



Chapter 4 The Developing Person

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Prenatal Development and the Newborn



Developmental Psychology

- a branch of psychology that studies physical, cognitive and social change throughout the life span



Prenatal Development and the Newborn



Life is sexually transmitted

Prenatal Development and the Newborn



- **Zygote**
 - the fertilized egg
 - enters a 2 week period of rapid cell division
 - develops into an embryo
- **Embryo**
 - the developing human organism from 2 weeks through 2nd month
- **Fetus**
 - the developing human organism from 9 weeks after conception to birth

Prenatal Development and the Newborn



40 days 45 days 2 months 4 months



Prenatal Development and the Newborn



- **Teratogens**
 - agents, such as chemicals and viruses, that can reach the embryo or fetus during prenatal development and cause harm
- **Fetal Alcohol Syndrome (FAS)**
 - physical and cognitive abnormalities in children caused by a pregnant woman's heavy drinking
 - symptoms include misproportioned head

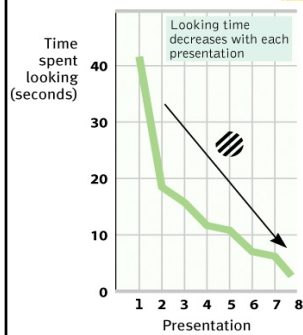
Prenatal Development and the Newborn



- **Rooting Reflex**
 - tendency to open mouth, and search for nipple when touched on the cheek
- **Preferences**
 - human voices and faces
 - facelike images-->
 - smell and sound of mother

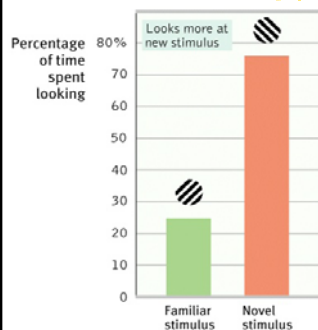


Prenatal Development and the Newborn



- **Habituation**
 - decreasing responsiveness with repeated stimulation

Prenatal Development and the Newborn



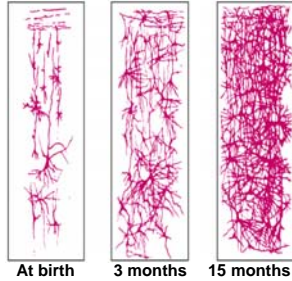
Having habituated to the old stimulus, newborns preferred gazing at a new one

Infancy and Childhood: Physical Development



Maturation

- biological growth processes that enable orderly changes in behavior
- relatively uninfluenced by experience



Cortical Neurons

Infancy and Childhood: Physical Development



- Babies only 3 months old can learn that kicking moves a mobile--and can retain that learning for a month (Rovee-Collier, 1989, 1997).

Infancy and Childhood: Cognitive Development



Schema

- a concept or framework that organizes and interprets information

Assimilation

- interpreting one's new experience in terms of one's existing schemas

Infancy and Childhood: Cognitive Development



- **Accommodation**
 - adapting one's current understandings (schemas) to incorporate new information
- **Cognition**
 - All the mental activities associated with thinking, knowing, remembering, and communicating

Piaget's Stages of Cognitive Development



Typical Age Range	Description of Stage	Developmental Phenomena
Birth to nearly 2 years	<i>Sensorimotor</i> Experiencing the world through senses and actions (looking, touching, mouthing)	•Object permanence •Stranger anxiety
About 2 to 6 years	<i>Preoperational</i> Representing things with words and images but lacking logical reasoning	•Pretend play •Egocentrism •Language development
About 7 to 11 years	<i>Concrete operational</i> Thinking logically about concrete events; grasping concrete analogies and performing arithmetical operations	•Conservation •Mathematical transformations
About 12 through adulthood	<i>Formal operational</i> Abstract reasoning	•Abstract logic •Potential for moral reasoning

Infancy and Childhood: Cognitive Development



- **Object Permanence**
 - the awareness that things continue to exist even when not perceived



Infancy and Childhood: Cognitive Development



Baby Mathematics

- Shown a numerically impossible outcome, infants stare longer (Wynn, 1992)

1. Objects placed in case. 2. Screen comes up. 3. Object is removed. 4. Possible outcome: Screen drops, revealing one object. 4. Impossible outcome: Screen drops, revealing two objects.

Infancy and Childhood: Cognitive Development



Conservation

- the principle that properties such as mass, volume, and number remain the same despite changes in the forms of objects



Infancy and Childhood: Cognitive Development



Egocentrism

- the inability of the preoperational child to take another's point of view

Theory of Mind

- people's ideas about their own and others' mental states- about their feelings, perceptions, and thoughts and the behavior these might predict

Autism

- a disorder that appears in childhood
- Marked by deficient communication, social interaction and understanding of others' states of mind

Social Development



- **Stranger Anxiety**
 - fear of strangers that infants commonly display
 - beginning by about 8 months of age
- **Attachment**
 - an emotional tie with another person
 - shown in young children by their seeking closeness to the caregiver and displaying distress on separation

Social Development



- **Harlow's Surrogate Mother Experiments**
 - Monkeys preferred contact with the comfortable cloth mother, even while feeding from the nourishing wire mother

Social Development



- **Critical Period**
 - an optimal period shortly after birth when an organism's exposure to certain stimuli or experiences produces proper development
- **Imprinting**
 - the process by which certain animals form attachments during a critical period very early in life

Social Development

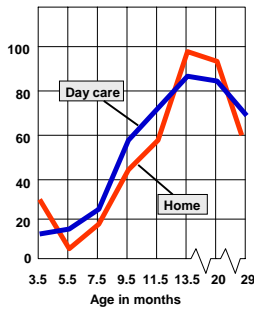


- Monkeys raised by artificial mothers were terror-stricken when placed in strange situations without their surrogate mothers.

Social Development



Percentage of infants who cried when their mothers left



- Groups of infants left by their mothers in a unfamiliar room (from Kagan, 1976).

Social Development



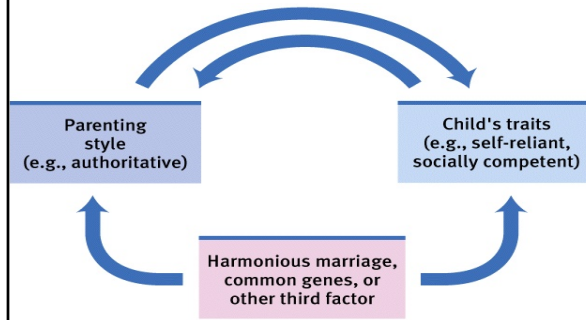
- **Basic Trust** (Erik Erikson)
 - a sense that the world is predictable and trustworthy
 - said to be formed during infancy by appropriate experiences with responsive caregivers
- **Self-Concept**
 - a sense of one's identity and personal worth

Social Development: Child-Rearing Practices



- **Authoritarian**
 - parents impose rules and expect obedience
 - "Don't interrupt." "Why? Because I said so."
- **Permissive**
 - submit to children's desires, make few demands, use little punishment
- **Authoritative**
 - both demanding and responsive
 - set rules, but explain reasons and encourage open discussion

Social Development: Child-Rearing Practices



Adolescence



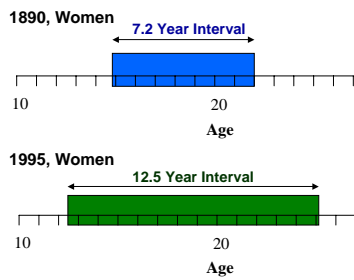
- **Adolescence**
 - the transition period from childhood to adulthood
 - extending from puberty to independence
- **Puberty**
 - the period of sexual maturation
 - when a person becomes capable of reproduction

Adolescence



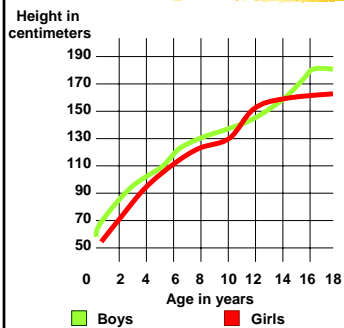
- Primary Sex Characteristics
 - body structures that make sexual reproduction possible
 - ovaries--female
 - testes--male
 - external genitalia
- Secondary Sex Characteristics
 - nonreproductive sexual characteristics
 - female--breast and hips
 - male--voice quality and body hair
- Menarche (meh-NAR-key)
 - first menstrual period

Adolescence

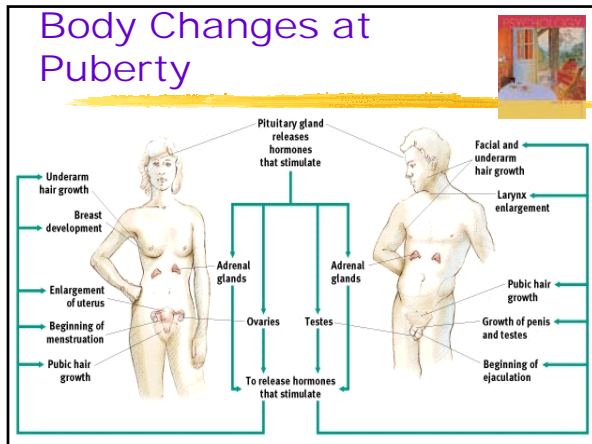


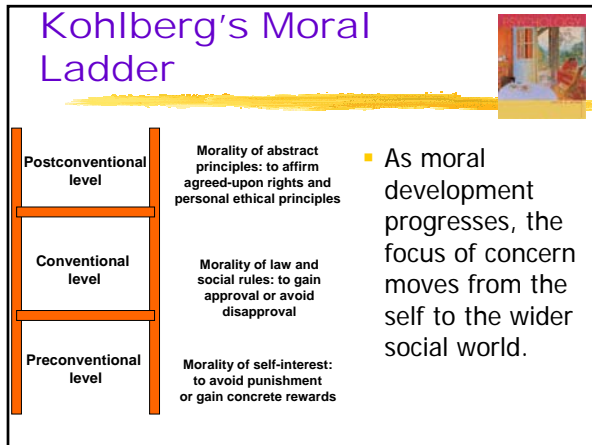
- In the 1890's the average interval between a woman's menarche and marriage was about 7 years; now it is over 12 years

Adolescence



- Throughout childhood, boys and girls are similar in height. At puberty, girls surge ahead briefly, but then boys overtake them at about age 14.





Erikson's Stages of Psychosocial Development

Approximate age	Stage	Description of Task
Infancy (1st year)	Trust vs. mistrust	If needs are dependably met, infants develop a sense of basic trust.
Toddler (2nd year)	Autonomy vs. shame and doubt	Toddlers learn to exercise will and do things for themselves, or they doubt their abilities.
Preschooler (3-5 years)	Initiative vs. guilt	Preschoolers learn to initiate tasks and carry out plans, or they feel guilty about efforts to be independent.
Elementary (6 years- puberty)	Competence vs. inferiority	Children learn the pleasure of applying themselves to tasks, or they feel inferior.

Erikson's Stages of Psychosocial Development



Approximate age	Stage	Description of Task
Adolescence (teens into 20's)	Identity vs. role confusion	Teenagers work at refining a sense of self by testing roles and then integrating them to form a single identity, or they become confused about who they are.
Young Adult (20's to early 40's)	Intimacy vs. isolation	Young adults struggle to form close relationships and to gain the capacity for intimate love, or they feel socially isolated.
Middle Adult (40's to 60's)	Generativity vs. stagnation	The middle-aged discover a sense of contributing to the world, usually through family and work, or they may feel a lack of purpose.
Late Adult (late 60's and up)	Integrity vs. despair	When reflecting on his or her life, the older adult may feel a sense of satisfaction or failure.

Adolescence: Social Development

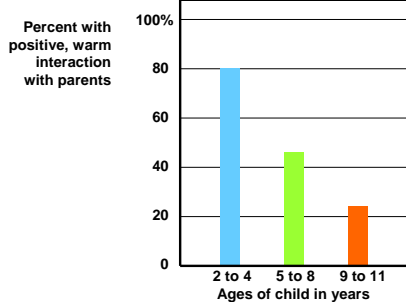


- **Identity**
 - one's sense of self
 - the adolescent's task is to solidify a sense of self by testing and integrating various roles
- **Intimacy**
 - the ability to form close, loving relationships
 - a primary developmental task in late adolescence and early adulthood

Adolescence: Social Development



- The changing parent-child relationship



Adulthood: Physical Development

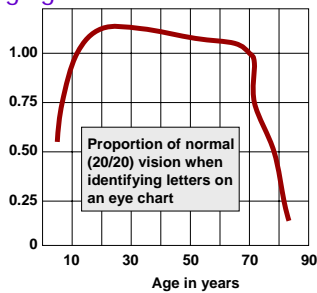


- **Menopause**
 - the time of natural cessation of menstruation
 - also refers to the biological changes a woman experiences as her ability to reproduce declines
- **Alzheimer's Disease**
 - a progressive and irreversible brain disorder
 - characterized by a gradual deterioration of memory, reasoning, language, and finally, physical functioning

Adulthood: Physical Development



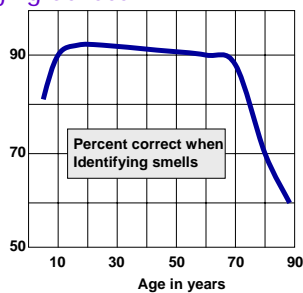
▪ The Aging Senses



Adulthood: Physical Development



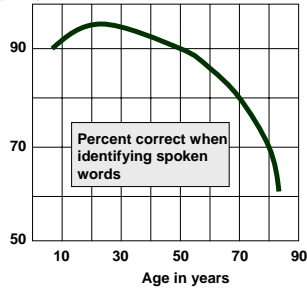
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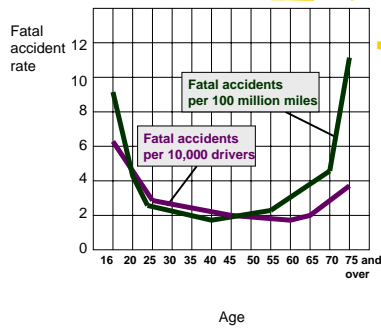
Adulthood: Physical Development



The Aging Senses



Adulthood: Physical Development

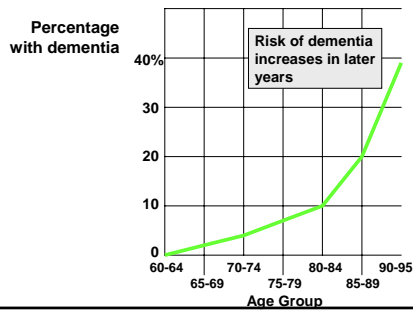


Slowing reactions contribute to increased accident risks among those 75 and older.

Adulthood: Physical Development

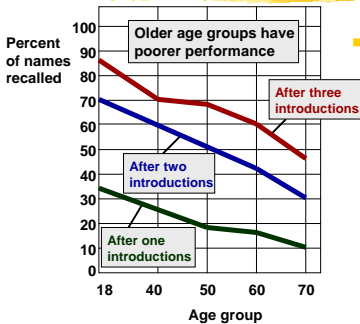


Incidence of Dementia by Age



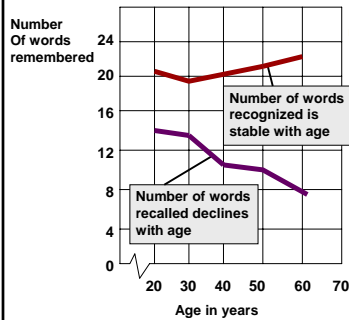
Risk of dementia increases in later years

Adulthood: Cognitive Development



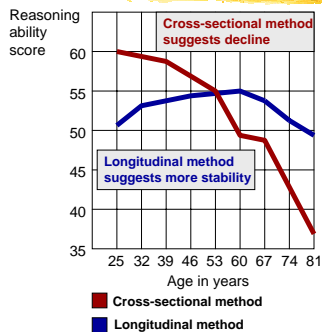
- Recalling new names introduced once, twice, or three times is easier for younger adults than for older ones (Crook & West, 1990).

Adulthood: Cognitive Development



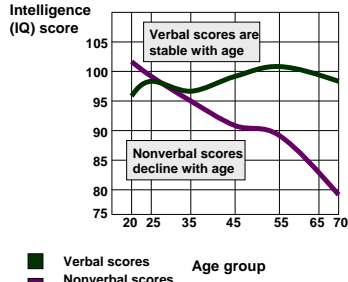
- In a study by Schonfield & Robertson (1966), the ability to recall new information declined during early and middle adulthood, but the ability to recognize new information did not.

Adulthood: Cognitive Development



- Cross-Sectional Study**
 - a study in which people of different ages are compared with one another
- Longitudinal Study**
 - a study in which the same people are restudied and retested over a long period

Adulthood- Cognitive Development



Verbal intelligence scores hold steady with age, while nonverbal intelligence scores decline (adapted from Kaufman & others, 1989).

Adulthood: Cognitive Development

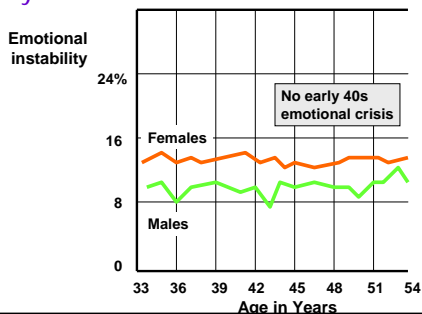


- **Crystallized Intelligence**
 - one's accumulated knowledge and verbal skills
 - tends to increase with age
- **Fluid Intelligence**
 - one's ability to reason speedily and abstractly
 - tends to decrease during late adulthood

Adulthood: Social Development



- **Early-forties midlife crisis?**

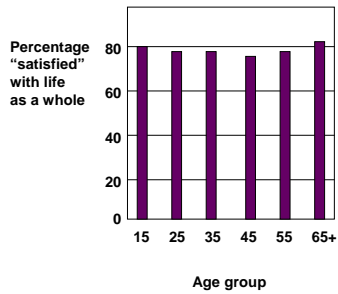


Adulthood: Social Changes



- **Social Clock**
 - the culturally preferred timing of social events
 - marriage
 - parenthood
 - retirement

Adulthood: Social Changes



- Multinational surveys show that age differences in life satisfaction are trivial (Inglehart, 1990).

Adulthood: Social Changes