

Chapter 2: Puberty and Physical Development

Multiple Choice Questions

1) _____ is a universal feature of adolescent development.

- A) "Storm and stress"
- B) Puberty
- C) Separation from parents
- D) Sexual initiation

Answer: B

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2) The process that propels children in the direction of physical and sexual maturity is called

- A) puberty.
- B) recapitulation.
- C) nurture.
- D) socialization.

Answer: A

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3) The endocrine system influences bodily processes by producing and releasing

- A) neural fibers.
- B) chemical energy.
- C) hormones.
- D) electrical impulses.

Answer: C

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4) The _____ functions as the control center for the endocrine system.

- A) hypothalamus
- B) pituitary
- C) adrenal gland
- D) medulla

Answer: A

Page Ref: 37

5) A key event in setting off puberty occurs when

- A) there is a surge in levels of human growth hormone.
- B) the adrenal gland produces higher levels of stress hormone.

- C) the hypothalamus becomes less sensitive to sex hormones and signals the gonads to produce higher levels of them.
- D) the growth curve becomes steepest.

Answer: C

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- 6) The letter "G" in HPG axis stands for

- A) growth.
- B) GnRH.
- C) giveback.
- D) gonads.

Answer: D

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- 7) The earliest phase of puberty, which begins before any outward physical changes, is known as

- A) adrenarche.
- B) spermarche.
- C) menarche.
- D) asynchronicity.

Answer: A

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- 8) During puberty, levels of _____ increase much more in boys than in girls.

- A) DHEA
- B) estrogen
- C) androgens
- D) leptin

Answer: C

Page Ref: 39

- 9) During puberty, levels of _____ increase much more in girls than in boys.

- A) androgens
- B) estrogen
- C) DHEA
- D) leptin

Answer: B

Page Ref: 39

- 10) During puberty, the HPG axis sets in motion the rapid increase in height and weight known as
- A) the secular trend.
 - B) homeostasis.
 - C) the adolescent growth spurt.
 - D) the metabolic transition.

Answer: C

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- 11) On average, girls enter the adolescent growth spurt _____ boys.
- A) at the same time as
 - B) six months later than
 - C) about two years earlier than
 - D) six months earlier than

Answer: C

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- 12) During the adolescent growth spurt, different parts of the body change at different times and different rates; a phenomenon called
- A) homeostasis.
 - B) the critical period.
 - C) ossification.
 - D) asynchronicity.

Answer: D

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- 13) One reason for the average difference in height between adult men and women is that
- A) boys are older and hence taller when they enter the growth spurt.
 - B) androgens promote greater height than estrogen.
 - C) girls are shorter than same-age boys during childhood.
 - D) the Y chromosome in males programs greater height.

Answer: A

Page Ref: 42

- 14) During early adolescence, _____ gain more body fat and _____ gain more muscle.
- A) boys; boys
 - B) girls; girls

- C) girls; boys
- D) boys; girls

Answer: C

Page Ref: 42

- 15) During puberty, boys increase in physical strength more than girls in part because
- A) they are more likely to exercise regularly.
 - B) girls put on proportionately more body fat than boys.
 - C) their endocrine systems produces more testosterone, closely linked to muscle growth.
 - D) All of the above.

Answer: D

Page Ref: 42-43

- 16) Typically, boys experience their first ejaculation fairly _____ in puberty, and girls experience their first menstrual period fairly _____ in puberty.
- A) early; early
 - B) early; late
 - C) late; early
 - D) late; late

Answer: B

Page Ref: 44

- 17) "Tanner stages" refers to
- A) the sequence of changes in secondary sex characteristics during puberty.
 - B) the levels of melatonin found in the skin of adolescents from different backgrounds.
 - C) the growth and maturation of the long bones of the body.
 - D) the increased production of sebum that is linked to adolescent acne.

Answer: A

Page Ref: 44

- 18) In most girls, the first outward indication of puberty is
- A) the appearance of pubic hair.
 - B) menarche.
 - C) the swelling of the breast bud.
 - D) the development of complexion problems.

Answer: C

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19) In most boys, the first outward sign of puberty is

- A) the growth of the testes and scrotum.
- B) the appearance of facial hair.
- C) the appearance of pubic hair.
- D) register changes in the voice.

Answer: A

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20) For boys, the first signs of puberty usually occur around age

- A) nine.
- B) eleven.
- C) thirteen.
- D) fifteen.

Answer: B

Page Ref: 46

21) For girls, the first signs of puberty usually occur around age

- A) ten.
- B) twelve.
- C) fourteen.
- D) sixteen.

Answer: A

Page Ref: 45

22) Research on trends in puberty often focuses on the age of menarche because

- A) pubertal trends change more for girls than for boys.
- B) it is the earliest sign of puberty in girls.
- C) it is a definite event that is usually noticed and remembered.
- D) sexual development in boys happens more slowly and gradually.

Answer: C

Page Ref: 46

23) The age at which girls experience their first menstrual period is affected by

- A) nutrition.
- B) family conflict.
- C) intensive exercise.
- D) All of the above.

Answer: D

Page Ref: 46-47

- 24) Between 1900 and 1960, the average age of menarche in Canada and the United States dropped by about two months every decade. This is an illustration of the
- A) pubertal decline.
 - B) secular trend.
 - C) delayed phase preference.
 - D) lowered reaction range.

Answer: B

Page Ref: 46

- 25) Historical evidence suggests that in Classical Greece and Rome, menarche
- A) came somewhat later than it does in Europe and North America today.
 - B) came much later than it does in Europe and North America today.
 - C) came at roughly the same age as it does in Europe and North America today.
 - D) came somewhat earlier than it does in Europe and North America today.

Answer: C

Page Ref: 49

- 26) Girls who have negative feelings about their breast development tend to attribute this to
- A) the stress of having to leave childhood.
 - B) increased parental restrictions on their activities.
 - C) the hassle of having to dress modestly.
 - D) overt reactions from others, especially boys.

Answer: D

Page Ref: 51

- 27) When girls experience menarche, most respond by
- A) telling their mother.
 - B) telling their closest friend.
 - C) keeping it secret.
 - D) telling their father.

Answer: A

Page Ref: 52

- 28) For pubertal boys, self consciousness about penis size can lead to
- A) checking out other boys' bodies for reassurance.
 - B) "locker room syndrome," or fear of being seen naked by other boys.
 - C) involuntary erections during public moments.
 - D) frequent conversations on the topic with close friends.

Answer: B

Page Ref: 53

- 29)** Girls who enter puberty earlier than their age mates
- A) are better prepared for adolescent changes.
 - B) tend to be taller as adults.
 - C) usually get more social support from parents and peers.
 - D) tend to be less popular and more depressed.

Answer: D

Page Ref: 54

- 30)** Early-maturing girls are less likely to have problems if
- A) puberty comes at the same time as moving to a new school.
 - B) their community doesn't offer sexuality education until junior high school.
 - C) they attend an all-girls school.
 - D) their friends have not yet reached puberty.

Answer: C

Page Ref: 55

- 31)** Boys who enter puberty earlier than their age mates
- A) are seen and treated as more mature.
 - B) are more likely to get involved with drug and alcohol use.
 - C) have fewer problems with parents.
 - D) All of the above.

Answer: D

Page Ref: 55

- 32)** According to the _____ hypothesis, the effects of entering puberty markedly early or late result from the stress of being different from others in one's peer group.
- A) stage termination
 - B) deviance
 - C) adult resemblance
 - D) continuum

Answer: B

Page Ref: 56

- 33)** According to the _____ hypothesis, entering puberty early is negative for girls because they haven't had time to complete the psychological tasks of childhood.
- A) stage termination
 - B) deviance

- C) adult resemblance
- D) continuum

Answer: A

Page Ref: 56

- 34) With puberty, both boys and girls tend to have _____ closeness and _____ conflict with their mothers.
- A) more; less
 - B) less; more
 - C) more; more
 - D) less; less

Answer: C

Page Ref: 58

- 35) The Jewish *Bar Mitzvah* is an example of the custom of
- A) honoring outstanding teens.
 - B) puberty rites.
 - C) birthday celebrations.
 - D) exchanging gifts on special days.

Answer: B

Page Ref: 60

- 36) As compared to puberty rites for girls, puberty rites for boys tend to be more
- A) enthusiastically celebrated.
 - B) focused on rules and taboos.
 - C) harsh and painful.
 - D) rapidly dying out.

Answer: C

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- 37) During puberty and adolescence, neurons in the brain lose as many as half their interconnections, in a process called
- A) synaptic pruning.
 - B) dendritic branching.
 - C) myelination.
 - D) nerve conservation.

Answer: A

Page Ref: 61

38) During adolescence, the brain becomes more efficient and precise in its functioning, partly because of the increase in

- A) neurons.
- B) myelin.
- C) hemispheres.
- D) synapses.

Answer: B

Page Ref: 62

39) The belief that complex processes must be explained in terms of more elementary processes is known as

- A) atomism.
- B) elementarism.
- C) reductionism.
- D) basicalism.

Answer: C

Page Ref: 62

40) During adolescence, young people form important health habits that affect their well being during adulthood, including

- A) getting enough sleep.
- B) eating a nutritious, well balanced diet.
- C) exercising regularly.
- D) All of the above.

Answer: D

Page Ref: 63

41) Mood swings during adolescence

- A) are the direct result of changes in hormone levels.
- B) are no greater than those during childhood or adulthood.
- C) reflect both a larger number of unpredictable events and a greater vulnerability to them.
- D) are just as extreme in late adolescence as during puberty.

Answer: C

Page Ref: 64

42) Girls who see themselves as overweight, even when they are not, and are especially dissatisfied with their hips, thighs, and waists, suffer from a distorted

- A) body image.
- B) pubertal growth.

- C) sexual self.
- D) media obsession.

Answer: A

Page Ref: 64

- 43)** Among adolescent girls, dissatisfaction with their bodies
- A) is found mostly among those whom others consider unattractive.
 - B) is generally the result of being overweight.
 - C) is more common among those who watch more television and read more teen magazines.
 - D) can generally be overcome through a focus on dieting and exercise.

Answer: C

Page Ref: 65

- 44)** Adolescents who do not get 8 or more hours of sleep on weeknights
- A) can make up for it by sleeping more on weekends.
 - B) are more likely to have academic and emotional problems.
 - C) are the minority, because most teens do get that much.
 - D) are normal, because teens need less sleep than children.

Answer: B

Page Ref: 68

- 45)** About _____% of Canadian adolescents eat too much unhealthy saturated fat.
- A) 25
 - B) 40
 - C) 66
 - D) 91

Answer: D

Page Ref: 69

- 46)** What proportion of Canadian adolescents eat at least one serving of fruit a day?
- A) Less than half.
 - B) Two-thirds.
 - C) Three quarters.
 - D) Over 90%.

Answer: A

Page Ref: 69

47) Recent research on diet among teens in industrialized countries indicates that _____ adolescents have the highest rates of overweight and obesity.

- A) Canadian
- B) American
- C) British
- D) Australian

Answer: B

Page Ref: 70

48) Among Canadian adolescent boys, _____ meet 'moderate' standards of physical activity.

- A) more than three quarters
- B) about two-thirds
- C) less than half
- D) fewer than one quarter

Answer: C

Page Ref: 70

49) Canadian teens spend _____ in sedentary activities every day.

- A) more than 9 hours
- B) less than 9 hours
- C) 3-5 hours
- D) None of the above

Answer: A

Page Ref: 70

50) In recent years, physical education classes in school when offered

- A) have become longer and more rigorous.
- B) are more likely to be required of all students.
- C) are one hour once weekly.
- D) are more popular among older adolescents.

Answer: C

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Essay Questions

1) What body system regulates puberty? What are the crucial elements in this system? How does it carry out its regulatory function?

Answer: The endocrine system regulates puberty by way of the HPG axis -- hypothalamus, pituitary, gonads -- which controls the levels of sex hormones, androgens (testosterone) and estrogens (estradiol). The HPG axis creates a feedback loop that keeps hormone levels at their set point. At puberty, the hypothalamus becomes less sensitive to sex hormones, which raises the set point.

- 2) How is the course of physical and sexual development during puberty different for girls and boys?

Answer: Girls enter puberty and the pubertal growth spurt about 2 years earlier than boys. As a result, while they are taller on average between 11 and 13, boys end up taller by mid-adolescence. Girls reach sexual maturity, or menarche, late in the course of pubertal development, but boys begin producing sperm early in puberty.

- 3) Shanti is one of the first girls in her school class to enter puberty. What are some of the ways in which this is likely to affect her? What explanations have been offered for these effects?

Answer: Girls who mature early tend to suffer for it. They are less popular with other girls, have lower self-esteem, and are more anxious and depressed. Explanations include the *deviance hypothesis* (those who deviate from the norm suffer for it), the *stage termination hypothesis* (girls who enter puberty early haven't had time to finish the tasks of childhood), and the *adult resemblance hypothesis* (girls who look more mature are likely to become involved early in deviant activities).

- 4) What are puberty rites? What social functions may they serve? How are they usually different for girls and boys?

Answer: Especially in traditional cultures, a child's entry into puberty is generally marked by special events called puberty rites. For girls, these generally include instruction on adult roles and rules, taboos, and sexual matters. Boys are often subjected to difficult and painful ordeals.

- 5) What important health issues come forward during puberty? Discuss in detail how teens are affected and what might be done to help.

Answer: Health issues during puberty include mood swings; poor body image; insufficient sleep; poor nutrition; and lack of exercise. New issues and experiences, along with hormonal shifts, can create mood swings and heightened emotionality. Unhappiness with one's changing body is common, especially among girls who read teen-oriented magazines, and can lead to serious eating problems. Many adolescents are chronically sleep-deprived. Too many skip meals and rely on high-fat fast food, resulting in an epidemic of teen obesity, and too few get even a minimum of physical exercise.