# *Child 2nd edition Martorell Test Bank*

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*Child, 2e* **(Martorell)**
**Chapter 2 Conception, Environment, and Heredity**

1) An ovum duplicates itself repeatedly by cell division to produce all the cells that make up a baby.

Answer: FALSE
Topic: Conception
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

2) If fertilization does not occur, the ovum and any sperm cells in the woman's body die.

Answer: TRUE
Topic: Conception
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

3) Women's fertility is less affected by age than men's fertility, but it declines significantly in the late 30s.

Answer: FALSE
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

4) In the context of infertility in women being caused by blockage of the fallopian tubes, there is a 50 percent likelihood that the tubes are blocked by scar tissue from sexually transmitted infections.

Answer: TRUE
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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5) Intracytoplasmic sperm injection involves injecting a single sperm into the ovum.

Answer: TRUE
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

6) Every sex cell in the normal human body has 23 pairs of chromosomes.

Answer: FALSE
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

7) At the moment of conception, the single-celled zygote receives all the biological information needed to guide its development into a unique individual.

Answer: TRUE
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

8) It is the mother who determines the sex of a child.

Answer: FALSE
Topic: Fetal Sex Determination
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

9) Once hormones signal the SRY gene on the X chromosome to turn on, cell differentiation and formation of the ovaries are triggered.

Answer: FALSE
Topic: Genes; Fetal Sex Determination
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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10) At 6 to 8 weeks after conception, the testes start to produce the male hormone testosterone.

Answer: TRUE
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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11) Permanent alterations in genes or chromosomes that usually produce harmful characteristics but provide the raw material of evolution are called mutations.

Answer: TRUE
Topic: Genetic Transmission
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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12) Defects transmitted by recessive genes tend to be lethal at an earlier age, in contrast to those transmitted by dominant genes as they can be passed down to the next generation by carriers.

Answer: TRUE
Topic: Genetic Transmission
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

13) Incomplete dominance is a pattern of inheritance in which certain characteristics carried on the X chromosome inherited from the mother are transmitted differently to her male and female offspring.

Answer: FALSE
Topic: Genetic Transmission
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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14) Chromosomal abnormalities typically occur because of errors in cell division.

Answer: TRUE
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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15) Children with Down syndrome tend to benefit cognitively, socially, and emotionally when placed in special schools rather than in regular classrooms.

Answer: FALSE
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

16) Heritability refers to the relative influence of heredity and environment in a particular individual.

Answer: FALSE
Topic: Heritability
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

17) The tendency to seek out environments compatible with one's genotype is called niche-picking.

Answer: TRUE
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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18) Obesity is measured by body mass index (BMI).

Answer: TRUE
Topic: Obesity
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

19) Autism is likely to have an environmental basis rather than a genetic basis and shows greater concordance between dizygotic twins than between monozygotic twins.

Answer: FALSE
Topic: Chromosomal Abnormalities
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

20) Advanced paternal age is a risk factor for schizophrenia.

Answer: TRUE
Topic: Chromosomal Abnormalities
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

21) A(n) _____ is a one-celled organism resulting from fertilization.
A) zygote
B) ovum
C) blastula
D) spermatozoon

Answer: A
Topic: Conception
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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22) Which of the following statements is true about fertilization?
A) At birth, a female is likely to have about 2 million immature ova in her two ovaries.
B) Fertilization typically occurs before the ovum reaches the fallopian tube.
C) Fertilization typically involves only one sperm being released into the vagina.
D) At birth, a male is likely to have about a several hundred million sperm cells.

Answer: A
Topic: Conception
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

23) In a sexually mature woman, ovulation occurs about once every _____ days until menopause.
A) 7
B) 10
C) 19
D) 28

Answer: D
Topic: Conception
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

24) Sperm are produced in the _____ of a mature male at a rate of several hundred million a day and are ejaculated in the semen at sexual climax.
A) ovary
B) cervix
C) testes
D) uterus

Answer: C
Topic: Conception
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
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25) The most common cause of infertility in men is
A) low sperm count.
B) artificial insemination.
C) high sperm motility.
D) malnutrition.

Answer: A
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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26) Which of the following statements is true about infertility?
A) Obesity is unlikely to have a negative effect on fertility.
B) Smoking is likely to have a strong negative effect on fertility.
C) High levels of caffeine and alcohol consumption are the leading causes of infertility.
D) Exposure to environmental pollutants is unlikely to be related to infertility.

Answer: B
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

27) In the context of assisted reproductive technology (ART), artificial insemination by a donor recommended when
A) there is an increased risk for children of a multiples birth.
B) the production of multiple ova needs to be stimulated.
C) there is no female partner.
D) the male partner is infertile.

Answer: D
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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28) Dan and Fiona find it difficult to conceive naturally and decide to utilize technology to conceive. Fiona is first given fertility drugs to trigger the production of multiple ova. Her ova are then removed surgically, fertilized in a laboratory dish, and implanted in her uterus. This technique is called
A) artificial insemination.
B) in vitro fertilization.
C) gamete intrafallopian transfer.
D) surrogacy.

Answer: B
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
Accessibility: Keyboard Navigation

29) The simplest form of assisted reproductive technology (ART) is _____, and it can facilitate conception if a man has a low sperm count.
A) ovum transfer
B) gamete intrafallopian transfer
C) artificial insemination
D) in vitro fertilization

Answer: C
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

30) Fred and Wilma find it difficult to conceive naturally. Tests reveal that the infertility is because of Fred's extremely low sperm count. To help Wilma conceive, Dr. Samuel injects Fred's sperm into Wilma's cervix. This procedure is called
A) in vitro fertilization.
B) gamete intrafallopian transfer.
C) artificial insemination.
D) ovum transfer.

Answer: C
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
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31) Which of the following statements is true about adoption?
A) In June 2017, the U.S. Supreme Court ruled that same-sex couples were to be treated as equal under the law, and same-sex adoption is now legal in all 50 states.
B) In 2008, adoptions were unlikely to occur through publicly funded adoption agencies or through intercountry adoption.
C) In August 2011, the U.S. Supreme Court ruled that stepparents could adopt the child of a spouse even if the spouse did not have legal custody of the child.
D) Since the mid-1970s, the percentage of never-married women who adopt out their children has increased significantly.

Answer: A
Topic: Infertility
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

32) Which of the following is true about the genetic code?
A) Deoxyribonucleic acid (DNA) has a cylindrical structure.
B) Chromosomes are found only in the male and female gamete cells.
C) The complete sequence of genes in the human body constitutes the human genome.
D) A single gene is likely to be located in numerous potential points on a chromosome.

Answer: C
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

33) In the context of the genetic code, the fundamental unit of heredity is a chemical called
A) threonine.
B) adenosine monophosphate.
C) arachidonic acid.
D) deoxyribonucleic acid.

Answer: D
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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34) _____ are the functional units of heredity.
A) Zygotes
B) Genes
C) Follicles
D) Gametes

Answer: B
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

35) Every cell in the normal human body has _____ pairs of chromosomes.
A) 24
B) 23
C) 46
D) 48

Answer: B
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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36) A process through which DNA replicates itself so each newly formed cell is a genetic copy with the same hereditary information is called
A) diffusion.
B) meiosis.
C) translocation.
D) mitosis.

Answer: D
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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37) Which of the following is true of meiosis?
A) It results in two cells, each with 46 chromosomes.
B) It reduces the number of chromosomes by half.
C) It refers to the addition of an extra 21st chromosome.
D) It represents the process by which the ovum and sperm combine.

Answer: B
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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38) Meiosis is a type of cell division in which
A) nonsex cells divide and replicate DNA.
B) permanent alterations are made in genetic material.
C) sex cells end up with 23 chromosomes.
D) recessive disorders are passed on to female children.

Answer: C
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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39) When sperm and ovum fuse at conception, they produce a zygote with _____ chromosomes.
A) 28
B) 50
C) 23
D) 46

Answer: D
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
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40) Which of the following is true of the sequence of bases in a gene?
A) It tells the cells how to make the proteins that enable them to carry out specific functions.
B) It is meant to be a recipe for making a particular human.
C) It turns the gene on and off at different points in the development of an individual.
D) It has a double-helix structure and resembles a long, spiraling ladder.

Answer: A
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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41) In the context of the mechanisms of heredity, normal human females have _____ and normal human males have _____.
A) an XY pairing of chromosomes; an XO pairing of chromosomes
B) an XY pairing of chromosomes; a YX pairing of chromosomes
C) two X chromosomes; an XO pairing of chromosomes
D) two X chromosomes; an XY pairing of chromosomes

Answer: D
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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42) _____ are chromosomes that are not related to sexual expression.
A) Allosomes
B) Ribosomes
C) Lysosomes
D) Autosomes

Answer: D
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
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43) How many pairs of autosomes do humans normally have?
A) 22
B) 46
C) 44
D) 11

Answer: A
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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44) During the 1860s, Gregor Mendel laid the foundation for people's understanding of patterns of inheritance. Mendel's most important finding was that
A) genes occur singly and not in pairs.
B) genes do not have fixed positions on chromosomes.
C) dominant traits are expressed only if both copies of a gene are recessive.
D) traits are transmitted independently of each other.

Answer: D
Topic: Genetic Transmission
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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45) Genes that produce alternative expressions of a trait are called
A) gametes.
B) alleles.
C) autosomes.
D) karyotypes.

Answer: B
Topic: Genetic Transmission
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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46) Which of the following exemplifies a homozygous trait in a person?
A) Briana has curly hair similar to that of her parents.
B) Connor has freckles like his father, whereas his mother has clear skin.
C) Jayden, a mixed-race child, takes after his Asian mother who does not have eyelid creases.
D) Nyle's blood type is AB, whereas his mother's and father's blood types are A and B, respectively.

Answer: A
Topic: Genetic Transmission
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
Accessibility: Keyboard Navigation

47) A spontaneous dominant mutation known as _____ results in dwarfism.
A) toxoplasmosis
B) achondroplasia
C) bordetella
D) achlorhydria

Answer: B
Topic: Genetic Transmission
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

48) An individual's _____ consists of his or her observable traits; an individual's _____ is his or her underlying genetic makeup.
A) dominant inheritance; recessive inheritance
B) dominant inheritance; homozygosis
C) incomplete dominance; phenotype
D) phenotype; genotype

Answer: D
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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49) Petra wants to have an exact duplicate of herself. However, she needs to realize that although cloning can produce identical _____, it cannot produce identical _____.
A) phenotypes; autosomes
B) phenotypes; genotypes
C) genotypes; phenotypes
D) autosomes; sex chromosomes

Answer: C
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Understand
APA Outcome: 1.3: Describe applications of psychology
Accessibility: Keyboard Navigation

50) Louise's blue eyes and petite frame are the observable characteristics that comprise her
A) alleles.
B) genetic imprint.
C) phenotype.
D) genotype.

Answer: C
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Understand
APA Outcome: 1.3: Describe applications of psychology
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51) When the police ask a witness to describe an assailant and the witness says that the assailant is tall with black, curly hair, the witness is describing the assailant's
A) alleles.
B) genetic pattern.
C) phenotype.
D) genotype.

Answer: C
Topic: Genes
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Understand
APA Outcome: 1.3: Describe applications of psychology
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52) _____ is defined as a mechanism that turns genes on or off and determines the functions of body cells.
A) Mitosis
B) Meiosis
C) Phagocytosis
D) Epigenesis

Answer: D
Topic: Epigenesis
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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53) In the context of races and ethnicities, which of the following is a true statement about birth disorders?
A) Hispanic infants report the highest rates of hypospadias.
B) Hispanic infants have a higher occurrence of neural tube and ear defects than do non-Hispanic white infants.
C) African American infants are more likely than others to have cleft lip or gastrointestinal abnormalities.
D) Asian American infants are at a higher risk for most birth defects than others.

Answer: B
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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54) Which of the following statements is true about the genetic or chromosomal abnormalities that are not apparent at birth and appear later?
A) Huntington's disease results in excessive bleeding in males and typically appears during adolescence.
B) Cystic fibrosis is a condition that is most common in people of northern American descent.
C) Sickle-cell anemia is a metabolic disorder more common among Asian Americans and generally appears in infants between 3 to 4 months of age.
D) Tay-Sachs is a fatal degenerative disease of the central nervous system and is most common in Jews of eastern European ancestry.

Answer: D
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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55) Beta thalassemia is a birth defect that
A) causes severe anemia, leading to weakness, fatigue, and frequent illness.
B) leads to respiratory failure.
C) leads to the overproduction of mucus, which collects in the lungs and digestive tract.
D) causes poor blood clotting.

Answer: A
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
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56) At age 5, Krystal was diagnosed with an abnormality. Excess mucus was getting collected in her lungs and digestive tract, and she did not grow like other normal children her age. Given the information, she was most likely suffering from
A) cystic fibrosis.
B) Down syndrome.
C) neural tube defects.
D) Huntington's disease.

Answer: A
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
Accessibility: Keyboard Navigation


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57) Which of the following is a blood disorder that is more common in African Americans than in other ethnic groups and does not generally appear until at least 6 months of age?
A) Tay-Sachs disease
B) sickle-cell anemia
C) cystic fibrosis
D) thalassemia

Answer: B
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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58) Which of the following statements is true about phenylketonuria?
A) It is best treated with the help of enzymes used to improve digestion.
B) It is most likely to be found in families of Mediterranean descent.
C) It is a metabolic disorder that results in intellectual disability.
D) It is an enzyme deficiency that is likely to lead to cirrhosis of the liver in early infancy.

Answer: C
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

59) Recessive defects are expressed only if a child is _____ for that gene.
A) homozygous
B) hemizygous
C) azygous
D) heterozygous

Answer: A
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
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60) Incomplete dominance is a pattern of inheritance in which
A) multiple genes at different sites on chromosomes affect a complex trait.
B) a child receives identical recessive alleles, resulting in expression of a nondominant trait.
C) a child receives two different alleles, resulting in partial expression of a trait.
D) a child receives different alleles but only the dominant one is expressed.

Answer: C
Topic: Genetic Transmission
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

61) Reza, a 2-day-old baby, has muscle weakness and is unable to move his limbs. His doctors perform a surgery to close his spinal canal and to place a shunt inside his brain to drain excess fluid. In the context of birth defects, Reza is likely to have
A) spina bifida.
B) anencephaly.
C) Duchenne muscular dystrophy.
D) Tay-Sachs disease.

Answer: A
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
Accessibility: Keyboard Navigation

62) A pattern of inheritance in which certain characteristics carried on the X chromosome inherited from the mother are transmitted differently to her male and female offspring is called
A) recessive inheritance.
B) dominant inheritance.
C) multifactorial inheritance.
D) sex-linked inheritance.

Answer: D
Topic: Genetic Transmission
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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63) Which of the following is true of Duchenne muscular dystrophy?
A) It is caused by an incompletely closed spinal canal.
B) It is usually fatal in males, and death usually occurs in young adulthood.
C) Its symptoms include enlarged kidneys, respiratory problems, and paralysis.
D) It can be treated with antibiotics and physical therapy.

Answer: B
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

64) In the context of birth defects, which of the following is true of sickle-cell anemia?
A) It is a metabolic disorder resulting in mental retardation.
B) It increases the susceptibility of at-risk individuals to pneumonia and stroke.
C) Families of Mediterranean descent are primarily at risk for sickle-cell anemia.
D) Treatment for sickle-cell anemia involves regular blood transfusions with clotting factors.

Answer: B
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

65) Which of the following statements is true about Klinefelter syndrome?
A) It results in a webbed neck, low-set ears, and short stature.
B) It is caused by an extra female sex chromosome.
C) It results from a missing sex chromosome.
D) It is found only in females.

Answer: B
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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66) Which of the following is also called trisomy-21 because it is characterized in more than 90 percent of cases by an extra 21st chromosome?
A) cystic fibrosis
B) Tay-Sachs disease
C) Down syndrome
D) sickle-cell anemia

Answer: C
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

67) Which of the following statements about Down syndrome is true?
A) The cognitive functioning of children with Down syndrome is normal.
B) The conditions of children with Down syndrome can be improved with dietary changes.
C) Down syndrome is a sex-linked chromosomal disorder.
D) The risk of having a child with Down syndrome rises with the age of the mother.

Answer: D
Topic: Chromosomal Abnormalities
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

68) The clinical service that advises prospective parents of their probable risk of having children with hereditary defects is known as
A) genetic imprinting.
B) teratogenesis.
C) genetic coding.
D) genetic counseling.

Answer: D
Topic: Genetic Counseling and Testing
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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69) In the context of heritability, if a pair of twins is said to be concordant, the twins are likely to
A) attribute life to objects that are not alive.
B) make changes in their speech to match specific situations.
C) share a specific trait or disorder.
D) have accumulated differences in their genotypes.

Answer: C
Topic: Heritability
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

70) Which of the following terms describes the tendency of twins to share the same trait or disorder?
A) Disposition
B) Temperament
C) Concordance
D) Canalization

Answer: C
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

71) In an attempt to study the degree to which genetics influences activity levels in newborns, a researcher compares monozygotic and dizygotic twins for their level of similarity on the "activity level" trait. This research study attempts to determine the _____ of the "activity level" trait.
A) teratogenesis
B) genotype
C) karyotype
D) heritability

Answer: D
Topic: Heritability
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Understand
APA Outcome: 1.3: Describe applications of psychology
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72) A heritability estimate of 0.5 percent indicates that
A) both genes and the environment have an equal role in shaping a particular trait.
B) a particular trait has been shaped by factors other than the environment and genetics.
C) genes are 100 percent responsible for variances in a trait within a population.
D) the environment exclusively shaped a trait.

Answer: A
Topic: Heritability
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Analyze
APA Outcome: 1.3: Describe applications of psychology
Accessibility: Keyboard Navigation

73) Although Roberto's adoptive parents are short in stature, he is tall like his biological mother. What might we conclude about Roberto's height?
A) It is influenced primarily by environment.
B) It is influenced primarily by heredity.
C) It is primarily a result of incomplete dominance.
D) It is primarily a result of independent segregation.

Answer: B
Topic: Heredity
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
Accessibility: Keyboard Navigation

74) Which of the following most clearly demonstrates the influence of environment?
A) Georgio was adopted at birth and resembles his biological father and brother closely.
B) Sally was adopted when she was 2 years old, and she has developed a good vocabulary because her adoptive father encourages her to read.
C) Bill and Jim, identical twins, were separated at birth and have many similarities such as obesity, blood pressure, and left-handedness.
D) Ann and Jennie are fraternal twins who were reared apart, and only Ann has high blood pressure.

Answer: B
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
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75) In the context of making an estimate of the relative influence of genes and environment on a trait, identify a true statement about family studies.
A) Researchers study twins that are raised in either their biological family or an adoptive family.
B) Researchers measure the degree to which biological relatives share certain traits.
C) Researchers look at similarities between adopted children and their adoptive families.
D) Researchers compare pairs of monozygotic, or identical, twins with same-sex dizygotic, or fraternal, twins.

Answer: B
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

76) Potential variability, depending on environmental conditions, in the expression of a hereditary trait is known as
A) canalization.
B) concordance rate.
C) reaction range.
D) environmental interaction.

Answer: C
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

77) _____ is defined as a limitation on variance of expression of certain inherited characteristics.
A) Canalization
B) Multifactorial transmission
C) Transduction
D) Mutation

Answer: A
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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78) _____ is the conventional term for a range of potential expressions of a hereditary trait.
A) Canalization
B) Reaction range
C) Transduction
D) Karyotype

Answer: B
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

79) A strongly canalized trait is one that
A) is easily influenced by environmental conditions.
B) is affected only by an extreme change in environmental conditions.
C) is manifested mostly in males.
D) is characterized by a large reaction range.

Answer: B
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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80) Which of the following is true about canalized traits?
A) Children the world over acquire reading skills at approximately the same time.
B) Personality is a highly canalized trait and is unaffected by the kinds of families children grow up in.
C) Cognition is a highly canalized trait and is independent of variations in experience.
D) Babies the world over reach language milestones at approximately the same time and in the same order.

Answer: D
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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81) _____ usually refers to the effects of similar environmental conditions on genetically different individuals.
A) Teratogenesis
B) Genotype–environment interaction
C) Epigenesis
D) Phenotype–environment interaction

Answer: B
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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82) Children select experiences that are consistent with their genetic tendencies. In the context of genotype–environment correlations, this best describes a(n)
A) active correlation.
B) passive correlation.
C) evocative correlation.
D) reactive correlation.

Answer: A
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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83) The environment often reflects or reinforces genetic differences. This tendency of certain genetic and environmental influences to reinforce each other is called
A) environment–phenotype covariance.
B) genotype–environment correlation.
C) nonshared environmental effect.
D) shared environmental effect.

Answer: B
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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84) Chandra, a young adult, was interested in a career in research and decided to pursue it. She was very successful academically. She realized that she missed social interaction, so she decided to teach biology to high school students. The moment she entered her classroom, she knew that it was where she belonged. Which of the following terms best explains Chandra's development?
A) passive genotype–environment correlation
B) normative genotype–environment correlation
C) reactive genotype–environment correlation
D) active genotype–environment correlation

Answer: D
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Apply
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

85) Which of the following types of genotype–environment correlations is only experienced by children raised by their biological parents?
A) active correlations
B) passive correlations
C) evocative correlations
D) reactive correlations

Answer: B
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

86) _____ is defined as the unique environment in which each child grows up, consisting of distinctive influences or influences that affect one child differently than another.
A) nonshared environmental effect
B) canalization
C) genotype–environment interaction
D) bioecology

Answer: A
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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87) In the context of the ways in which inheritance and experience work together, which of the following is true of an evocative correlation?
A) This response involves other people reacting to a child's genetic makeup.
B) This response illustrates how heredity restricts the range of development for some traits.
C) This response functions only when a child is living with a biologically related parent.
D) This response is most common among adolescents and adults.

Answer: A
Topic: Genotype-Environment Interactions and Correlations
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

88) Which of the following statements about obesity is true?
A) Studies indicate that 40 to 70 percent of the risk of obesity is genetic.
B) Studies are yet to ascertain if there is a specific genetic code for obesity.
C) Obesity is on the rise in Western countries solely because of a genetic vulnerability to obesity.
D) The risk of obesity is free of environmental risk factors.

Answer: A
Topic: Heritability
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

89) Intelligence is a trait that is
A) influenced by the effects of large numbers of genes working together.
B) determined by a relatively small number of recessive genes.
C) determined from the karyotype of the father.
D) characterized by a lack of plasticity toward extreme environmental features.

Answer: A
Topic: Intelligence
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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90) Sophia was adopted when she was a year old. If she takes an IQ test at the age of 16, her intelligence level is most likely to resemble that of her
A) adoptive parents.
B) friends and peers.
C) biological parents.
D) adoptive siblings.

Answer: C
Topic: Intelligence
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
Accessibility: Keyboard Navigation

91) Which of the following is true of temperament?
A) It is closely related to the age of parents during conception.
B) It lacks a genetic basis.
C) It appears to be largely inborn.
D) It is inconsistent over the years.

Answer: C
Topic: Heritability
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

92) A neurological disorder that is characterized by loss of contact with reality; hallucinations and delusions; loss of coherent, logical thought; and inappropriate emotionality is known as
A) dyslexia.
B) depression.
C) schizophrenia.
D) Down syndrome.

Answer: C
Topic: Heritability
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Remember
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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93) Many studies suggest that schizophrenia
A) is characterized by a strong hereditary influence.
B) is seldom seen in family clusters.
C) is solely a result of environmental stress.
D) is caused by a single gene.

Answer: A
Topic: Heritability
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

94) Concordance rates for schizophrenia are highest
A) for infants born in early summer.
B) between grandparents and grandchildren.
C) between monozygotic twin pairs.
D) between dizygotic twin pairs.

Answer: C
Topic: Heritability
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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95) Simone and Kumar were both 19 years old when Simone conceived for the first time. During the third month of her pregnancy, Simone suffered trauma because of her elder brother's untimely death in a tragic road accident. After carrying the baby to term, Simone gave birth to a baby boy. The baby is at an increased risk of
A) Tay-Sachs disease.
B) schizophrenia.
C) phenylketonuria.
D) polycystic kidney disease.

Answer: B
Topic: Heritability; Psychopathology
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Apply
APA Outcome: 1.3: Describe applications of psychology
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96) Describe how and when human conception normally occurs.

Answer: Fertilization, or conception, is the process by which sperm and ovum—the male and female gametes, or sex cells—combine to create a single cell called a zygote, which then duplicates itself again and again by cell division to produce all the cells that make up a baby. At birth, a female is believed to have about 2 million immature ova in her two ovaries, each ovum in its own small sac, or follicle. In a sexually mature woman, ovulation occurs about once every 28 days until menopause. After being expelled from the ovary, the ovum is swept along through one of the fallopian tubes by tiny hair cells, called cilia, toward the uterus, or womb.

Sperm are produced in the testicles (testes), or reproductive glands, of a mature male at a rate of several hundred million a day and are ejaculated in the semen at sexual climax. Deposited in the vagina, they try to swim through the cervix (the opening of the uterus) and into the fallopian tubes, but only a tiny fraction make it that far. The nature of the sperm and the ovum that finally fuse together has tremendous implications for the person being conceived.

Fertilization typically occurs while the ovum is passing through the fallopian tube. If fertilization does not occur, the ovum and any sperm cells in the woman's body die. The sperm are absorbed by the woman's white blood cells, and the ovum passes through the uterus and exits through the vagina.
Topic: Conception
Learning Objective: Summarize the process of conception and alternative paths to parenthood.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

97) The science of genetics is the study of heredity—the inborn factors from the biological parents that affect development. Define the function of each of the following terms, and explain their relationship to the mechanisms of heredity: DNA, chromosomes, and genes.

Answer: The fundamental unit of heredity is a chemical called deoxyribonucleic acid (DNA). The double-helix structure of DNA resembles a long, spiraling ladder whose steps are made of pairs of chemical units called bases.

Chromosomes are coils of DNA that consist of smaller segments called genes and are found in every cell in the human body. Each gene has a specific location on its chromosome and contains thousands of bases. The sequence of bases in a gene tells the cell how to make the proteins that enable it to carry out its specific functions. The complete sequence of genes in the human body constitutes the human genome. The human genome is a reference point, or representative genome, that shows the location of all human genes.
Topic: Heredity
Learning Objective: Describe what genes are and how they influence human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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98) What is Down syndrome? Explain how often it occurs. What challenges does a person with Down syndrome face?

Answer: The most common genetic disorder in children is Down syndrome. It is responsible for about 40 percent of cases of moderate-to-severe intellectual disability. The condition is also called trisomy-21 because it is characterized in more than 90 percent of cases by an extra 21st chromosome. The most obvious physical characteristic associated with Down syndrome is a downward-sloping skin fold at the inner corners of the eyes.

Children with Down syndrome also tend to have slowed growth; poor muscle tone; congenital heart defects; thick hands; ear infections and early hearing loss; and impaired communication, language, memory, and motor skills.
Topic: Chromosomal Abnormalities; Down Syndrome
Learning Objective: Identify types of genetic and chromosomal abnormalities and available screening options.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
Accessibility: Keyboard Navigation

99) Describe how researchers use family studies, adoption studies, and twin studies to investigate the heritability of traits.

Answer: Heritability is a statistical estimate of how much heredity contributes to variations in a specific trait at a certain time within a given population.

In family studies, researchers measure the degree to which biological relatives share certain traits and determine whether or not the closeness of the familial relationship is associated with the degree of similarity. In other words, the more closely two people are related, the more likely they will be similar on a trait if that trait is indeed genetically influenced. Therefore, researchers use concordance rates on traits to infer genetic influences.

Adoption studies look at similarities between adopted children and their adoptive families and also between adopted children and their biological families. When adopted children are more like their biological parents and siblings in a particular trait (say, obesity), we see the influence of heredity. When they resemble their adoptive families more, we see the influence of environment.

Twin studies compare pairs of monozygotic, or identical, twins with same-sex dizygotic, or fraternal, twins. Monozygotic twins are twice as genetically similar, on average, as dizygotic twins. When monozygotic twins are more alike, or more concordant, on a trait than dizygotic twins, we see the likely effects of heredity. As an extension of this, twins raised in either their biological family or an adoptive family can be studied.
Topic: Heritability
Learning Objective: Explain how heredity and environment interact in human development.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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100) Describe the role of heredity and environment in obesity, schizophrenia, and intelligence.

Answer: Obesity is measured by body mass index, or BMI (comparison of weight to height). Children between the 85th and 95th percentiles are classified as overweight and those above the 95th percentile as obese. The risk of obesity is two to three times higher for a child with a family history of obesity, especially severe obesity. The kind and amount of food eaten in a particular home and the amount of exercise that is encouraged can increase or decrease the likelihood that a child will become obese. Obesity rates rise in countries with rapid socioeconomic growth and increases in gross domestic product. In Western countries, obesity likely stems from the interaction of a genetic predisposition with overeating, supersized portions, and inadequate exercise.

Heredity exerts a strong influence on general intelligence, as measured by intelligence tests, and a moderate effect on specific abilities such as memory, verbal ability, and spatial ability. While specific genes might contribute to intelligence, intelligence is influenced by the effects of large numbers of genes working together. Indirect evidence of the role of heredity in intelligence comes from adoption and twin studies. Adopted children's scores on standardized intelligence tests are consistently closer to the scores of their biological mothers than to those of their adoptive parents and siblings; monozygotic twins are more alike in intelligence than dizygotic twins. Intelligence also depends in part on brain size and structure, which are under strong genetic control.

Schizophrenia is an example of the interaction of heredity and genetics. Schizophrenia is a neurological disorder that affects about 1 percent of the U.S. population each year. It is characterized by loss of contact with reality; hallucinations and delusions; loss of coherent, logical thought; and inappropriate emotionality. Estimates of heritability range from 60 to 80 percent. A wide array of rare gene mutations, some of which involve missing or duplicated segments of DNA, may increase susceptibility to schizophrenia. However, monozygotic twins are not always concordant for schizophrenia, perhaps due to epigenetic processes. Researchers also have looked at possible nongenetic influences, such as a series of neurological insults in fetal life, exposure to influenza or rubella, or the mother's loss of a close relative in the first trimester of pregnancy. Infants born in urban areas or those whose mothers experienced obstetric complications or who were poor or severely deprived as a result of war or famine are at higher risk as are infants born during the winter months. Advanced paternal age is also a risk factor for schizophrenia, and there are indications that, at least for boys, very young fathers may put children at elevated risk as well.
Topic: Heredity
Learning Objective: Identify individual characteristics influenced by heredity and environment.
Bloom's: Understand
APA Outcome: 1.1: Describe key concepts, principles, and overarching themes in psychology
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