?
    A. In senescence, it can be noticed the increase of fatty tissue and physical inactivity
    B. In senescence, it can be noticed the increase of body mass, muscle mass, maximum aerobic capacity
    C. In senescence, it can be noticed the decrease of fatty tissue and physical inactivity
    D. In senescence, it can be noticed the decrease of body mass, muscle mass, maximum aerobic capacity

12. Which of the following statements are false?
    A. After the age of 60 years, the cardiovascular pathology represents the main cause of death
    B. The pulmonary function increases with age, as well as the pulmonary elasticity
    C. The response to thirst and indigestion to water after deprivation is low in the elderly
    D. The tolerance to glucose decreases with age

13. Which of the following statements are true?
    A. In elderly, the immune system decreases, which can lead to infectious diseases and neoplasm
    B. The immune system is more decreased in men than in women
    C. The humoral immune modifications comprise the increase of self-antibodies and decrease of the antibodies' response to foreign antigens
    D. The humoral immune modifications comprise the decrease of self-antibodies and increase of the antibodies' response to foreign antigens

14. The characteristics of the elderly's gait are:
    A. Shuffling, shortened steps
    B. Slowness with increase of the bipedal support base
    C. Balance disorders
    D. Increase of pelvis rotation

15. Which is the main global death cause, in total number of lost lives order?
    A. Neonatal conditions (asphyxia and trauma at birth, infections, premature birth)
    B. Chronic obstructive pulmonary diseases, inferior respiratory infections
    C. Alzheimer's disease and other types of dementia
    D. Ischemic cardiopathy

16. Which are the disorders most frequently encountered in the elderly?
    A. Multiple sclerosis, Down syndrome, paraplegia, tetraparesis, vertebro-medullary traumatism
    B. Cardiac insufficiency, ischemic cardiopathy, AHT, chronic bronchitis and emphysema, bronchial asthma, stroke, Alzheimer's disease
    C. Scapulo-humeral periarthritis, coxarthrosis, gonarthrosis, spondylosis, rheumatoid polyarthritis, osteoporosis
    D. Fractures, sprains, muscle pulls, muscle tears

17. Ischemic cardiopathy is:
    A. Affectation of bronchi, the breathing capacity narrows and decreases, the pulmonary tissue becomes inflamed and the alveoli – sack full of air from the lungs – are gradually destroyed
    B. A myocardial disorder caused by imbalance between the coronary flow (blood supply of nutritious substances and oxygen needed for a good functioning of the heart), which is decreased by the affectation of heart arteries and myocardial necessities
    C. Deterioration of articular cartilage, micro lesions in the periarticular soft tissues – especially in the conjunctive tissue – thickening of the articular capsule
    D. Dormant cardiac insufficiency and requires a pacemaker

18. Arterial hypertension is defined as the increase of the following tension values:
    A. Systolic over 120 mm Hg and/or diastolic over 70 mm Hg
    B. Systolic over 90 mm Hg and/or diastolic over 140 mm Hg
    C. Systolic over 70 mm Hg and/or diastolic over 120 mm Hg
    D. Systolic over 140 mm Hg and/or diastolic over 90 mm Hg

19. Frequent symptoms of geriatric AHT are:
    A. Effort dyspnea, sensation of thoracic discomfort, headache, time-space disorientation, dyssomnia, nocturia
    B. Aesthenia, dizziness, apathy, depression, irritability
    C. Breathing difficulties, frequent coughing, pain and chest pressure
    D. Sensation of incapacity to inhale enough air, sensation of chest tightness

20. The chronic obstructive pulmonary disease (COPD) is:
    A. An infectious disease, caused by the Koch bacillus
    B. Actually the bronchial asthma
    C. Incurable, progressive, disease, most often caused by smoking, although it also has a strong genetic component
    D. A chronic respiratory disease which affects both the bronchi (chronic bronchitis) and the lungs (emphysema) and it manifests through progressive and irreversible narrowing of bronchi, which is accompanied by a progressive decrease of respiratory capacity

21. Risk factors of COPD include:
    A. Smoking and exposure to cigarette smoke (passive smoking)
    B. Pollution, professional exposure to dust, fumes and vapors
    C. Improper eating habits and nutrition
    D. Frequent respiratory infections in childhood

22. Pulmonary tuberculosis has the following signs and symptoms:
    A. Coughing with mucus, good appetite, weight gain, wheezing
    B. Persistent cough for 3 weeks or more, cough with sputum or blood, lack of appetite, weight loss, chills, fever, nocturnal sweating

C. Persistent cough for 3 weeks or more, cough with sputum or blood, appetite, weight gain, wheezing
D. Cough with mucus, lack of appetite, weight loss, wheezing

23. Extra pulmonary respiratory disorders include:
A. Alzheimer's disease, Parkinson's disease, inflammatory rheumatism
B. Strokes, Alzheimer's disease, degenerative rheumatism
C. Strokes, Parkinson's disease, kypho-scoliosis
D. kypho-scoliosis, Alzheimer's disease, degenerative rheumatism

24. Arthroses are characterized by:
A. Inflammation is triggered in the synovial membrane, which pads the inside of the joint
B. Deterioration of the joint cartilage, thickening of the articular capsule, in some cases, osteoporosis and ostheophytosis
C. Micro lesions in the periarticular soft tissues, especially in the conjunctive tissue
D. Can occur at any age, but most often around the age of 50

25. It has been noticed that arthroses interest especially the overworked areas from mechanical point of view, such as:
A. Knees, coxo-femoral joints, ankles, small bones from hands and feet
B. Knees, shoulders, elbows
C. Coxofemoral joints, ankles, small bones from hands and feet
D. Knees, coxo-femoral joints, shoulders, elbows, ankles, small bones from hands and feet

26. Scapulo-humeral periarthritis, according to symptomatology, has the following stages:
A. Degenerative lesions with calcification tendency in the supraspinous and biceps tendons, blocked shoulder
B. Retraction of the joint capsule, movement limitation, pain
C. Acute painful shoulder and blocked shoulder
D. Simple painful shoulder, acute painful shoulder, blocked shoulder and pseudo-paralytic shoulder

27.Coxarthrosis is:
A. Degenerative rheumatic disorder, localized at the elbow joint level
B. Degenerative rheumatic disorder, localized at the hip joint level
C. Degenerative rheumatic disorder, localized at the knee joint level
D. Inflammatory rheumatic disorder, localized at the spine joint level

28. Primitive coxarthrosis means:
A. That it is congenital
B. That it is genetic
C. That it is of arthritic nature, occurs around the age of 50–60 years
D. That it is of traumatic nature

29. Coxarthrosis leads to:
    A. Pain, atrophy, muscle contracture, motion range limitation
    B. Statics and gait disorders (specific walking: bouncing walking)
    C. Pain, paralysis, spasticity, the patient gets into the wheelchair
    D. Spine stiffness, posture alteration (kyphosis, scoliosis occur)

30. Gonarthrosis is the arthrosis of:
    A. hip
    B. knee
    C. elbow
    D. ankle

31. Which of the following statements are true?
    A. Gonarthrosis is manifested through pain, especially when getting dresses, combing, and through mobility decrease at elbow joint level
    B. Gonarthrosis is manifested through pain, especially when climbing stairs up and down and through mobility decrease at hip joint level
    C. Gonarthrosis is manifested through pain, especially when climbing stairs up and down and through mobility decrease at ankle joint level
    D. Gonarthrosis is manifested through pain, especially when climbing stairs up and down and through mobility decrease at knee joint level

32.Cervicarthrosis or cervical spondylosis:
    A. It is arthrosis localized at level of the anatomical elements from the spine cervical region, manifested through movement limitation and pain which can irradiate in the scapular areas, to the hands
    B. It can cause headaches, dizziness, disorders of the cerebral circulatory regime and, in old individuals, even depressive conditions
    C. It is characterized by osteophytes formation or dystrophy of the cartilaginous vertebral plateaus at dorsal vertebrae level
    D. It can cause precordial pain, intercostal neuralgia, ankylosis of costovertebral joints

33. Rheumatoid polyarthritis is:
    A. A degenerative rheumatic disease which affects the conjunctive tissue, determining asymmetrical deformities and ankyloses, especially to the limbs, starting from the proximal level to the distal one
    B. A degenerative rheumatic disease which affects the intervertebral discs
    C. An evolutive, chronic, inflammatory, rheumatic disease which affects completely the conjunctive tissues, determining inflammations, deformities and symmetrical ankyloses, especially to the limbs, starting from the distal level to their root
    D. An inflammatory, rheumatic disease which affects the intervertebral discs

34. The signs and symptoms of polyarthritis are:
    A. Pains and muscle cramps, tiredness, nervousness, steating, underfeverish condition, vasomotor disorders, morning joint stiffness
    B. Pain localized at the level of L4-L5 and L5-S1 vertebrae which is accentuated when lifting and carrying heavy things and when maintaining the orthostatic position for a long period of time
    C. Pain in the dorsal area, sometimes intercostal neuralgia, precordial pain, disc hernia and ankylosis of costovertebral joints
    D. Headaches, dizziness, cerebral circulatory regime disorders, joint disorders, depressive conditions

35. Specific attitude in ankylosing spondylitis is:
    A. Bent head, lumbar hyperlordosis, scoliosis
    B. The spine is stiff, martial attitude, deletion of physiological curvatures
    C. The spine is stiff, hypertension at knee level, flat foot
    D. Head and shoulders are projected forward, characteristic dorsolumbar kyphosis, semi flexion in coxofemoral joints and at knee level, stiff spine

36. Basic rules and principles in applying physiotherapy to a 3rd age patient:
    A. To wear comfortable cotton or wool clothes
    B. To actively and conscientiously participate to all movements, to repeat alone all the exercises which he can perform
    C. Daily practice of the rehabilitation program, even after accomplishing the objectives, to avoid relapses
    D. To continue the exercises even through pain, or else, the objectives will not be accomplished

37. Basic rules and principles in applying physiotherapy to the 3rd age, for the physiotherapist:
    A. To inform the patient about the necessity and importance of physiotherapy, about the type of applied therapy, means and working methodology, as well as about its effects, way of their assessment, necessity of evaluation and regular control
    B. To form the patient's belief and habit to practice the rehabilitation sessions even after the treatment period is over
    C. To use the preconceived sets of exercises (e.g. Williams gymnastics) for each elderly individual, irrespective of the disease stage and evolution
    D. To show empathy, to be in a permanent dialogue with the patient, thus creating a proper atmosphere to obtain his cooperation

38. Basic rules and principles in applying physiotherapy to the 3rd age, for the physiotherapist:
    A. To make physiotherapy sessions only with the agreement and presence of someone close to the patient
    B. To be calm, to have lots of patience, using mostly the demonstration and explanation for each exercise
    C. To adopt, during the work with the patient, the most stable position
    D. Work is done only from bed

39. Which of the following statements are true?
    A. The rehabilitation program for the 3rd age must be more functional and less analytical
    B. The physical training in the 3rd age should be maximal
    C. The training intensity in the 3rd age will be established by monitoring the respiratory frequency, cardiac frequency (CF 70–75% form CFmax) and ABP (170–180/105–110), the movement execution rhythm should be moderate
    D. In the case of continuous training in the 3rd age, the duration will not be longer than 50–60 minutes

40. Which of the following statements are true in applying physiotherapy to the 3rd age?
    A. Effort grading should be made progressively, so the body adjustment to effort would be accomplished gradually
    B. The content should not be varied, so the patient could learn and imitate the exercises demonstrated by the physiotherapist
    C. The movements should be performed with maximum range, according to individual possibilities, without overloading the joints and the exercises which cause pain, especially at the spine level, should be eliminated
    D. The number of repetitions of each movement should not cause tiredness

41. Which of the following statements are false in applying physiotherapy in the 3rd age?
    A. Breathing will be correlated with movement and after each series, body relaxation should follow
    B. The onset of tiredness does not mean that the effort should be stopped, to let the body recover
    C. The emphasis will be especially on those muscles which, through their specific action, are used in daily activities
    D. To provide tolerance, the patients' mimicry will be observed because many of them, hoping that they will heal fast and completely, bear intense pain. This, however, triggers defense reactions whose treatment will be much more difficult because of its complexity and duration

42. Which are the counter-indications in applying physiotherapy in the 3rd age?
    A. Prolonged orthostatism; aerobic effort; exercises which imply lifting heavy weights; exercises with large support base; prolonged physical efforts with closed glottis
    B. Prolonged orthostatism, sitting on a chair with legs hanging; anaerobic effort; exercises which imply lifting heavy weights; sudden position changes; exercises with narrow support base; exercises in which the body is lowered under the horizontal, compared to the trunk; prolonged physical efforts with closed glottis
    C. Too much sitting; exercises with face down, from ventral decubitus; exercises which simultaneously involve several muscle groups; exercises which imply lifting heavy weights
    D. Prolonged orthostatism; too much sitting; aerobic effort; exercises with large support base; exercises which imply lifting heavy weights; prolonged physical efforts with closed glottis

43. The elderly's functional deterioration is caused, if not totally, at least partially, by:
    A. Retirement
    B. Genetics
    C. Becoming old
    D. Inactivity

44. In the elderly, the movement control disorders have the following causes:
    A. Death of motoneurons which make the other additionally reinnervate the muscle fibers of the disappeared motoneurons
    B. Loss of dendrites and decrease of axonal transportation speed
    C. Increase of synapse potential frequency and increase of tactile sensitivity
    D. Sarcopenia, in direct relation with motoneurons death

45. To increase the fitness level of elderly individuals, according to Caspersen, Kriska, and Dearwater (1994), 3 important aspects should be solved:
    A. There is the possibility that in certain situations, the physical activity program should emphasize certain organic and functional disorders and, from this reason, the physio-prophylaxis programs for elderly should be established, in most cases, with the doctor's agreement
    B. The elderly's preference for physical activities, for a new lifestyle should be ameliorated
    C. Many elderly can have diseases which limit their physical abilities and that is why the aerobic exercises should be carefully selected, so that they also positively influence the functional deficiencies of the respective diseases and the tendency of age physical
    D. The elderly individuals' psycho-social problems, finding financial resources and their preference for physical activities should be ameliorated

46. Elderly individuals' training is made only respecting the following parameters:
    A. The sequence of exercises: it starts with the large groups or with more complex exercises, with the upper limbs, then with the lower limbs
    B. Number of sets: it starts with a set for each exercise, then, it will progressively increase to 3 or more sets, but generally, no more than 6 sets
    C. Intensity is the most important parameter which should be considered when an aerobic exercise program is established
    D. Rest between the sets and exercises is of 5 minutes or more for high resistances, 4–5 minutes for the medium ones and 2–3 minutes for the easier exercises. However, rest is not mandatory if the subject tolerates the metabolic load

47. The most appropriate movement types for aerobic training of elderly individuals' bodies are:
    A. Walks in nature, Pilates, yoga, qigong
    B. Athletics, aerobic gymnastics, cycling
    C. Walking (fast paced), light running, cycling or pedaling, swimming, Nordic walking, marching
    D. Table tennis, field tennis, volleyball, squash

48. The effect of regular physical exercise in elderly are:
    A. Prevention of bone demineralization, cerebral activity amelioration, the cardiac debit in effort decreases, the arterial blood pressure decreases, the tolerance to insulin increases
    B. Ostheoporosis prevention, the cardiac debit in effort increases, the arterial blood pressure increases (which is low in elderly), the tolerance to insulin decreases
    C. Amelioration of neuro-psychological tests (after 4 months of activity)
    D. Immunity decrease, because they get tired when doing physical exercises, they have to take vitamin and mineral supplements during the training program

49. The effects of regular physical exercises in elderlies are:
    A. Decrease of body weight, preferential decrease of visceral fatty deposits
    B. Decrease of obesity tendency, of cardiovascular risk and of evolution towards type 2 diabetes
    C. Increasing the total energy consumption per day, their appetite will also increase, so they gain weight
    D. Their life expectancy and functional independence decrease

50. In peripheral arterio-venous circulation disorders, the following is very important:
    A. Posture correction
    B. Hydration (minimum 3 liters/day)
    C. Hygiene and rigorous caring of the lower limbs, especially of teguments and nails
    D. Increase of circulation through sudden position changes

51. Bürger gymnastics implies:
    A. Standing up from sitting into orthostatism, 10 repetitions, 3 times each
    B. Doing squats for 1–2 minutes, the patient lies in dorsal decubitus
    C. Dorsal decubitus with lower limbs flexed to 90° from the hip joint, heels against the wall, the position is kept for 5 minutes after which the patient sits on the bed edge for 5 more minutes
    D. Dorsal decubitus: lower limbs are placed on a pillow/inclined plan, position kept for 2–3 minutes after which the patient sits on the bed edge with hanging legs for 2–3 more minutes, then he lies in dorsal decubitus

52. The physiotherapy objectives in shoulder functional rehabilitation are:
    A. Fighting the inflammatory phenomena and pain, regaining normal joint mobility, muscle toning
    B. Stability increase, control reeducation and hand-elbow-shoulder coordination
    C. Balance reeducation, shoulder stability increase, rotator cuff muscles' strength increase
    D. Joint mobilization under anesthetic, passive mobilizations on flexion, extension, abduction, adduction and rotation

53. In shoulder functional rehabilitation, it is counter-indicated:
    A. To work passively
    B. Cryotherapy

C. To work while there is pain
D. Electrotherapy

54. The physiotherapy objectives in coxarthrosis:
A. Correction of vicious positions, gait reeducation
B. Functional rehabilitation of coxo-femoral joint by toning the muscles of the flexors, extensors, abductors, rotators and especially of quadriceps and gluteus medius
C. Joint mobility increase, preservation of stability and motor function
D. Prevention of falling

55. Which of the following activities are counter-indicated in coxarthrosis:
A. Cycling
B. Walking with a cane
C. Walking on long distances
D. Walking on rough terrain

56. Which of the following statements are true in coxarthrosis rehabilitation?
A. It is emphasized the regaining of external and internal rotation movements at hip level
B. In case of immobilization, it is begun with exercises which involve excentric contraction, after which the concentric contractions follow and, finally, the isometric ones
C. During the exercises, the affected limb must be released from the body weight and the range of motion is established according to pain onset
D. Exercises are performed passively

57. Physiotherapy objectives in gonarthrosis are:
A. Prevention of joint stiffness
B. Reeducation of internal and external rotation movements
C. Maintaining or developing mobility
D. Strengthening the lower limbs' muscle tone

58. Counter-indications in gonarthrosis rehabilitation:
A. Prolonged orthostatism
B. Active and active with resistance exercises
C. Cryotherapy
D. Electrotherapy

59. General indications in spine arthroses and pain:
A. It is recommended to avoid lifting weights
B. Avoid bearing heavy weights on the head, shoulders or back
C. Exercises are performed mainly from orthostatism and sitting
D. More rarely are used the quadrupedal and decubitus positions because it is difficult to get into these positions

60. Codman type exercises are used for:
    A. Hip
    B. Knee
    C. Ankle
    D. Shoulder

61. The means used in cervical arthrosis rehabilitation are:
    A. Local massage and of the neighboring area
    B. Medical gymnastics: head and neck passive, passive-active, active mobilization exercises in all plans and axes, exercises with resistance, corrective exercises, exercises with the cane
    C. Cervical spine elongation exercises (manual or with apparatus)
    D. Acupuncture

62. Which are the antalgic corrective positions in lumbar spondylosis/sciatic/lumbar disc hernia?
    A. Lateral decubitus on the affected side on a hard bed (fetus position)
    B. Ventral decubitus with hands under forehead
    C. Dorsal decubitus with raised head with shank support on a swing (Perl position)
    D. Dorsal decubitus with lumbar area support, with a pillow under the lumbar area

63. In rheumatoid polyarthritis rehabilitation:
    A. The sequence of joint mobilizations starts with passive, then active movements
    B. The sequence of joint mobilizations starts with active, then passive movements
    C. Considering that degenerative modifications fix the segments in extension, the basic movement will be flexion, always doing joint mobilization on all its movements' plans and axes considered physiological
    D. Considering that degenerative modifications fix the segments in flexion, the basic movement will be extension, always doing joint mobilization on all its movements' plans and axes considered physiological

64. In hip partial or total arthroplasty, the counter-indications in kinetic rehabilitation are the followings:
    A. The hip internal rotation and external rotation is forbidden, the patients are not allowed to sit with crossed legs
    B. vibromasage
    C. Electrical current, ultrasounds and electromagnetic waves
    D. Cycling

65. The femoral col fracture is more frequent in:
    A. Men
    B. Women
    C. Equally in men and women
    D. People with gonarthrosis

66. The signs and symptoms of femoral col fracture are:
    A. Pain, which increases at palpation and at passive hip mobilization attempts
    B. Functional impotence is total, the patient cannot raise the heel from the bed
    C. Walking is possible, but the pain is very intense
    D. At inspection and palpation, it is noticed a protrusion, like a tumor at the Base of the Scarpa triangle, it is the Laugier sign

67. Which is the vicious attitude of the lower limb in case of femoral col fracture?
    A. Adduction, external rotation and shortening of the lower limb
    B. Abduction, external rotation and dorsiflexion
    C. Adduction, internal rotation and knee flexion
    D. Flexion, internal rotation and plantar flexion

68. Femoral col fracture treatment is:
    A. Plaster cast
    B. Surgical
    C. Rehabilitation
    D. Bed rest

69. The duration of the rehabilitation program in case of femoral col fracture is of minimum:
    A. 3 months
    B. 6 months
    C. 9 months
    D. 1 year

70. Osteoporosis is more frequent in:
    A. Men
    B. Women
    C. Men and women equally
    D. Patients with coxarthrosis

71. Osteoporosis classification:
    A. Primary and secondary
    B. Of type 1 (post menopause) and type 2 (senile)
    C. Primary, of type 1 (post menopause) and type 2 (senile), and secondary
    D. None of the above

72. Signs and symptoms of osteoporosis:
    A. Skin dehydration, hair loss
    B. Loss of appetite
    C. Fatigue
    D. Asymptomatic

73. In osteoporosis, the most frequent fractures occur at:
    A. Ribs, wrist bones and spine level
    B. Pelvis, tibia and ankle
    C. Elbow, ankle and femur
    D. Forearm, humerus and tibia

74. Osteopenia is:
    A. Bone arthrosis
    B. Bone inflammation
    C. Periosteum inflammation
    D. Osteoporosis precursor phase

75. How is bone density measured?
    A. With adipocentimeter and compass
    B. With magnetic resonance imagery (MRI)
    C. With dual X rays absorbtiometry (DEXA)
    D. With CT-scan

76. What is CVA short for?
    A. Chronic value assessment
    B. Cerebral vascular accident
    C. Computerized value assessment
    D. Chronic value amelioration

77. CVA (stroke) is of 2 types:
    A. Acute and chronic
    B. Christian orthodox and Christian catholic
    C. Ischemic and hemorrhagic
    D. Medium old age and long-lived over 85 years

78. The stroke occurs when:
    A. A disease progresses/ becomes worse/ passes from the acute phase into the chronic phase:
    B. Over 65
    C. Baptism is made
    D. The blood supply at brain level is interrupted or significantly reduced, it is also reduced the oxygen and nourishment quantity at the brain tissue level, in a few minutes the cells start dying, causing neuron lesion and neurological deficit

79. In case of a stroke, clinically it is possible the existence of several deficits:
    A. Motor, sensitive, mental, perceptual and of language
    B. Of extension, flexion, abduction, adduction
    C. Of calcium, magnesium, zinc, iron and vitamin D3
    D. Vitamins, minerals, circulatory, venous, arterial

80. Motor deficit in stroke is characterized by:
    A. Posture alteration, senile kyphosis onset
    B. Extension, flexion, abduction, adduction, internal rotation and external rotation deficit
    C. Paralysis (hemiplegia) or partial strength loss (hemiparesis) and it is localized on the opposite side from the cerebral lesion
    D. Incapacity to move any body part, bed immobilization

81. Ischemic stroke:
    A. Is characterized by blood overflow in the cerebral tissue, either by vascular rupture or by erythrodiapedesis
    B. Represents cerebral tissue necrosis as a result of cerebral blood debit decrease; if the flow decrease lasts more than a few minutes, cerebral infarction occurs
    C. Represents imbalance between the coronary flow
    D. None of the above

82. Hemorrhagic stroke:
    A. Represents imbalance between the coronary flow
    B. Represents cerebral tissue necrosis as a result of cerebral blood debit decrease
    C. Is characterized by blood overflow in the cerebral tissue, either by rupture or by erythro-diapedesis, which actually represents one of the most common and most frequent causes of death
    D. None of the above

83. Hemiplegia is:
    A. Hemiparesis
    B. Loss of voluntary motility in lower and upper limbs after the affectation of the cerebral tissue
    C. Loss of voluntary motility in half of the body and occurs after the affectation of the pyramidal fascicle situated between the cerebral cortex and the high spinal cord
    D. Upper limbs paralysis after the affectation of the cerebral tissue

84. Stroke determining causes and factors are:
    A. Arterial hypertension
    B. Atherosclerosis
    C. Arterial disease (thromboangeiitis obliterans, arteritis)
    D. Season – during the cold season, a decrease of blood coagulation occurs, which can produce hemorrhage

85. Hemorrhagic stroke risk factors are:
    A. Age, heredity
    B. Smoking
    C. Obesity and sedentariness
    D. All of the above

86. Atherosclerosis is:
    A. Thickening of the arterial wall, creating stenosis (reduction of artery lumen)
    B. Fat deposits (atheroma plates) and cholesterol on the internal arteries' walls, leading to their narrowing
    C. Modification of an organ's normal structure by conjunctive tissue proliferation, as a result of chronic or degenerative inflammatory processes
    D. Disease of the central nervous system with the occurrence of some demyelination plates and is manifested through movement disorders

87. Ischemic stroke is of 2 types:
    A. Hemiparetic and paraplegic
    B. Thrombotic and embolic
    C. Thrombotic and emphysema
    D. Acute and chronic

88. The stroke signs are:
    A. Sudden and very strong headache and dizziness
    B. Imbalance and walking and movement coordination disorders, it can get to consciousness loss
    C. Sudden and very strong chest pain
    D. Speech disorders: individuals who suffer a stroke may say meaningless, scrambled words, or they may not even speak at all

89. The stroke signs are:
    A. State of confusion, staring blankly
    B. Paralysis: the patient can no longer move the upper limbs
    C. Face deformation, one part of the face is fallen and the patient cannot move his mouth
    D. Paralysis: the patient can no longer move the left or right side of the body

90. Thrombotic stroke:
    A. Is an ischemic type stroke
    B. Is a hemorrhagic type stroke
    C. The stroke cause is the formation of a thrombus or blood clot
    D. It is genetical

91. Embolic stroke or embolia:
    A. Is a hemorrhagic type stroke
    B. Is an ischemic type stroke
    C. It is caused by matters which move through the blood vessels (they can be thrombus, fat, air, bacteria, etc.)
    D. Means a sudden block of a pulmonary artery with a blood clot which started off from the leg's veins with thrombosis

92. The evolutive stages of motor deficit in post-stroke hemiplegia, according to Brunnstrom are:
    A. 1st stage – spasticity; 2nd stage – flaccid; 3rd stage – voluntary control appears within the synergy; 4th stage – muscles are toned and spasticity reappears; 5th stage – more difficult, combined movements are learned and the synergies lose their dominance over the motor acts; 6th stage – spasticity disappears, separate articular movement is possible and coordination approaches the normal
    B. 1st stage flaccid; 2nd stage – spasticity begins to develop; 3rd stage – voluntary control within the synergy, spasticity increases; 4th stage – some voluntary control outside the synergic schemes are made with difficulty and spasticity begins to decrease; 5th stage – more difficult combined movements are learned and the synergies lose their dominance over the motor acts; 6th stage – spasticity disappears, separate articular movement is possible and coordination approaches the normal
    C. 1st stage – spasticity; 2nd stage – flaccid; 3rd stage spasticity; 4th stage – flaccid
    D. 1st stage flaccid; 2nd stage – spasticity; 3rd stage- flaccid; 4th stage – spasticity

93. What is spasticity?
    A. It is a state which lacks consistency, strength, energy
    B. A movement disorder which features essential tremor
    C. It is a state of excessive tone increase and of muscle stretching and osteotendinous reflexes which appear in various neurological diseases which involve the central nervous system
    D. A muscle control disorder, characterized by muscle tension and stiffness, as well as by the inability to control these

94. In case of post-stroke hemiplegia, the upper limb spasticity occurs in:
    A. Scapular adductors, shoulder adductors, shoulder internal rotators, elbow flexors and forearm pronators
    B. Fist and fingers flexors
    C. Elbow extensors
    D. Fist and fingers extensors

95. In case of post-stroke hemiplegia, the inferior shoulder spasticity occurs in:
    A. Dorsal flexors, toes' extensors and foot eversion
    B. Hip abductors and external rotators, hip and knee flexors
    C. Hip adductors and internal rotators, hip and knee extensors
    D. Plantar flexors, toes flexors and foot supinators

96. What are the muscular synergies?
    A. The association of several muscles in order to achieve the same movement
    B. Occur as a result of nervous impulses discharged from the muscle's motor neurons
    C. Production of internal tension in the muscles
    D. Microscopic tears at the muscle fibers' level

97. There are 2 basic synergies at each extremity:
    A. One of abduction and one of adduction
    B. One of flexion and one of extension
    C. Isotonic contraction and isometric contraction
    D. Concentric and excentric contraction

98. The flexion synergy at the lower limb is:
    A. Triple flexion from the hip, knee and ankle joints
    B. Hip: flexion, adduction, internal rotation; knee: flexion; ankle: plantar flexion; toes: plantar flexion
    C. Hip: flexion, abduction, external rotation; knee: flexion; ankle: dorsiflexion, inversion; toes: dorsiflexion
    D. None of the above

99. The extension synergy at the lower limb is:
    A. Triple extension from the hip, knee and ankle joints
    B. Hip: extension, adduction, internal rotation; knee: extension; ankle: plantar flexion, inversion; toes: plantar flexion
    C. Hip: extension, abduction, external rotation; knee: extension; ankle: dorsiflexion, inversion; toes: dorsiflexion
    D. None of the above

100. What is synkinesis and which are the three types of synkinesis?
    A. Automatic, involuntary movement of a paralyzed limb of the body with the occasion of a voluntary movement of a healthy limb. It can be global, partial and of balance
    B. Automatic, involuntary movement of the affected limb, if the upper limb is healthy. It can be global, of imitation and of coordination
    C. Voluntary movement of the affected limb. It can be global, partial and of balance
    D. Automatic, involuntary movement of a paralyzed limb of the body with the occasion of a voluntary movement of a healthy limb. It can be global, of imitation and of coordination

Correct answers:

1.C; 2.D; 3.A; 4.BC; 5.C; 6.BC; 7.AD; 8.BCD; 9.CD; 10.AB; 11.AD; 12.B; 13.AC; 14.ABC; 15.D; 16.BC; 17.B; 18.D; 19.A; 20.CD; 21.ABD; 22.B; 23.C; 24.BC; 25.A; 26.D; 27.B; 28. C; 29. AB; 30.B; 31.D; 32.AB; 33.C; 34.A; 35.D; 36.ABC; 37.ABD; 38.BC; 39. AC; 40.ACD; 41.BC; 42.B; 43.D; 44.ABD; 45.ABC; 46.ABC; 47.C; 48.AC; 49.AB; 50.C; 51.D; 52.A; 53.C; 54.ABC; 55.CD; 56.C; 57.ACD; 58.A; 59.AB ; 60.D; 61.ABC; 62.AC; 63.BD; 64.ABC; 65.B; 66.ABD ; 67.A; 68.B; 69. A; 70.B; 71.C; 72.D; 73.A; 74.D; 75.C; 76.B; 77.C; 78.D; 79.A; 80.C; 81. B; 82.C; 83.C; 84. ABC; 85.D; 86.AB; 87.B; 88.ABD; 89.ACD; 90.AC; 91.BC; 92.B; 93.CD; 94.AB; 95.CD; 96.A; 97.B; 98.C; 99.B; 100.D

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PHYSIOTHERAPY
IN PHYSICAL-SENSORIAL DEFICIENCIES AND MASSAGE

1. In scoliosis, gibbosity (watched from behind):
   A. Appears on the concavity side
   B. Is determined by the rotation of the spinous apophyses of the vertebrae, being part of the torsional segment towards convexity
   C. Is determined by the posterior traction of the ribs from the convexity side, determined by the vertebrae rotation with the spinous towards the concavity

2. Non-reduction of scoliosis when bending the trunk forward from orthostatism means that we deal with:
   A. Functional scoliosis
   B. Structural scoliosis maintained by vertebral rotation
   C. Scheuermann kyphosis

3. The postural reeducation of spine deviations starts with:
   A. Spine alignment
   B. Learning the corrections
   C. Awareness of own body

4. The lordotic attitude is accentuated:
   A. In sitting position with raised arms
   B. In sitting on a stool
   C. In sitting with bent torso

5. To correct the head and neck in flexion, the following should be achieved:
   A. Excentric toning in the long zone of the posterior cervical musculature
   B. Concentric toning in medium position of the thoracic (extensor) posterior musculature and inferior cervical musculature
   C. Neck extensor musculature stretching

6. The following muscles become involved in calm inhaling:
   A. Internal intercostals, scaliens, SCM
   B. External intercostals, scaliens, diaphragm
   C. Serratus anterior, external intercostals, rhomboid muscles

7. In calm inhaling, the antero-posterior diameter increase is achieved through the contraction:
   A. Of scaliens which raise the first 5 ribs and, thus, the sternum is pushed forward
   B. Internal intercostals raise the sternum which is, thus, pushed forward

C. The external intercostals raise the last ribs and pivots them to the exterior, thus increasing the transverse diameter of the thoracic cage

8. The final purpose of physiotherapy in functional physical deficiencies is:
   A. To achieve postural (re)education by creating the improved and rectified body attitude reflex
   B. To accomplish local toning of musculature
   C. To achieve a rigid and balanced body

9. Knowing one's body is achieved:
   A. By developing the proprioceptive sense through various stimulations, alternating contractions with relaxation, attempting to feel the weight of a limb, to feel the support areas in lying position, etc.
   B. Through self-visualization in the mirror
   C. By watching certain videos, pictures, etc.

10. The main muscle of the abdominal press is:
   A. Rectus abdominis
   B. Internal and external oblique abdominalis
   C. Transversus abdominis

11. The longitudinal diameter of the thoracic cage is increased by the contraction of:
   A. Diaphragm
   B. Oblique abdominals
   C. Transversus abdominis

12. The diaphragmatic breathing reeducation position is:
   A. Dorsal decubitus with both upper limbs up
   B. Lateral decubitus with flexed knees
   C. Dorsal decubitus with flexed knees, one hand placed on the abdomen, the other on the thorax

13. Looking in frontal plan, in the case of a normal spine, the plumb line passes through:
   A. The external occipital protuberance, under –buttock crease
   B. Ear, acromion, C7, inter-buttock crease, internal malleoli
   C. External occipital protuberance, C7, inter-buttock crease, internal malleoli

14. Which are the most rigid segments on which asuplization is applied in a scoliotic back:
   A. Concave thoracic costo-spinal complex
   B. Concave thoracic costo-spinal complex
   C. Concave scapulo-humeral joint

15. Which is "the ideal" of postural reeducation of the scoliotic, kyphotic, kypho-lordotic patient:
   A. To keep a sand bag with a load equal to the BMI
   B. To learn the corrections as soon as possible
   C. To acknowledge the automatization of correct posture in the daily acts and gestures

16. Muscle toning in scoliosis is made through:
    A. Isometric contractions and isotonic contractions of small amplitude and small load
    B. Isometric contractions and isotonic contractions of large amplitude and small load
    C. Isometric contractions and isotonic contractions of small amplitude with maximal load and many repetitions

17. The maximal load in correction (BMI) is:
    A. Maximal load which can be maintained for 10 contractions
    B. Maximal load which can be maintained for 10 seconds
    C. Maximal load which can be maintained for 10 seconds in perfect correction position

18. We speak of unbalanced scoliosis:
    A. When we have one main scoliotic curvature and one of compensation
    B. When the plumb line placed in C7 falls laterally from the inter-buttock line
    C. When the plumb line passes through the buttock crease

19. The difference between a scoliotic attitude (functional scoliosis) and a structural scoliosis is made with the following functional test:
    A. Standing, trunk bent, arms and head hangs freely
    B. Sitting with trunk bent forward between the legs, palms on the ground
    C. Standing, trunk bent laterally, to the deviation side

20. Which are the most inclined (in frontal plan) and the most rotated (in transversal plan) vertebrae in a structural scoliosis:
    A. The vertebrae which limit the curvature are the most rotated and most inclined
    B. The vertebrae which limit the curvature are the most rotated and the top vertebrum is the most inclined
    C. The vertebrae which limit the curvature are the most inclined and the top vertebrum is the most rotated

21. The spine allows movements in:
    A. One plan
    B. Three plans
    C. Two plans

22. Lumbar lordosis accentuation can be accompanied by:
    A. Internal rotation of hips
    B. Pelvis anteversion
    C. Posterior pelvis tilt

23. Pelvis anteversion is achieved by the pair of synergical muscles:
    A. Abdominals – psoas-iliac
    B. Lumbar-psoas iliac extensors
    C. Hamstring muscles, gluteal-lumbar

24. Lumbar lordosis decrease is achieved through:
    A. Pelvis anteversion
    B. Pelvis extension on thighs
    C. Lateral pelvis tilt

25. Lumbar lordosis reduction can be achieved through simultaneous and synergic contraction of the pair of muscles:
    A. Abdominals – psoas-iliac
    B. Abdominals – gluteal, hamstrings
    C. Lumbar – gluteal, hamstrings

26. To correct thoracic kyphosis, it is necessary the contraction of the two posterior muscle chains which can cross at this level:
    A. Dorsal with thoracic paravertebral
    B. Rhomboids, trapezius medialis with the abdominals
    C. Thoracic extensors with shoulder blades' adductors

27. The round back is corrected also through stretching the muscles situated on the anterior face of the body
    A. Pectorals, intercostals
    B. Deltoid
    C. Abdominals

28. For the serratus muscle to be a corrector muscle for dorsal kyphosis and, at the same time, an inhaling muscle, it is necessary:
    A. To make a deep forced exhaling, with kyphosation of the back
    B. To achieve the contraction of pectorals
    C. To achieve shoulder blades' adduction and forced inhaling

29. In diaphragmatic breathing, followed by the inferior costal one:
    A. The diaphragm contracts, the abdominal muscles relax, then the diaphragm relaxes
    B. The abdominal muscles contract, the diaphragm gets lower, then the diaphragm takes fixed point on the phrenic center, departing the ribs
    C. The diaphragm gets lower, the abdominal muscles relax, then slightly contract, allowing the diaphragm to inverse its insertion points and slightly depart the ribs

30. Which is main technique of motion range increase in postural reeducation:
    A. Concentric contraction in the long zone
    B. Excentric contraction in the long zone
    C. Long stretching

31. The forward bent head and neck, as well as the detached shoulder blades are characteristic for:
    A. Total scoliotic attitude
    B. Plan-rigid attitude
    C. Total kyphotic attitude

32. Total lordotic attitude is characterized through:
    A. Backward pelvis tilt, prominent abdomen and knees in hyperflexion
    B. Forwards pelvis tilt sucked in abdomen and knees in flexion
    C. Forwards pelvis tilt, prominent abdomen and knees in hyperflexion

33. The classical postural reeducation exercise is for:
    A. Posterior and anterior body musculature toning through isotone contractions
    B. Lower limbs and postural musculature toning through isometric contractions
    C. Transversus abdominus and shoulder blades' adductors toning through isometric contractions and postural muscles toning through postural tonic contractions

34. From biomechanical point of view, the correct orthostatic body posture:
    A. Requires higher energetic and nervous consumption than the "relaxed" orthostatic position
    B. Consumes 22% more energy than the rest metabolism
    C. Is characterized by stable balance

35. The "asthenic" or relaxed attitude presents:
    A. Head in extension, bulging thorax, flaccid abdomen, kyphosis and lordosis exaggeration
    B. Head bent forward, thorax is flat, abdomen is flaccid and bulging, hyper kyphosis and hyperlordosis
    C. It is also named the elderly's hypertone attitude

36. The child aged between 6–10 years has poorer balance in orthostatism:
    A. Because it has well developed proprioception
    B. Because proprioception is not developed enough
    C. Because the body weight center is lower and the support base is smaller

37. Because of sedentariness and prolonged sitting position, the active and passive spine structures are influenced in the small school child:
    A. The intervertebral discs are compacted and the paravertebral musculature is atrophied
    B. The spine becomes hyperlax
    C. The paravertebral musculature is shortened

38. The muscular chain which provides antigravity posture:
    A. Is in the anterior part of the body
    B. Is made up of the muscle of the body's posterior plan
    C. Is made up of flexor muscles

39. The solicitation through manual stimulation of some repeated maximal contractions:
    A. Is a muscle strength increase technique which uses exercises with functional character
    B. Is a muscle strength increase technique inspired by the neuro-muscular facilitation techniques
    C. Is a muscle resistance increase technique

40. An elastic spine and strong musculature means:
    A. Accentuated sagittal curvatures
    B. Cervical arrow as small as possible and the lumbar one as big as possible
    C. The cervical arrow and the lumbar arrow are smaller than 3 cm

41. The shortened muscle, which suffers of tight weakness phenomenon is:
    A. Strong if tested in short position and weak if tested in long position
    B. Weak in short position and strong in long position
    C. Weak both in short and long position

42. Lumbar hyperlordosis correction from dorsal decubitus position, accepting the worsening of dorsal kyphosis and cervical lordosis is:
    A. The second postural reeducation stage of a patient with lordosis
    B. The first postural reeducation stage of a patient with kypho-lordosis
    C. This is not accepted

42. Complete breathing, which comprises all three respiratory types:
    A. Is the most correct way to breath and can only be made consciously
    B. It can be learned and automatized
    C. More than 3–5 complete ample breathings are performed in one session

44.Torticolis is:
    A. Head and neck bend towards the affected side and twisting it towards the affected side
    B. Head and neck bend towards the healthy side and twisting it towards the affected side
    C. Head and neck bend towards the affected side and twisting it towards the opposite side

45. The stretch weakness phenomenon occurs in:
    A. A muscle which was under loaded and kept in shortened position
    B. A muscle kept elongated which reduced its contraction capacity
    C. A muscle which was overloaded through excentric contractions

46. Lymphatic drainage:
    A. Lymph is pumped by the heart and it flows continuously, stimulated by various elements, among which, the muscular tissue which surrounds the lymphatic vessels
    B. Unlike blood, lymph always flows in one direction: from periphery to center
    C. The center is represented by the place named "terminus", which is the subclavicular vein localized near the neck

47. The psoas – lordozing muscle :
    A. In dorsal decubitus position with extended knees, the psoas-iliac is placed in tension, pulling the lumbar vertebrae and accentuating the lumbar lordosis
    B. Dorsal decubitus position with flexed knees, will take the iliopsoas out of tension
    C. In dorsal decubitus with lower limbs flexed to 90^0, lowering both lower limbs will accentuate the lumbar lordosis, this being maximal an the beginning of the descent

48. We have the following exercise: dorsal decubitus, knees flexed, soles on the floor, forearms in pronation: T1 – cervical and lumbar lordosis become flat; T2 – forearms are supined and scapulae adducted; T3 – becomes relaxed. The exercise objective and the spine area for which it is intended are:

A. Muscle strength increase and is intended for the thoracic region
B. Postural reeducation of the entire spine
C. Respiratory reeducation and is intended for the thorax

49. The abdominal muscles and the psoas are antagonist muscles – orthostatism anterior-posterior pelvis tilt:

A. The rectus abdominis take fixed point on the superior insertion on the sternum, pulling upwards the pubis and accomplishing pelvis retroversion, which has as result the lumbar lordosis reduction
B. The psoas accentuates lordosis, taking the fixed point on the thigh and pulling forward the lumbar vertebrae
C. The psoas diminishes lordosis, taking the fixed point on the lumbar vertebrae and flexing the femur on pelvis

50. Postural reeducation of functional deviations in children is made mostly through:

A. Trunk bending on the side opposite to the most accentuated deviation
B. Axial stretches with correction of all curvatures
C. Accentuated spine flexions

51. Which are the most important three sensitive-sensorial inputs on which keeping the balance of the postural system is based:

A. The ear pavilion, visual receptor, leg
B. Vestibulary system, postural musculature, eye
C. Internal ear, visual receptors, somato-sensitive system of the leg

52. The head:

A. It has the tendency to fall forward because of its weight center is situated anterior compared to its support on the spine
B. It is kept in correct position by the central muscular system
C. The nuchal ligament is placed in tension when the nape muscles are inefficient due to maintaining them in elongated position

53. The weight of the scapular belt and upper limbs:

A. Leads to shoulders fall and shoulder blades departing from the spine
B. Counter-balancing the scapular belt and upper limbs weight is made through the contraction of the shoulder blades' adductors and fixators
C. They take fixation point on the shoulder blades and get the spine closer

54. From lateral view, the gravity line:
    A. Passes posterior to the ankle joint, which tends to flex the tibia on the foot
    B. Passes anterior to the ankle joint, which tends to flex the tibia on the foot
    C. Ankle stability is provided by the plantar flexor muscles, triceps suralis and, especially, the soleus muscle

55. The neutral zone is:
    A. The mid zone of the motion range in a joint
    B. Placing the ligaments in tension stops the movement considerably before the static muscles' passive stretch
    C. Through total muscle relaxation, the spine curvatures become exaggerated and to maintain the posture, support will only consist of passive structural elements

56. Lateral tilt and vertebral rotation:
    A. From the 2nd cervical vertebra to the 3rd thoracic one, the lateral tilt and vertebral rotation always take place together and are made in the same direction, irrespective of the position from which they are performed
    B. For the vertebrae situated under the level of the 3rd thoracic one, in orthostatism, the lateral tilt of the vertebrae is achieved with their rotation to the opposite side
    C. In the lumbar region, in orthostatism with flexed trunk, the lateral tilt is achieved in the opposite side to the vertebral rotation

57. The ribs imitate all thorax movements:
    A. In lateral tilt, the thorax is raised an enlarged on the contralateral side
    B. In lateral tilt, it is compressed on the contralateral side
    C. During the rotation the thighs protrude posteriorly on the side to which the vertebral body rotates and flattens on the opposite side (see scoliosis)

58. In a correct posture, the length and strength of muscles involved in a joint movement:
    A. Must be balanced
    B. Only the muscle length should be balanced
    C. When a movement torque is imbalanced, the segment moves, gets out of the normal movement/rotation axis and, thus, a vicious or abnormal joint movement occurs

59. In an imbalanced posture:
    A. The muscles predisposed to inhibition, hypotonia and muscle strength decrease are: gluteus maximus, medius and minimus, rectus abdominis, trapezius medius and inferior, deltoid and tibialis anterior
    B. These muscles, which tend towards hypoactivity, are named postural muscles
    C. The postural muscles are those who are hyperactive: triceps suralis, adductor muscles, hamstrings, rectus femoris, fascia lata tensor, psoas, erector spinae, lumbar square, trapezius superior, mastication muscles, central muscular system

60. A person's correct postural alignment:
    A. Is when the gravity axis is far as possible from the axis center of all joints
    B. Is when the gravity stress is as small as possible (excessive forces) acting on the soft tissue components which support the joints because there is little resistance or none, to the movement for a movement
    C. Is an indicator of functional stability with clinical importance

61. Without proper stabilization:
    A. Of the spine, the belts' muscle contractions will be transmitted to the proximal regions of the spine, determining spine movements which will determine excessive stress to the spine structures and adjacent soft tissues
    B. Of pelvis by the abdominal muscles against traction performed by the iliopsoas muscle, when thigh flexion on pelvis from dorsal decubitus is performed, the lumbar lordosis decreases
    C. Of ribs by the intercostal and abdominal muscles, it cannot be achieved an efficient pushing force by the pectoralis major and serratus anterior muscles

62. Within the stabilizing musculature of the scapular belt:
    A. The mid fibers of trapezius pull the shoulder blade towards the body midline, synergic action with the rhomboid muscles, and the inferior fibers lower the shoulder blade, thus the shoulder as well
    B. The pectoralis major which inserts on the shoulder blade, adducts the shoulder blade
    C. The rhomboid muscles and the mid fibers of trapezius are the antagonists of serratus and pectoralis major

63. Correction in the case of an exaggerated dorsal kyphotic curvature is achieved:
    A. Due to crossing exactly in the maximum zone of the curvature and of the muscles of vertebral grooves which are vertical straps, and of the rhomboids and serratus, which are transversal straps
    B. Forced exhaling muscles, through the costal lever arms have also action upon the thoracic curvature
    C. By inhaling, the ribs recover (ribs raise and pulling apart), become parallel again and straighten the spine

64. In orthostatism, during trunk flexion, as the electromyography studies show:
    A. First, the paravertebral muscles contract strongly, the gluteals and, finally, the hamstrings and soleus
    B. When 50º flexion is achieved, the erectors start the relaxation by becoming completely inactive at the end of the movement
    C. When the trunk raises, the order of muscles recruited in contraction is the same as in lowering movement

65.The abdominal belt is:
    A. Relaxed in dorsal decubitus

B. During head raise, only the rectus abdominis contract, the oblique muscles remaining relaxed
C. Raising both lower limbs determines the strong contraction of the bilateral obliques, while, when raising one, it is activated predominantly the one in the counterlateral side

66. The abdominal muscles and the psoas are synergic muscles – dorsal decubitus – trunk flexion – pelvis on lower limb:
A. They flex together the thoracic-pelvi-lower limbs complex, being prevalent one at a time, without possible separation
B. Insufficient pelvis fixation has as consequence the lumbar curvature accentuation
C. The lumbar curvature accentuation is visible especially at the end of the exercise performance
D. The gluteus maximus and hamstring muscles become stretched to the limit starting from approximately 70^0 upward

67 The antagonism and synergism of the diaphragm (D) and abdominal muscles:
A. During inhale, D contraction lowers the central tendon, increasing the thorax vertical diameter
B. Further on, without a strong abdominal brace, the abdominal content would be easily moved down and forward and the central tendon would not be stabilized to allow D to raise the inferior ribs
C. During exhale, D contracts again and the abdominal muscles relax

68. In support on knees:
A. Costal mobility is blocked in a reflex way, due to postural reflex (anterior scapular support)
B. Ventilation is made by raising the ribs
C. It is the best posture for abdominal breathing training, the transversus muscle working against the resistance of visceral weight

69. The pelvis and respiratory mechanics:
A. The pelvis anteversion increases the abdominal cavity and favors abdominal expansion during inhaling lowering of the diaphragm
B. Retroversion favors inhaling by reducing the abdominal cavity
C. Pelvis tilt exercises can integrate into the diaphragmatic localized breathing

70. Maintaining or global development of functional respiratory possibilities is achieved:
A. Through breathing amplification, insisting on the exhale phases, which determine, in consequence, the increase of inhaling phases, without them being forced
B. Through breathing amplification, doing global exercises performed with large muscle groups and as many as possible, exercises taken from sports and sports games
C. Exhaling muscles' toning

71. Diaphragm toning is achieved by indirectly opposing resistance:
A. The visceral mass weight opposes resistance from declive position with head down
B. Achieved by a weight placed on the abdomen
C. Achieved through apnea

72. Thoracic modelling:
    A. Targets the expansion of depression zones, developing proprioceptive sensations at the respective level
    B. Is achieved through the manual action of the therapist or through exercises performed in corrector sense which also accomplish the spine asuplization
    C. Pressure, manual action is achieved in the sense opposed to correction

73. Mobilization of gybbosities and depression areas in scoliosis:
    A. Can be done through traction with the help of cloth strips or especially through the physiotherapist's manual action
    B. Asuplization action is always made in the costal-vertebral de-rotation direction
    C. Asuplization action is always made without synchronizing movement with breathing

74. The most rigid segments on which asuplization is applied in scoliosis are:
    A. The concave ilio-lumbar angle
    B. Concave thoracic costo-spinal complex
    C. Convex gybbosity

75. Thoraco-lumbar fascia:
    A. Provides stability and support in the lumbar spine and trunk dynamics
    B. Strengthens the anterior ligamentar system due to its fibers orientation and insertions on the lumbar spine and pelvis
    C. In lumbar spine flexion on pelvis and in posterior pelvis tilt, a passive tension occurs in the posterior side of fascia. This tension stabilizes the pelvis against pelvis flexion
    D. The fascia absorbs and equalizes the increased forces at the lumbar spine level, determined by tension increase in the muscles attached to fascia or which surrounds it

76. In kypho-lordotic posture, the pain sources can be:
    A. Overload (stretching) of the anterior longitudinal ligament anterior in the lumbar area and posterior in the thoracic area
    B. Narrowing of the posterior L discal space and getting closer the L articular facets
    C. Overload (stretching) of the anterior longitudinal ligament anterior in the thoracic area and posterior in the lumbar area

77. In the kypho-lordotic posture, the muscular imbalances are:
    A. Thigh flexors on pelvis (iliopsoas, fascia lata tensor, rectus femoris) are shortened and hypertone
    B. Abdominal muscles are atone and stretched
    C. Lumbar extensors are stretched

78. The kypho-lordotic posture is characterized through:
    A. Pelvis retroversion increase and hip flexion
    B. Lumbar lordosis increase
    C. Dorsal kyphosis accentuation and forward head and neck tilt

79. In relaxed posture (slipped/flattened), the pain sources can be:
    A. Stress on the ligaments: ilio-femoral, anterior longitudinal in the lumbar area, posterior longitudinal in the high lumbar and thoracic areas
    B. Narrowing of the intervertebral foramen in the thoracic area
    C. Getting closer the articular facets in the low lumbar area

80. In relaxed posture (slipped/flattened), the muscular imbalances:
    A. Shortened muscles: the superior segment of the abdominal muscles, internal intercostals, hip extensors
    B. Elongated: inferior lumbar extensor and respective fascia
    C. Elongated and atone: inferior segment of abdominals, extensor of inferior thoracic, hip flexor

81. The relaxed posture (slipped/flattened) is characterized through:
    A. Posterior pelvis slip, hip extension
    B. Posterior thoracic segment slip in the low thoracic area and in the superior lumbar area
    C. The muscles are not used to support the body weight, the person completely yields to the gravity effects

82. The common causes of relaxed posture (slipped/flattened) can be:
    A. Attitudinal (the persons feel comfortable when they relax the musculature and yield to gravity)
    B. From the hypotone muscles (hypotonia which can be either the cause, or the effect of posture)
    C. After an incorrect physical activity program (which accentuates the thoracic extension)

83. The inferior flat back posture is characterized by:
    A. Diminished lumbo-sacral angle
    B. Posterior pelvis tilt and, in consequence, accentuated lumbar lordosis
    C. Hip extension

84. In the inferior flat back posture, the muscular imbalances are:
    A. Contracted muscles are: trunk flexors (rectus abdominis and intercostals)
    B. Elongated: thigh on pelvis extensor
    C. Elongated and hypotone muscles are: lumbar extensors, possible thigh on pelvis flexor

85. In superior flat back posture, the muscular imbalances are:
    A. Shortening of thoracic extensors
    B. Elongation of shoulder blades' adductors, which determines restrictive movements of the shoulder blades and also diminishes the shoulder raising movement
    C. Hypotone: anterior thoracic muscles, scapula protractors

86. Potential causes of pain in superior flat back posture are:
    A. Tiredness of thoracic extensor postural muscles
    B. Tiredness of pectoralis
    C. Neurovascular compression between clavicles and ribs

87. Forward bent head-neck – characteristics:
    A. Accentuated extension of the inferior cervical area and superior thoracic area
    B. Accentuated extension of occipitum on the first cervical vertebrum
    C. Accentuated extension of superior cervical vertebrae
    D. There can be dysfunctions of the temporo-mandibular joint with mandible retrusion

88. Forward bent head-neck – common causes
    A. Functional or professional positions which require a prolonged posture with the trunk in extension
    B. Relaxed postures
    C. Secondary deficiency of a deficient posture of the pelvis or lumbar spine

89. Forward bent head-neck – potential pain sources:
    A. Stress on the posterior longitudinal ligament in the high cervical area and on the anterior longitudinal ligament in the low cervical area and high thoracic area
    B. Irritations of the articular facets in the high cervical area and narrowing of intervertebral foramen in the high cervical area and discal lesions of the low cervical area
    C. Shortening of the scapula raising muscle affects the cervical plexus and the affectation of the occipital nerve by the trapezius superior muscle can lead to headaches
    D. Vicious postural alignment of the head, neck and temporo-mandibular joint can lead to pain in this joint and hypertonia in the face muscles

90. The flat neck posture is characterized through:
    A. Cervical lordosis increase
    B. Increase of occipitum flexion on the atlas (exaggeration of axial stretch)
    C. Can occur together with the back high plan
    D. Dysfunctions of the temporo-mandibular joint and mandible protraction

91. The flat neck posture – potential pain sources:
    A. Pain in the temporo-mandibular joint and occlusive changes
    B. Increased capacity to absorb the shocks of the lumbar spine can predispose the cervical area to lesions
    C. Nuchal ligament stress

92. The flat neck posture – muscular imbalances:
    A. Anterior muscles of the neck are shortened
    B. Scapula raising muscles can be elongated and hypotone
    C. Sternocleidomastoidien, scaliens are shortened

93. Forward bent head-neck – muscular imbalances:
    A. Shortened and hypertone: scapula errector muscles, scaliens, sub-occipitals sternocleido-mastoid,, if the scapulae are elevated, and trapezius superior can be hypertone (shortened)

B. If there are symptoms of temporo-mandibular joint, it means that the masticatory muscles are hypotone
C. Elongated and hypotone: anterior neck muscles (the hyoid becomes fixed because of the elongated position), the inferior cervical spinal erectors and the superior thoracic muscles

94. Typical clinical problems associated with the painful postural syndrome and with postural dysfunctions are:
A. Pain caused by: stress on the sensitive structures and muscular hypertonia
B. Range of motion decrease (dysfunction)
C. Balanced muscle strength
D. Kinesthesic control on alerted normal alignment

95. Flat inferior back is characterized through:
A. A diminished lumbar-sacral angle and posterior pelvis tilt
B. Accentuated lumbar lordosis
C. Hip extension

96. Potential causes of flat inferior back pain are:
A. Lack of normal physiological curvatures, which reduces the shock absorbing capacity of the lumbar region and predisposes to lesions
B. Anterior longitudinal ligament stress
C. Increase of posterior discal space, which allows the nucleus pulposus to get imbibed with extra fluid and, in certain circumstances, it can produce a posterior protrusion when extension is performed

97. Lymphatic drainage – the high permeability of lymphatic capillaries is due to 2 factors:
A. Endothelial cells which form the capillary wall are not solidly attached, their edges overlap easily, forming disjunctions which open very easily
B. Any interstitial liquid volume increase exercises traction on disjunctions and the interstitial liquid penetrates the lymphatic capillary
C. The disjunctions are closed when pressure becomes smaller in the lymphatic capillaries than in the outside; lymph cannot overflow in the interstitial compartment and it is pushed into the lymphatic circulation

98. Common causes of inferior flat back are:
A. Permanent maintenance of a relaxed position in orthostatism and sitting
B. Exaggeration of exercises in flexion
C. Exaggeration of exercises in extension

99. Round or kyphotic back is characterized by:
A. Kyphotic curvature increase
B. Scapulae protection, round shoulders
C. Usually, head and neck in extension

100. Muscular imbalances which can occur in a round or kyphotic back:
   A. The anterior thorax muscles (intercostals) are shortened
   B. There are elongated the muscles of the upper trunk, which have their origins on thorax (pectoralis maximus and minimus, latissimus dorsi, serratus anterior)
   C. There are shortened the muscles of the cervical region and of the head, which are inserted on the scapulae (scapula raiser and trapezius superior)
   D. There are stretched and weak: thoracic erector spinae, scapulae adductors (rhomboid muscles and trapezius medius)

101. The purposes of massage are:
   A. Hygienic/physiological purpose means maintaining/improving the functional properties of the entire body at optimum level
   B. Prophylactic massage dwells with the prevention of occurring certain body functioning disorders
   C. Therapeutic massage = removing the sequelae of posttraumatic disorders or other diseases
   D. Recovery massage = treating – in parallel with other therapeutic methods – of certain disorders

102. From the history of massage:
   A. 1930 is the year when the Massage School related to INEFS Bucharest was founded, under the leadership of dr. Ion Lascăr and Valentina Roșca
   B. After 1970, the specialty literature starts to develop in our country as well, appearing even translations such as "Masajul practic și teoretic, general și parțial", belonging to Theodora Atanasiu (after the work of M-me De Fumerie), appeared in 1933 and addressed to the auxiliary health care givers
   C. In 1940 appears the first massage course of Dr. Adrian Ionescu, the father of Romanian medical gymnastics
   D. In Transylvania, under the impulse provided by Marius Sturza – inspired from abroad – massage is introduced in the balneo-climaterical resorts

103. The methodology of procedure application in a massage is:
   A. Massage starts with simple, easy, supple procedures, with testing/examining and preparing character
   B. The range of motion and execution rhythm will progress gradually, until the necessary intensity is reached, after which they will decrease gradually, the session being concluded with long and calming techniques and procedures
   C. This intensity curve of applying massage techniques and procedures is applied only on the first massaged region or segment

104. Effleurage:
   A. Is addressed to the subcutaneous tissue
   B. Is an easy and rhythmical slide on the tegument surface
   C. Simple hand contact, without great pressure, generally with the finger tips, which are soft and can follow the anatomic forms

D. Is addressed mainly to superficial sensitivity, either to achieve first contact, or to desensitize the area (hypoestesiant effect), if the movements are made slowly

105. Frictions:
A. Pressing on and movement of soft tissues in the elasticity limits on a deeper plan – muscular, ligamentary or bone
B. If we want to act with more powerfully and on the deeper tissues, we accentuate the pressure either by inclining the fingers and the hand on the region plan, or by applying a second hand on the one that is working
C. The hand is moving on the cutaneous plan

106. Tapotement:
A. In trampling, intensity results mostly from the active muscle contraction than from the fingers and hand weight
B. Intensity varies according to the sensitivity of the region to be massaged and the existent muscle mass
C. The sequence of tapotement maneuvers is: beating with the cubital side of the hand; slapping, cupping, hacking, percussion
D. Splashing is a special technique in which the fingers fall one at a time on the skin and continue the movement through light effleurage (used for the face, head, abdomen)

107. The secondary massage procedures:
A. Are interpolated between the main ones or are added at the end of the massage session
B. Complete the action of the basic ones and enrich the massage technique
C. Are less efficient than the main ones, that is why they are named secondary procedures
D. Some derive from the main ones, which they also accompany; others have their own characteristics and are applied independently

108. The effects of effleurage on blood flow:
A. The most important effects are on blood flow in the capillaries, superficial veins and lymphatic vessels
B. Acting mechanically means that the effleurage techniques act directly on the superficial blood vessels, influencing the push of the venous blood column in centripetal direction
C. The effect does not extend to the deep circulation
D. Due to the fact that the medial sheath of the veins is formed from a muscular layer in which the fiber disposition is transverse, under the form of rings, they are influenced very efficiently through this "circular" grip and, thus, the staccato effleurage stimulates the smooth musculature contraction, favoring the return circulation at the thorax level

109. Effects of smoothing on the skin:
A. Exfoliation of corneal cells at the level of the disjunctive layer, stimulating new differentiations of the basal cells and thus shortening the time necessary for epidermis regeneration
B. This is the way to ameliorate the skin's physical-mechanical properties, such as elasticity, contractility and, secondarily, tension and cutaneous resistance to pressure

C. Skin elasticity is manifested through sensitivity owed to the elastic fibers which get into the dermis structure; it increases with age

110. Effects of smoothing on the skin:
A. Mechanically, the sebum secretion is activated, by stimulating the contraction of hair threads erector muscles
B. Sebum has an important role in forming the surface acid pellicle, thus diminishing the antimicrobial and anti-parasite function of the skin
C. The sweat glands respond to the mechanical excitatory which stimulate the opening of the secretory canals. Thus, the surface acid pellicle is completed with the sweat component and the thermoregulation function is influenced through heat loss, as a result of sweating
D. Through sweating, toxins and Na, K, Ca, etc. slats are eliminated, which result from the protein substances degradation (ammonia, creatine, uric acid, urea, etc.) and of the non-nitrate organic compounds (lactic acid), substances which are the result of muscular contraction biochemistry. Detoxification can be accelerated through massage, thus interfering with the prevention of muscular fatigue onset, and with the recovery of the tissues' functional

111. Neurotonic effect of effleurage:
A. Long effleurage, with reduced rhythm and intensity, has a calming action upon the nervous system, relaxing and decontracturing upon the skeletal muscles, determines the slowing down of tissues or organs' functions, diminishes or inhibits sensitivity, conductibility and reactivity of nerves (produces desensitivisation)
B. Short, vigorous techniques with increased rhythm and intensity, have the same effects
C. Through effleurage, the excitation of skin or nervous terminations in the skin determine the triggering of the antidronic axonic reflex, with vasodialating effect, which exteriorizes through cutaneous hyperthermia
D. Because the skin temperature is involved in perceiving painful sensations, the low temperature emphasizing them, in posttraumatic lesions it is performed the effleurage with warming creams, until anesthesia is achieved (cryomassage)

112. The effects of kneading on the body:
A. It is stimulated the opening of reserve capillaries, favoring the profound circulation which provides the elimination of toxic products of metabolism (wear substances)
B. Kneading maintains the muscle in a normal functioning and trophicity condition, preventing muscle atrophies
C. Muscle elasticity is not improved

113. Effects of tapotement on the body:
A. Vary according to the rhythm and intensity of taps within each technique
B. Are also conditioned by the suppleness or rigidity of the physiotherapist's hands, and by the skin's or massaged tissue's sensitivity
C. Cutaneous hyperthermia is not obvious and is of short duration
D. The excitation of sensitive somatic nerves is followed, in time (after a certain number of sessions) by the painful sensitivity decrease

114. Effects of vibrations on the body:

A. The techniques performed over a long period of time and with finesse are calming, warming, reduce skin and superficial tissues' sensitivity, producing a sensation of numbness, warming and relaxation
B. The ampler and more powerful techniques have as effect the intensification of deep local circulation which is exteriorized through cutaneous hyperthermia
C. Vibrations are not indicated in the treatment of some painful and congestive disorders of the internal organs, of some lesions accompanied by muscular contracture, as well as in cases of high psychic tension ice

115. Excitation of sensitive somatic nerves, followed shortly by the decrease of painful sensitivity (sedative effect) is best achieved through:

A. Effleurage
B. Kneading
C. Tapotement

116. Through which mechanisms do you explain the improvement of skin suppleness and elasticity and with the help of which maneuvers are they mainly achieved:

A. Through adherence rupture and removal of calcium deposits at the level of elastic fibers from dermis with the help of effleurage
B. Through painful sensitivity decrease with the help of friction
C. Through calcium deposits removal and adherence rupture with the help of friction

117. Tensions:

A. Are the main massage processes and are addressed to the joints
B. Are performed according to the biomechanics of each joint around the axes and in the normal movement plans
C. Have relaxing effect because they perform the musculature and periarticular structures' stretching

118. Sedative (calming) effect of massage is based on:

A. Removing toxic metabolism products form the muscles, by opening the pores and by stimulating the excretion functions
B. Improvement of local and general circulation, which is manifested through hyperemia
C. Exhaustion of neurotransmitter reserve at the level of sensitive nervous terminations, which leads to gradual amelioration and disappearance of pain

119. The indirect, reflex effects of massage are explained through:

A. Mechanical action upon the receptor of various types, which transmit it directly to the performing organs, improving their activity
B. Direct action upon the CNS, which determines a better activity of the entire body
C. Transformation of mechanical energy which acts upon the receptors (exteroceptors, proprioceptors, introceptors) in nervous influx, transmitting it to the Central Nervous System

(CNS), providing information about the activity of the internal and peripheral organs; the CNS retransmits the correction activities on their activities, creating a functional state of body comfort, the well-being

120. The effects of massage are associated as follows:
A. Local, direct and tardy
B. General, direct and tardy
C. General, indirect and immediate
D. Local, direct and immediate

121. Hyperemia (skin redness) :
A. Is physiologically a capillary constriction
B. Is determined by mechanical stimulation, direct and indirect and reflex stimulation
C. Is determined only by direct stimulation
D. Is determined by capillary vasodilation

122. The physiological purpose of the massage is targeted to:
A. The improvement of physical properties of the tissues
B. Rehabilitation of certain muscular and articular lesions
C. Body recovery after tiredness

123. In the preparing period, massage is given:
A. Only before training, to prepare the body for effort
B. Immediately after effort
C. A few hours after the training is finished, on the muscle groups which took part directly to effort
D. A few hours after the training is finished, on the muscle groups which did not take part directly to effort

124. To obtain stimulating effect on atrophied or inactive musculature:
A. The aim is to remove the sanguine and lymphatic stasis caused by inactivity, that is why effleurage maneuvers are performed to help the venous circulation
B. The aim is to tear the membranous and fibrous adherences, caused by inactivity, through repeated frictions
C. The aim is to obtain a better response of the muscle to the nervous excitation (improvement of muscular contractibility) through kneading and tapotement maneuvers

125. The excitation of motor nerves , materialized through the increase of muscle tone and through the increase of contraction speed of muscular fibers is best achieved through:
A. Friction and kneading
B. Effleurage and tapotement
C. Tapotement and kneading
D. Vibration and tapotement

126. Vigorous and excitating kneading:
    A. Helps to the elimination of toxic metabolism products contained in the tired muscles
    B. Activates the interstitial tissue, preventing it to stagnate and to be organized in fibrous tissue
    C. Stimulates the nutrition of muscular fibers and, secondary, the muscular contraction
    D. Has antalgic effect

127. In cellulitis treatment the following are indicated
    A. Effleurage maneuvers of all types
    B. Friction, kneading and vibration maneuvers, performed energetically
    C. Friction maneuvers performed with the entire palm

128. Dry massage:
    A. means that it is achieved on dry skin, using creams and ointments with therapeutic effects
    B. is made without any other additives
    C. uses powders to absorb sweat and facilitate hand sliding

129. The neurotonic effect:
    A. Occurs only when the massage has a relaxing, calming effect; it means that short energetic maneuvers were performed in a brisk rhythm
    B. Consists in accumulating physical and psychic energy through the massage maneuvers
    C. Means that short energetic maneuvers were performed in a brisk rhythm

130. Cellulitis:
    A. Is a simple accumulation of subcutaneous fatty tissue
    B. Is an inflammatory disorder of the subcutaneous fatty tissue which is manifested under the form of nodes
    C. Calming, light effleurage is provided
    D. Energetic and painful kneading is performed

131. Tendons:
    A. Are massaged the same way as the muscles
    B. Are not massaged at all
    C. In tendinitis, a special transversal friction maneuver is made

132. Ecchymosis caused by superficial concussions:
    A. Benefits of immediate massage
    B. Massage is given only after 2–3 days
    C. Massage is completely counter-indicated

133. The followings benefit of massage:
    A. Severe sprains and fractures, on the affected spot, but only after the plaster cast is removed
    B. Mild sprains, after 3–4 days
    C. Mild sprains benefit of immediate ice massage

134. Effleurage maneuver:
    A. Which mostly helps the venous circulation at the level of cylindrical segments is named "sifted" and "rolled"
    B. Which mostly helps the arterial circulation at the level of the lower limbs is named "staccato"
    C. Which mostly helps the venous circulation at the level of lower and upper limbs is named "staccato"

135. In sportive activity:
    A. The apathetic athlete is given an excitating massage before competition
    B. The athlete who is in the "start fever" is given a stimulating massage before competition
    C. "The intermission massage" is the recovery massage after the competition
    D. "The intermission massage" is applied in certain sports branches to maintain the "ready for the start" state of the athlete between events

Correct answers:

1.C; 2.B; 3.C; 4.A; 5.B; 6.B; 7.A; 8.A; 9.A; 10.C; 11.A; 12.C; 13.C; 14.B; 15.C; 16.C; 17.C; 18.B; 19.A; 20.C; 21.B.; 22.AB; 23.B; 24.B; 25.B; 26.C; 27.A; 28.C; 29.C; 30.C; 31.C; 32.C; 33.C; 34.B; 35.B; 36.B; 37.A; 38.B; 39.B; 40.C; 41.A; 42.B; 43.A; 44.C; 45.B; 46.BC; 47.AB; 48.B; 49.AB; 50.B; 51.C; 52.AC; 53.AB; 54.BC; 55.AC; 56.AB; 57.AC; 58.AC; 59.AC; 60.BC; 61.AC; 62.AC; 63.AC; 64.AB; 65.AB; 66.ABD; 67.AB; 68.AC; 69.AC; 70.AB; 71.AB; 72.AB; 73.AB; 74BC; 75;ACD; 76.AB; 77.AB; 78.BC; 79.AC; 80.AC; 81.BC; 82.AB; 83.AC; 84.AC; 85.AC; 86.AC; 87.BCD; 88.BC; 89.BCD; 90.BCD; 91.AC; 92.AB; 93.AC; 94.ABD; 95.AC; 96.AC; 97.AB; 98.AC; 99.AB; 100.ACD; 101.AB; 102.ACD; 103.AB; 104.BCD; 105.AB; 106.BCD; 107.ABD; 108.ABD; 109.AB; 110.ACD; 111.AC; 112.AB; 113.ABD; 114.AB; 115.C; 116.C; 117.BC; 118.C; 119.C; 120.D; 121.BD; 122.A; 123.D; 124.BC; 125.D; 126.BC; 127.B; 128.B; 129.B; 130.B; 131.C; 132.A; 133.AC;134.C; 135.AD

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