Meeting the Physical Therapy Needs of Children 3rd edition Effgen Test Bank

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Chapter 02. Child Development

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Which developmental theory has had the most long-term impact on the practice of pediatric physical therapy?
a. Dynamic systems
b. Genetic-oriented view
c. Cognitive view
d. Neuromaturational view
e. Ecological view

____ 2. Which developmental theory enlightened us regarding the importance of early learning?
a. Maturational view
b. Behavioral view
c. Ecological view
d. Cognitive view
e. Genetic-oriented view

____ 3. When working with a teenager having a developmental disability, which theory would probably guide your work today as a physical therapist?
a. Dynamic systems
b. Genetic-oriented view
c. Cognitive view
d. Maturational view

____ 4. Your best friend from high school expresses concern that there is something wrong with his 12-month-old son. At this age, a typical 12-month-old can:
a. gesture.
b. change from sitting to creeping independently.
c. walk with hands held.
d. rise to stand through ½ kneel.
e. All of the above

____ 5. Your best friend from college expresses concern that there is something wrong with her 4-month-old son. At this age, a typical 4-month-old can:
a. roll over independently.
b. change from sitting to crawling independently.
c. drink from a cup.
d. pull to standing at furniture.
e. rake or scoop tiny objects using ulnar grasp.

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____ 6. Your neighbors are concerned that there is something wrong with their 6-month-old son. At this age, a typical 6-month-old can:
   a. walk with handheld assistance.
   b. change from sitting to crawling independently.
   c. sit independently, without external support.
   d. change from sitting to standing without using arms.
   e. demonstrate controlled release into a small container with wrist extended.

____ 7. Which of the following are "red flags" as possible indications of atypical motor development in an infant?
   a. He is extremely floppy.
   b. He is a very quiet baby.
   c. He has oral feeding difficulties.
   d. He demonstrates unilateral reaching.
   e. All of the above

____ 8. What is the youngest age group that would be expected to be able to independently go up and down stairs alternating steps, catch a ball if prepared, jump 2 to 3 inches, hop 8 to 10 steps, throw a ball and hit a target, roller skate, and ride a bike?
   a. 3- to 4-year-old preschool students
   b. 5- to 6-year-old kindergarten students
   c. 7-year-old first-grade students
   d. 8-year-old second-grade students

____ 9. An infant demonstrates the asymmetrical tonic neck reflex has integrated by:
   a. turning his head to either side.
   b. turning his head to one side and looking at the extended arm on that side.
   c. turning his head and bringing his hand to the mouth on the same side.
   d. turning his head to one side and bringing the opposite hand toward his mouth.

____ 10. The bidirectional nature of the relationship and context of the interplay of the child and environment is addressed in which model or view of development?
   a. Genetic oriented
   b. Cognitive
   c. Neuromaturational
   d. Transactional

____ 11. Structural abnormalities of chromosomes may involve:
   a. trisomies
   b. Numerical abnormalities
   c. Deletions, translocations, and inversions
   d. monosomy

____ 12. In autosomal dominant inheritance:
   a. one parent provides the mutant gene and all offspring will inherit the disorder.

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b. both parents carry the abnormal gene, and there is a 50% risk that their child will inherit the disorder.
c. both parents carry the abnormal gene, and there is a 25% risk that their child will inherit the disorder.
d. one parent provides the mutant gene, and there is a 50% risk their offspring will inherit the disorder.

____ 13. Smoking during pregnancy increases the risk of the infant being:
a. large for gestational age and having a cleft lip.
b. born post-term and having a clubfoot.
c. born early and having a low birth weight.
d. irritable and lethargic and having a large frontal lobe.

____ 14. The benefits of breast milk for an infant may include:
a. nutritional and immunological benefits.
b. health, developmental, psychological, and social benefits.
c. reduced child abuse and neglect benefits.
d. All of the above

____ 15. A "sensitive period" is a:
a. period when there is the least neuroplasticity.
b. period of reduced responsivity.
c. time when normal development is most sensitive to abnormal environmental conditions and the brain is particularly responsive to experience.
d. sharply defined time when the impact of experience gradually declines.

____ 16. Fetal limb movements:
a. change the most during the second trimester.
b. follow a proximal to distal sequence.
c. increase during the first trimester.
d. change little during gestation.

____ 17. The sequence of infant rolling over is:
a. culturally dependent.
b. prone to supine since the start of the Back to Sleep Campaign.
c. supine to prone in all cultures.
d. dependent on the child's weight.

____ 18. Hand and knees creeping in infants:
a. is never exhibited by a small number of infants.
b. is achieved between 5 and 13 months of age.
c. covers about two football fields a day.
d. All of the above

____ 19. By 24 months of age, a toddler should:

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a. have at least a 50-word vocabulary, use two-word combinations, and scribble using a palmar-supinate grasp.
b. have at least a 300-word vocabulary and scribble using a static tripod.
c. have a mature running pattern and use plurals in speech.
d. All of the above

____ 20. One of the constraints an infant has in being able to extend his head in prone is:
a. excessive "tummy time."
b. visual orientation.
c. complete hip extension.
d. large weight of the head relative to the body.

____ 21. An infant has just begun to pull to stand through kneeling, still demonstrates plantar grasp in standing, and is independent in sitting including all protective reactions. This infant's chronological age is approximately:
a. 5 months
b. 7 months
c. 9 months
d. 12 months

____ 22. All of the following primitive reflexes should be integrated by the age of 7 months except:
a. asymmetrical tonic neck reflex.
b. mono.
c. rooting.
d. plantar grasp.
e. palmer grasp.

____ 23. A full-term, typically developing neonate compared to a 12-month-old will have:
a. limitations in hip flexion and excessive plantar flexion.
b. limitations in hip extension and excessive plantar flexion.
c. limitations in plantar flexion and excessive hip flexion.
d. limitations in hip extension and excessive dorsiflexion.

____ 24. In children, heel strike:
a. Generally occurs at 18 months.
b. Is aided by sturdy shoes.
c. Does not develop until 3 years.
d. Is seen when learning to walk.

____ 25. A child typically uses two- to three-word phrases by:
a. 8 months.
b. 12 months.
c. 2 years.
d. 3 years.
e. preschool.

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____ 26. Play in young children might include:
a. intrinsic motivation.
b. freedom to suspend reality.
c. performance for its own sake.
d. internal control.
e. All of the above

____ 27. When an adolescent with a disability is delayed from going through the stages of psychosocial development, all of the following might occur except:
a. problems with self-concept.
b. delayed establishment of identity.
c. increased independence.
d. influences on social behavior in adulthood.

____ 28. The most serious disorders and usually death are seen in infants having chromosomal:
a. trisomies.
b. monosomy.
c. gene deletions.
d. translocations.

____ 29. The most serious effects of maternal alcohol consumption on the infant are seen when the mother drinks heavily in the:
a. first trimester of the pregnancy.
b. second trimester of the pregnancy.
c. third trimester of the pregnancy.
d. time just before conception.

____ 30. Maternal tobacco smoking during pregnancy might cause the infant to:
a. die in the first year of life.
b. be born early and have a low birth weight.
c. have craniofacial abnormalities.
d. have a seizure disorder.

____ 31. In children with disabilities, obesity can lead to:
a. sleep apnea.
b. musculoskeletal pain.
c. higher metabolic rate.
d. cardiopulmonary insufficiency.
e. All of the above

____ 32. When does successful goal-directed reaching typically first occur in infants?
a. 1 month of age.
b. 4 months of age.
c. 6 months of age.
d. 8 months of age.

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____ 33. Epigenetics involves:
a. major alterations in the DNA.
b. heritable changes in the gene expression.
c. no environmental influences.
d. mitochondrial inheritance.

____ 34. A 7-month-old boy presents for a physical therapy evaluation regarding his gross motor development. You screen his primitive reflexes. The infant demonstrates integration of the asymmetrical tonic neck reflex (ATNR) when:
a. his head is turned to the right and he brings his L hand to his mouth.
b. his head is turned to the right and he extends his R arm.
c. his head is turned to the right and he brings his R hand to his mouth.
d. he can turn his head to the right or the left.

____ 35. Your cousin expresses concern that her 12-month-old is demonstrating developmental delays. At this age, a typically developing 12-month-old can:
a. say one to two words.
b. walk with two hands held.
c. point to three body points.
d. stand independently.
e. perform all of the above.

____ 36. When evaluating the stair climbing skills of a 5-year-old boy in the outpatient setting, you note that the child can walk up 4 steps without a hand rail with a nonreciprocal pattern, left lower extremity leading. He walks down 4 steps with one rail with a nonreciprocal pattern, right lower extremity leading. Based on this observation, which of the following is true?
a. The child's stair skills are on target for his age.
b. The child's stair skills are advanced for his age.
c. The child's stair skills are delayed for his age.
d. There are no normative values for stair climbing.

____ 37. A 2-year-old presents to physical therapy with a diagnosis of gross motor delay. Which of the following are components of the gait pattern of a typically developing, ambulatory 2-year-old walker?
a. Active ankle dorsiflexion during swing phase.
b. Push-off.
c. Reciprocal arm swing.
d. All of the above.

Short Answer

38. What factors have been shown to correlate with positive child development?

39. What are two things a potential mother can do preconception to improve her health as recommended by the Centers for Disease Control and Prevention? _____

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40. Name three characteristics of immature movement patterns.

True/False
Indicate whether the statement is true or false.

____ 41. Genomic imprinting indicates that conditions will vary depending on whether the trait is inherited from the mother or father. For example, if the child inherits deletion of the long arm of chromosome 15 from the father, the child will have Prader-Willi syndrome; if inherited from the mother, the child will have Angelman syndrome.

____ 42. The only developed nation of the world that does not provide paid maternity leave is the United States.

____ 43. During the first year of life, the infant progresses through a rapid transformation in postural control and locomotion and appreciable differences begin to be seen between boys and girls.

____ 44. There is great variability in an infant's prone progression of crawling and creeping.

____ 45. Anticipatory postural control in sitting occurs once the infant is able to walk.

____ 46. Increased fitness, especially aerobic capacity, is associated with academic success.

____ 47. Chromosomal microarray analysis can be used to test for known DNA sequences.

____ 48. An infant's environment in the womb has little effect on his health as an adult.

Chapter 02

Answer Section

MULTIPLE CHOICE

1. ANS: D
   Rationale: Pediatric physical therapy has been heavily influenced by the neuromaturational viewpoint, and many of our assessment tools and some interventions are based on a neuromaturational view. While a dynamic systems view my best reflect most current practice, a neuromaturational viewpoint was one of the first theories physical therapists followed and is still part of practice today.

2. ANS: D

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Rationale: The cognitive view and Piagetian principles are compatible with learning theories are used throughout early childhood education (Case, 1992).

3. ANS: A
   Rationale: The dynamic systems theory of motor development crosses the life span and has replaced the neuromaturational view as the theoretical framework for much of pediatric physical therapy. A Behavioral View might also be used which is why it is not listed as an option.

4. ANS: E
   Rationale: Review development milestones in Tables 2.4, 2.5, & 2.7.

5. ANS: A
   Rationale: Review development milestones in Tables 2.4, 2.5, & 2.7.

6. ANS: C
   Rationale: Review development milestones in Tables 2.4, 2.5, and 2.7.

7. ANS: E
   Rationale: Review motor development milestones in Table 2.11.

8. ANS: B
   Rationale: This development is consistent with a 5- to 6-year-old child. Review development milestones in Table 2.9.

9. ANS: C
   Rationale: The infant should always be able to turn his head to either side. If his arm extends on the face side or if the opposite arm flexes toward the mouth, that suggests the ATNR is still present. If the infant can bring the face side arm to the mouth, then that indicates the ATNR has integrated. Review development milestones in Table 2.6.

10. ANS: D
    Rationale: The bidirectional nature of the relationship of the child and environment has been addressed by Sameroff (2009) in his transactional model of development, which outlines the interplay of nature and nurture in explaining child development.

11. ANS: C
    Rationale: Structural abnormalities involve the deletion, translocation, inversion, or other rearrangement of chromosomes. Trisomies and monosomy are numerical abnormalities.

12. ANS: D
    Rationale: In autosomal dominant inheritance, one parent provides the mutant gene and there is a 50% risk of the offspring inheriting the disorder. The abnormal gene overcomes the normal gene inherited by the other parent.

13. ANS: C

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Rationale: Smoking during pregnancy increases the risk of low birth weight and preterm delivery, both of which can lead to developmental problems. There is also an increased risk of a stillborn infant, the infant dying in the first year of life, cleft lip, cleft palate, clubfoot, and heart defects (CDC, 2009a). Cigarette exposure has also been associated with smaller frontal lobe and cerebellar volumes in infants (Ekblad et al., 2010).

14. ANS: D
Rationale: For infants, the advantages of breast milk "include health, nutritional, immunological, developmental, psychologic, social, economic, and environmental benefits" (American Academy of Pediatrics, 2005, p. 496). Breastfeeding also may protect against maternally perpetrated child abuse and neglect (Strathearn et al., 2009).

15. ANS: C
Rationale: AA "sensitive period" is a time when normal development is most sensitive to abnormal environmental conditions (Bruer, 2001). During this time, the brain is particularly responsive to experience (Elman et al., 1997). It is a time of increased responsivity and neuroplasticity that is rarely brief and seldom sharply defined (Bruer, 2001).

16. ANS: C
Rationale: By 12 weeks, two-thirds of the fetus's arm movements are directed toward objects in the uterus (Sparling, van Tol, & Chescheir, 1999). There is an increased frequency of movement with increased gestational age during this first trimester. Distal to proximal development of the extremities is observed with an unexpected linear decrease in the hand-to-face or head movement (Sparling et al., 1999) in the third trimester.

17. ANS: A
Rationale: The sequence of infant rolling appears to be culturally dependent. In Western cultures, infants have been reported consistently to first roll prone to supine at about 3.6 months (Capute et al., 1985; Davis et al., 1998; Piper & Darrah, 1994). Chinese infants, however, first roll supine to prone (Nelson et al., 2004). Japanese and Chinese mothers do not use the prone position for sleep or play, and Asian infants usually learn to roll in any direction later than those reported in the United States (Nelson et al., 2004). With the success of the Back to Sleep Campaign, there are reports of the reverse order of learning to roll for infants in the United States, with rolling supine to prone likely to occur first (Liao, Zawacki, & Campbell, 2005).

18. ANS: D
Rationale: A WHO (2004) study noted that 4.3% of the infants never exhibited hands and knees creeping and there was a wide range for achieving this milestone between 5.2 and 13.5 months. Adolph (2003) also reported that infants who crawl or creep spend about 5 hrs per day on the floor and move 27 to 43 m per hr or 60 to 188 m per day, a total of about the length of two football fields!

19. ANS: A
Rationale: Although many 24-months olds should have at least a 200-word vocabulary, many do not have a 300-word vocabulary and will not yet have a static tripod grasp, a mature running pattern, or use plurals in speech. Review Table 2.9.

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20. ANS: D
Rationale: Of the options provided, only large weight of the head relative to the body is the best answer. Excessive tummy time would not constrain head lifting nor would complete hip extension (incomplete hip extension would also limit head extension).

21. ANS: C
Rationale: At 5 and 7 months, an infant is not pulling to standing and would not have all the protective reactions in sitting. At 12 months, the infant would have all the motor skills listed, but should have already integrated the plantar grasp.

22. ANS: D
All of the reflexes listed are integrated before 7 months except the plantar grasp, which integrates around 9 months.

23. ANS: D
Rationale: A normal full-term infant has limitations in hip extension and excessive dorisflexion, not excessive plantar flexion.

24. ANS: A
Rationale: Heel strike and reciprocal arm swing should be present by 18 months. Their absence at 2 years may indicate a pathological gait. Review Table 2.8.

25. ANS: C
Rationale: By 18 to 24 months, toddlers should be using two-word combinations and indicating an understanding of basic semantic relations.

26. ANS: E
Rationale: All of these are part of play.

27. ANS: C
Rationale: If adolescents with disabilities are delayed from going through the normal stages of psychosocial development, they commonly have problems with self-concept, establishing identity, and decreased (not increased) independence, which influences social behavior in adulthood.

28. ANS: B
Rationale: Monosomy causes the most serious disorders and typically leads to death. Although the other chromosomal abnormalities listed cause problems, they are not quite as serious as monosomy.

29. ANS: A
Rationale: Problems can occur in the fetus/infant when the mother drinks alcohol heavily anytime during the pregnancy, but the most serious effects occur during the first trimester.

30. ANS: B
Rationale: The most common problems of maternal tobacco smoking are preterm delivery and low birth weight. The other problems have not been associated with maternal tobacco smoking.

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31. ANS: E
Rationale: All of these secondary problems might be caused by obesity.

32. ANS: B
Rationale: At 1 month, goal-directed reaching is not successful in infants, and by 6 to 8 months, the infant is skillful in reaching. Four months is when goal-directed reaching typically first occurs.

33. ANS: B
Rationale: Epigenetics is a phenomenon where heritable changes in gene expression do not involve alterations in the DNA sequence. Epigenetic changes are thought to be caused by environmental and genetic factors. Mitochondrial inheritance is another cause of genetic disorders.

34. ANS: C
Rationale: An ATNR occurs when the head is turned to the side and the same side arm extends. If the head is turned and that arm can come to the face, the ATNR is integrated.

35. ANS: E
Rationale: A typical 12 month old can perform all of these activities. See Tables 2.4 and 2.7.

36. ANS: C
Rationale: A typical 5-year-old should climb both up and down stairs using a reciprocal pattern without a railing. See Table 2.9. Therefore this child has delayed development in this skill area.

37. ANS: D
Rationale: Each of these elements of gait are typically seen in a 2 year old walker. See Table 2.8.

SHORT ANSWER

38. ANS:
Adequate socioeconomic status, higher parent educational level, availability of play toys.

39. ANS:
The Centers for Disease Control and Prevention (CDC, 2010a) recommendations for improving preconception health include daily use of vitamin supplements containing folic acid; management of diabetes; cessation of alcohol, smoking, and recreational drug use; altering the dosage of certain medications; receiving vaccinations against or for treatment of infections; and improving weight status.

40. ANS:

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Inconsistency of performance; perseveration, response repetition, the inability to stop when appropriate, and having extraneous movements; mirroring or the inability to transpose right-left visual cues; asymmetry and difficulty in bilateral coordination; loss of dynamic balance and falling after finishing a motor task; inability to maintain rhythm or movement pattern; inability to control force whether unable to generate enough force or uses too much force; and inappropriate motor planning (Sherrill, 1993).

TRUE/FALSE

41. ANS: T
Rationale: Genomic imprinting indicates that conditions will present differently depending on whether the trait is inherited from the mother or father (Batshaw, 2007, p. 18). An example is a deletion of the long arm of chromosome 15. If it is inherited from the father, the child will have Prader-Willi syndrome (see Table 2.2). If it is inherited from the mother, the child will have Angelman syndrome, a much more serious disability affecting behavior and intelligence.

42. ANS: T
Rationale: The only developed nation of the world that does not provide paid maternity leave is the United States (Brown, 2009; Human Rights and Equal Opportunity Commission, 2003).

43. ANS: F
Rationale: During the first year of life, the infant progresses through a rapid transformation in postural control and locomotion, advancing from seemingly random limb movements to independent ambulation without any appreciable differences between boys and girls (World Health Organization, 2004).

44. ANS: T
Rationale: McGraw (1945) noted that no other neuromuscular function of the infant had greater individual variation than the prone progression of crawling and creeping. Research by Adolph and colleagues (1998) found no strict, stage-like progression, although most infants did display most milestones.

45. ANS: F
Rationale: By 10 months of age, when infants are sitting independently and have relatively mature reaching movements, they will activate the muscles of their trunk before making arm movements displaying anticipatory postural control (von Hofsten & Wollacott, 1989).

46. ANS: T
Rationale: Increased fitness, especially aerobic capacity, is associated with academic success (Wittberg, Northrup, & Cottrel, 2009).

47. ANS: T
Rational: Chromosomal microarray analysis is one test that can be used to test for known DNA sequences.

48. ANS: F

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Rational: There is now evidence that “the health we enjoy throughout our lives is determined to a large extent by the conditions in which we develop in the womb” Nanthanielsz, 1999; Nathanielsz & Vaughan, 2002).

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