

Thinking About Psychology: The Science of Mind and Behavior

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Chapter 02

Life Span Development

Module 04

Prenatal and Childhood Development

Module 4: Prenatal and Childhood Development

The Beginnings of Life:

Prenatal Development

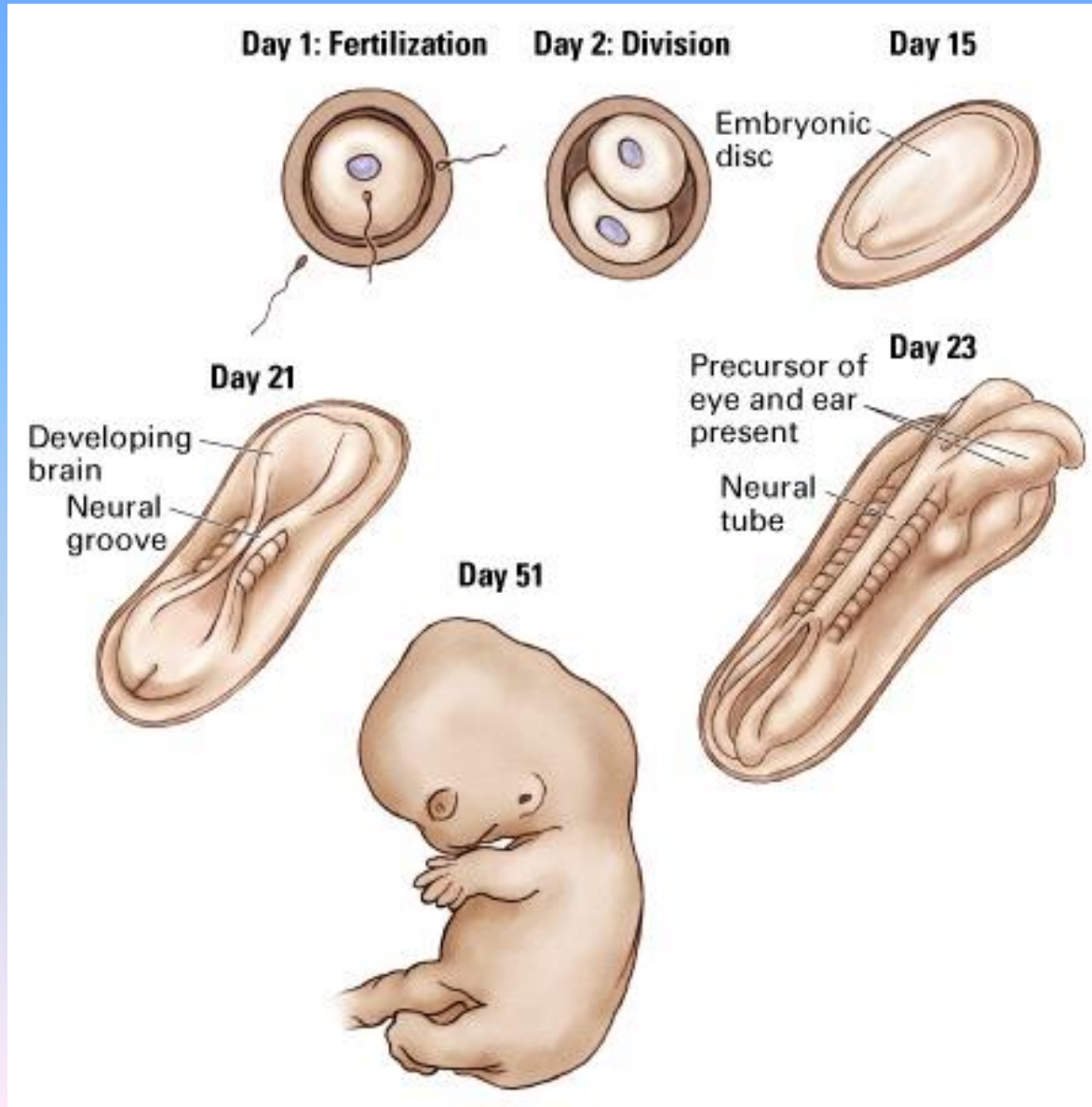
Prenatal Development

- Prenatal defined as “before birth”
- Prenatal stage begins at conception and ends with the birth of the child.

Zygote

- A newly fertilized egg
- The first two weeks are a period of rapid cell division.
- Attaches to the mother's uterine wall
- At the end of 14 days becomes an embryo

Prenatal Development



Embryo

- Developing human from about 14 days until the end of the eight week
- Most of the major organs are formed during this time.
- At the end of the eight week the fetal period begins.

Fetal Period

- The period between the beginning of the ninth week until birth

Prenatal Development – 45 Days

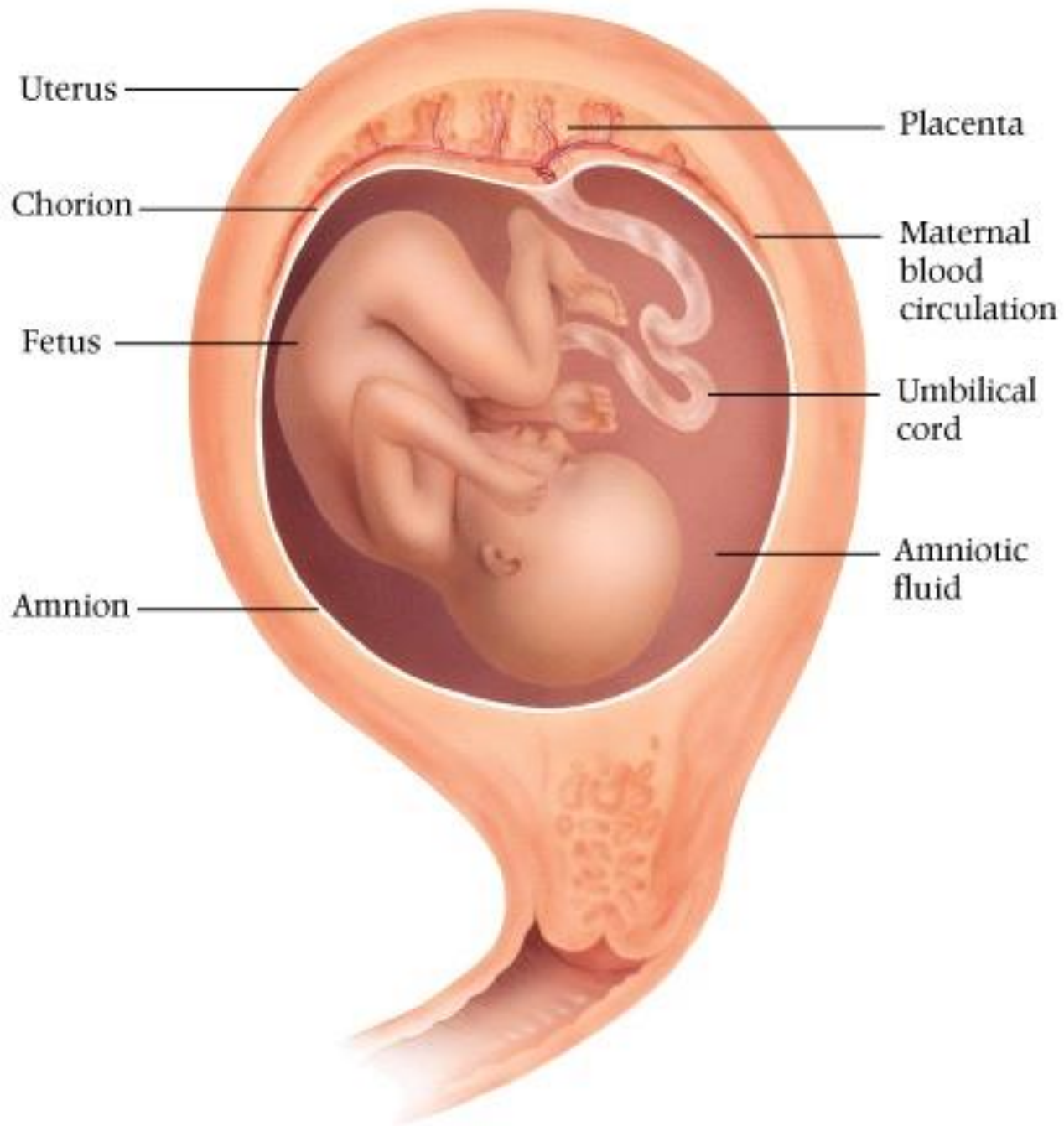


Prenatal Development – 2 months



Placenta

- A cushion of cells in the mother by which the fetus receives oxygen and nutrition
- Acts as a filter to screen out substances that could harm the fetus



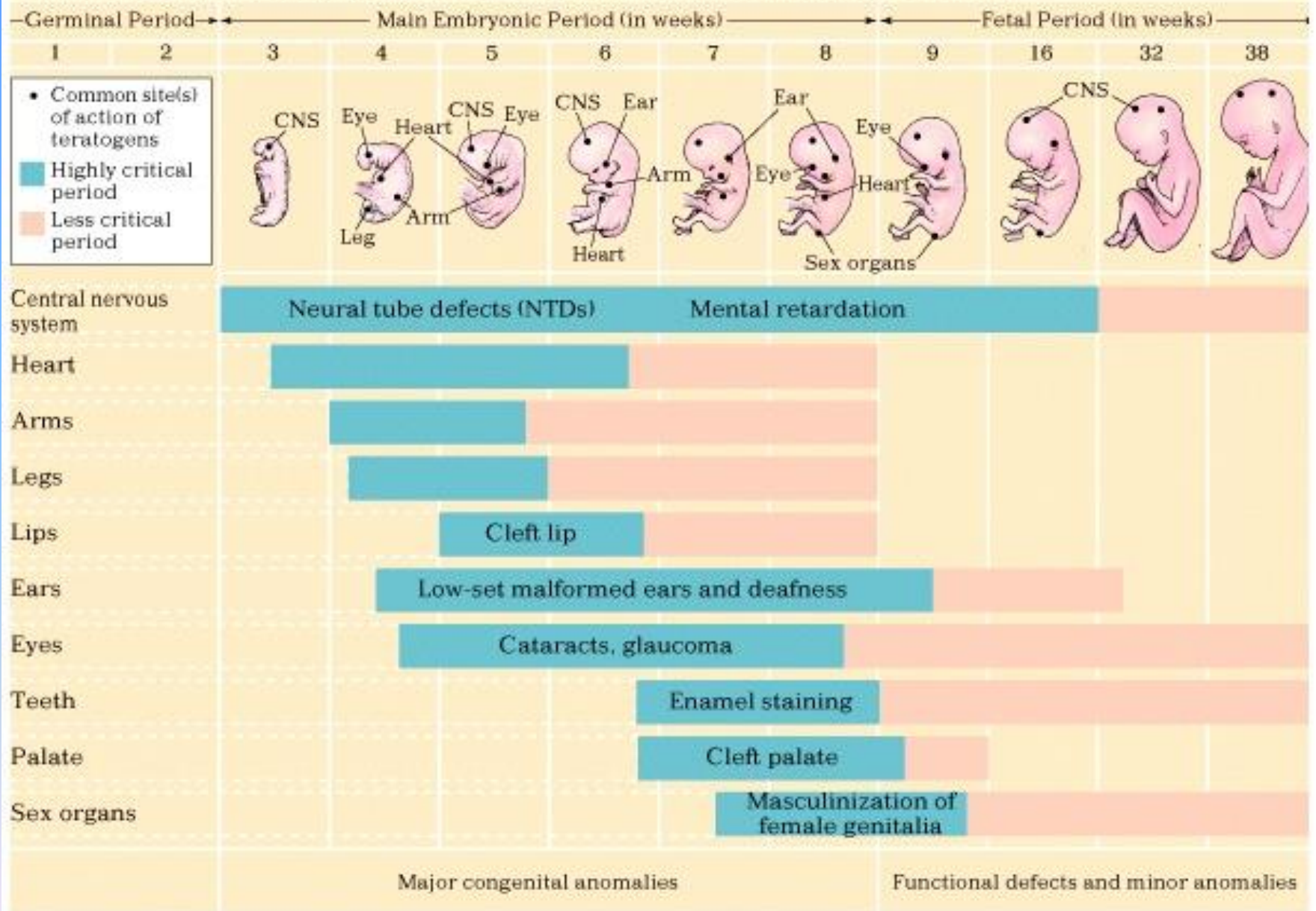
Prenatal Development

- Play “Teratogens and Their Effects on the Developing Brain and Mind”
(12:44) Segment #12 from The Mind: Psychology Teaching Modules (2nd edition)

Teratogens

- Substances that pass through the placenta's screen and prevent the fetus from developing normally
- Includes: radiation, toxic chemicals, viruses, drugs, alcohol, nicotine, etc.

Birth Defects from Teratogens: Time of Exposure and Effects on Major Organs



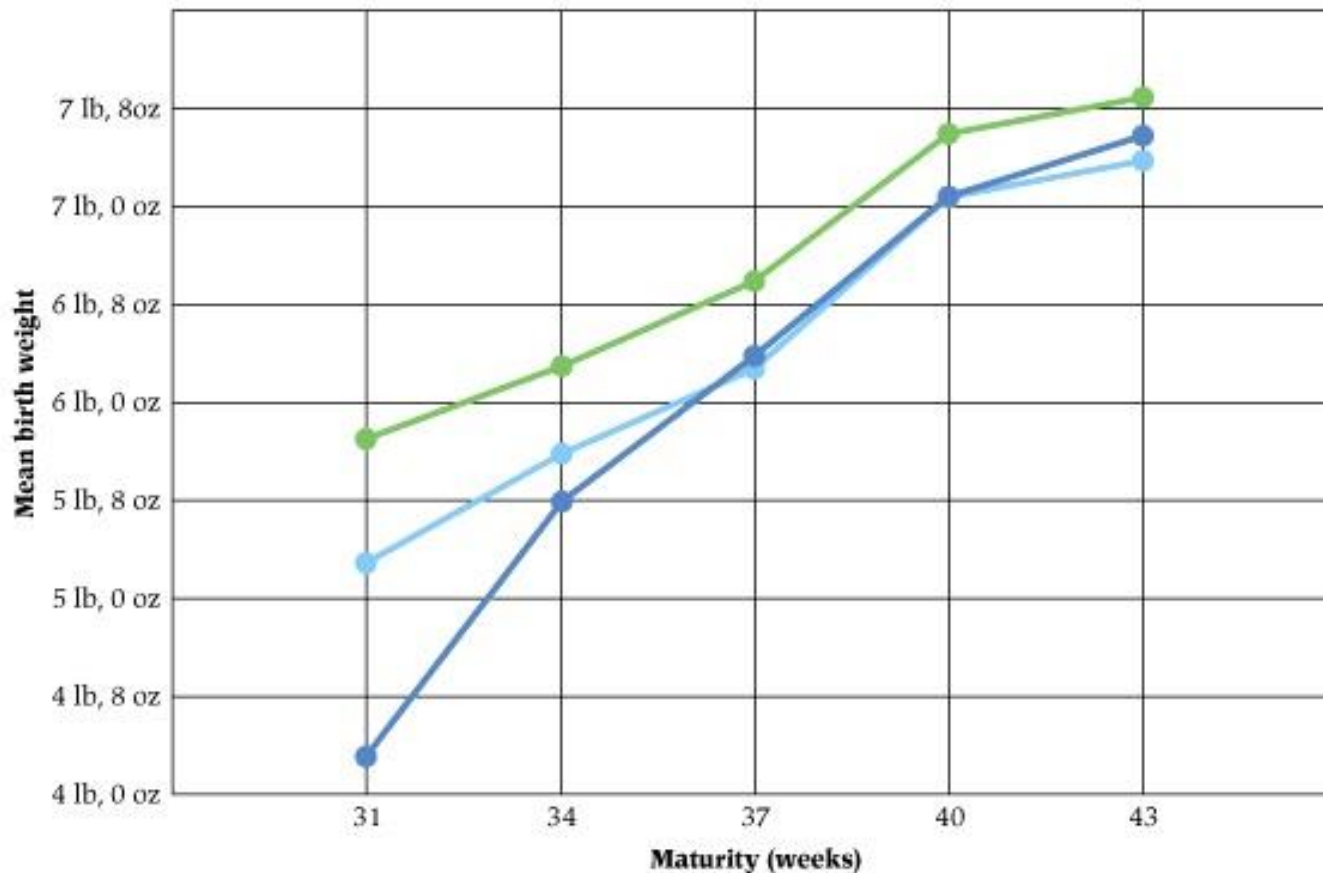
Source: Adapted from Moore & Persaud, 1998.

Prenatal Brain Development

- Play “The Effects of Hormones and the Environment on Brain Development” (6:50) Module #2 from The Brain: Teaching Modules (2nd edition)

Smoking and Birth Weight

Mean birth weight (in pounds and ounces) of babies born at various gestations to smokers and nonsmokers



Key:

—●— = Nonsmoker

—●— = Smoker of 1-20 cigarettes per day

—●— = Smoker of over 20 cigarettes per day

Fetal Alcohol Syndrome (FAS)

- A series of physical and cognitive abnormalities in children due to their mother drinking large amounts of alcohol during pregnancy

Alcohol

- Play “Teratogens and Their Effects on the Developing Brain and Mind”
(12:44) Segment #12 from The Mind: Psychology Teaching Modules (2nd edition)

Module 4: Prenatal and Childhood Development

The Beginnings of Life: The Newborn

Newborn and the Apgar Readings

- Insert “Testing Competency In a Newborn” Video #13 from Worth’s Digital Media Archive for Psychology
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM

Rooting Reflex

- Infants' tendency, when touched on the cheek, to move their face in the direction of the touch and open their mouth
- Is an automatic, unlearned response
- Child is looking for nourishment.

Reflexes in the Newborn

- Insert “Reflexes in the Newborn” Video #14 from Worth’s Digital Media Archive for Psychology
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM

Newborn Reflexes

- Play “Capabilities of the Newborn” (3:59) Segment #13 from The Mind: Psychology Teaching Modules (2nd edition)

Temperament

- A person's characteristic emotional reactivity and intensity
- A child might be:
 - An “easy” or “difficult” baby
- Temperament shown in infancy appears to carry through a person's life.

Temperament

- Play “Bringing Up Monkeys” (9:40)
Segment #23 from Scientific American
Frontiers: Video Collection for
Introductory Psychology (2nd edition)

Module 4: Prenatal and Childhood Development

Physical Development in Infancy and Childhood

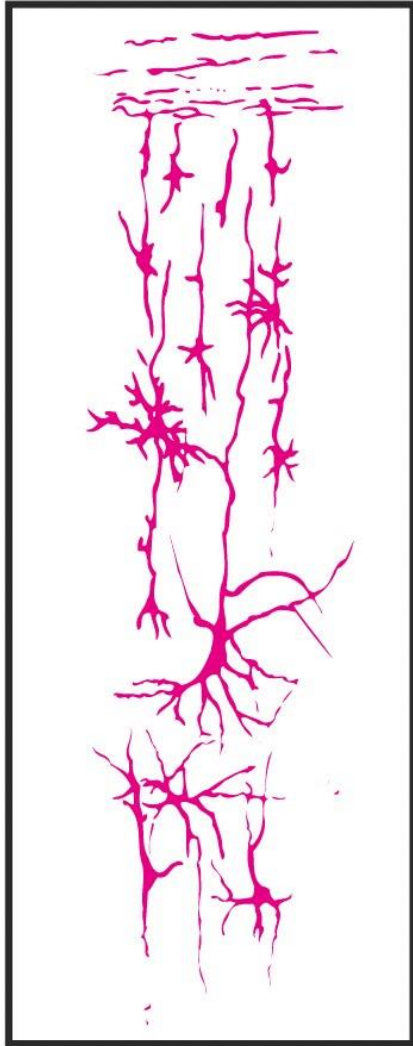
Infant, Toddler, Child

- Infant: First year
- Toddler: From about 1 year to 3 years of age
- Child: Span between toddler and teen

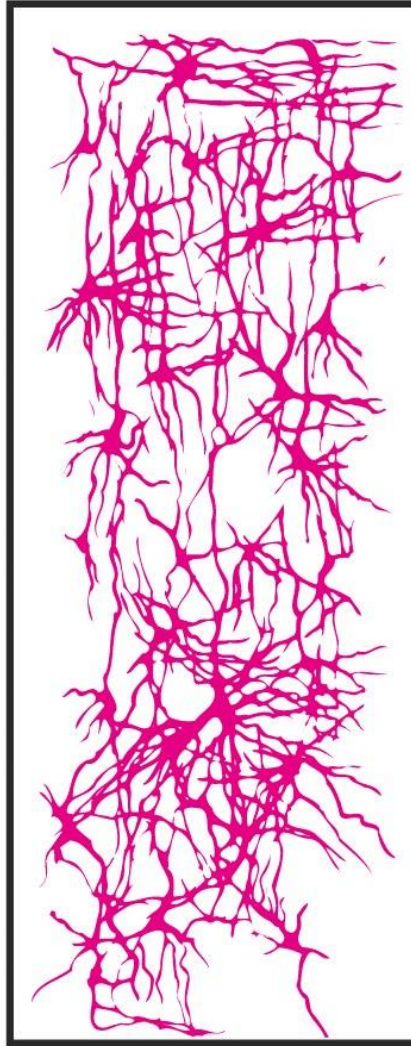
Module 4: Prenatal and Childhood Development

Physical Development in Infancy and Childhood: The Developing Brain

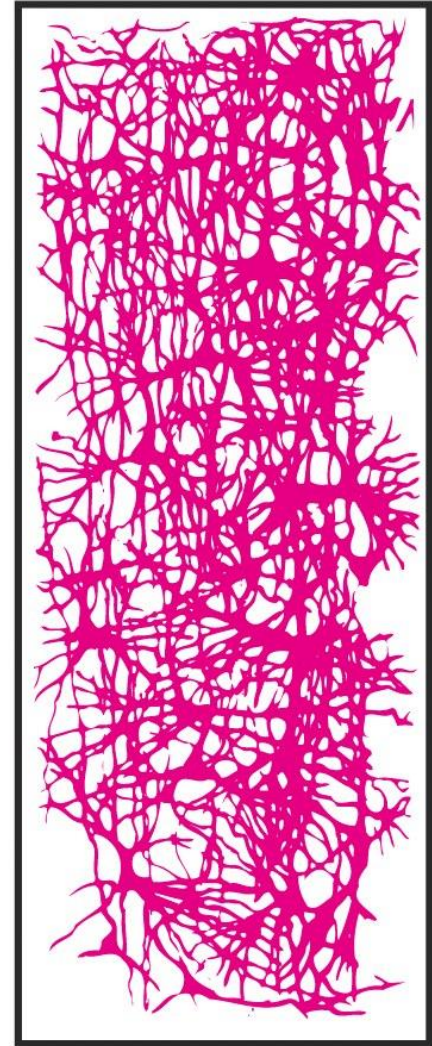
Neural Development



At birth



3 months



15 months

Maturation

- Biological growth processes that enable orderly changes in behavior

Module 4: Prenatal and Childhood Development

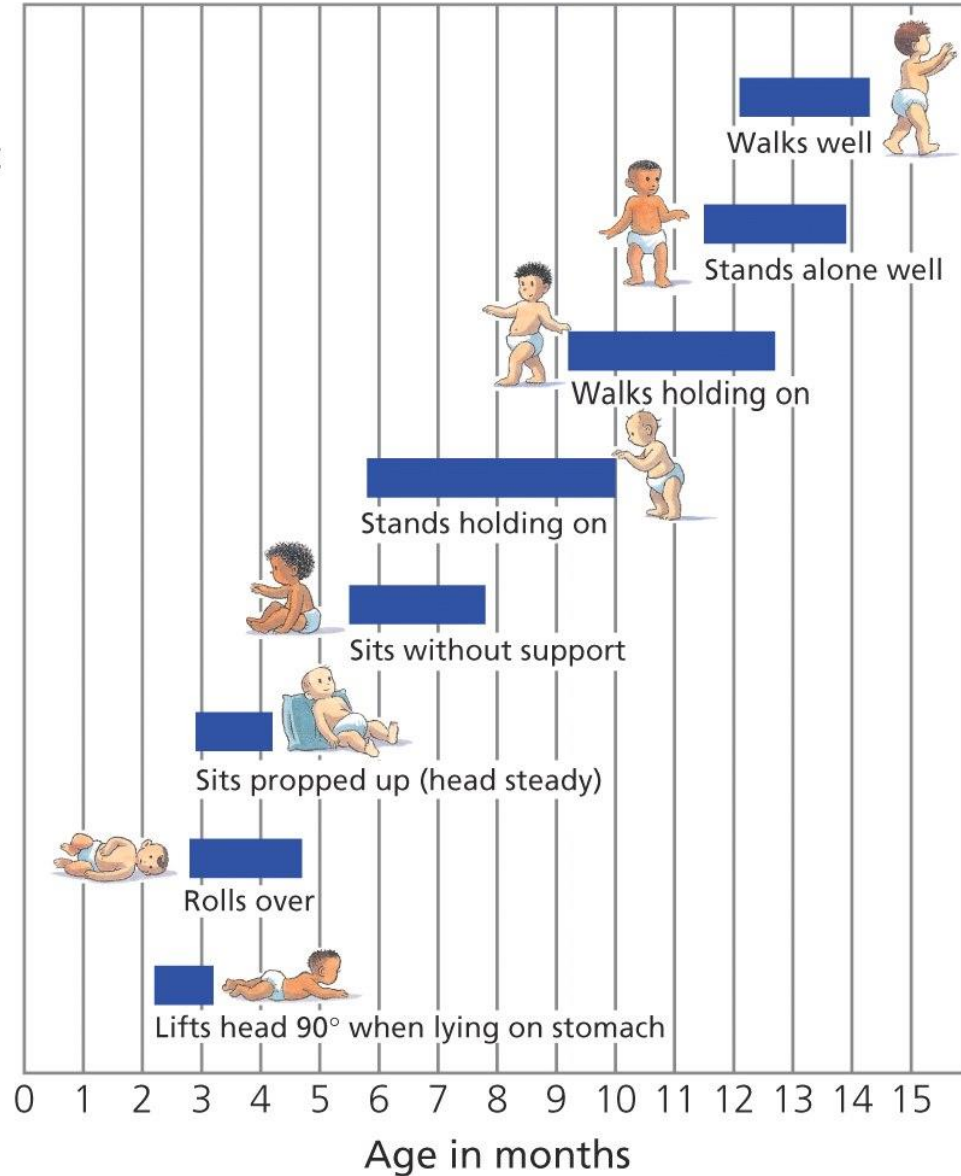
Physical Development in Infancy and Childhood: Motor Development

Motor Development

- Includes all physical skills and muscular coordination

Motor Development

Stages of motor development



Motor Development

- Play “Baby Body Sense” (11:00)
Segment #24 from Scientific American
Frontiers: Video Collection for
Introductory Psychology (2nd edition)

Module 4: Prenatal and Childhood Development

Cognitive Development in Infancy and Childhood: Piaget's Cognitive Stages

Cognition

- All the mental activities associated with thinking, knowing, and remembering
- Children think differently than adults do

Child's Thinking

- Play “The Magic Years” (10:00)
Segment #25 from Scientific American
Frontiers: Video Collection for
Introductory Psychology (2nd edition)

Jean Piaget (pee-ah-ZHAY)

- Developmental psychologist who introduced a stage theory of cognitive development
- Proposed a theory consisting of four stages of cognitive development

Schemas

- Concepts or mental frameworks that people use to organize and interpret information
- Sometimes called schemes
- A person's "picture of the world"

Assimilation

- Interpreting a new experience within the context of one's existing schemas
- The new experience is similar to other previous experiences

Accommodation

- Interpreting a new experience by adapting or changing one's existing schemas
- The new experience is so novel the person's schemata must be changed to accommodate it

Assimilation/Accommodation



Two-year-old Jocelyn has learned the schema for "dog" from her picture books.

Assimilation/Accommodation



Two-year-old Jocelyn has learned the schema for "dog" from her picture books.

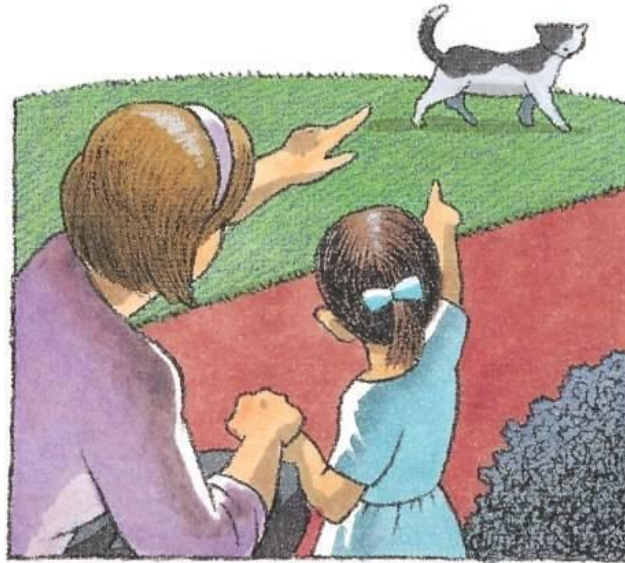


Jocelyn sees a cat and calls it a "dog." She is trying to assimilate this new animal into an existing schema. Her mother tells her, "No, it's a cat."

Assimilation/Accommodation



Two-year-old Jocelyn has learned the schema for "dog" from her picture books.



Jocelyn sees a cat and calls it a "dog." She is trying to assimilate this new animal into an existing schema. Her mother tells her, "No, it's a cat."



Jocelyn accommodates her schema for 4-legged animals and continues to modify that schema to include different kinds of dogs and cats in the neighborhood.

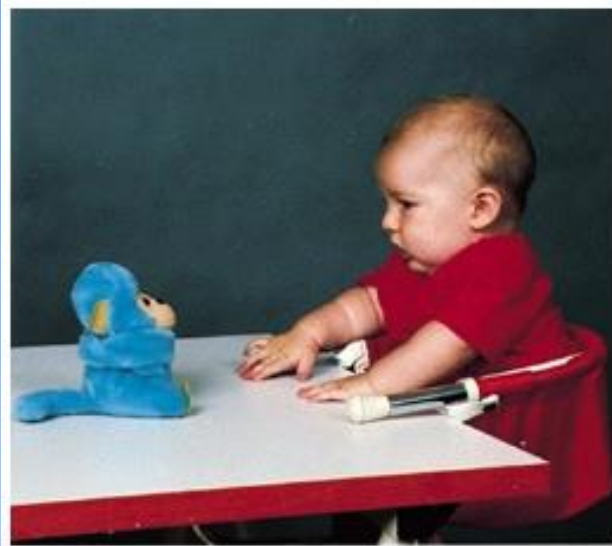
Sensorimotor Stage

- Piaget's first stage of cognitive development
- From birth to about age two
- Child gathers information about the world through senses and motor functions
- Child learns object permanence

Object Permanence

- The awareness that things continue to exist even when they cannot be sensed
- “Out of sight, out of mind”

Object Permanence



Object Permanence

- Insert “Object Permanence” Video #15 from Worth’s Digital Media Archive for Psychology
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM

Preoperational Stage

- Piaget's second stage of cognitive development
- From about age 2 to age 6 or 7
- Children can understand language but not logic

Egocentrism

- The child's inability to take another person's point of view
- Includes a child's inability to understand that symbols can represent other objects

Childhood Thinking

- Play “A Change of Mind” (12:00)
Segment #26 from Scientific American
Frontiers: Video Collection for
Introductory Psychology (2nd edition)

Concrete Operational Stage

- Piaget's third stage of cognitive development
- From about age 7 to 11
- Child learns to think logically and understands conservation

Conservation

- An understanding that certain properties remain constant despite changes in their form
- The properties can include mass, volume, and numbers.

Piaget's Conservation Task

- Insert “Piaget's Conservation Task” Video #18 from Worth's Digital Media Archive for Psychology
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM

Conservation



A



B

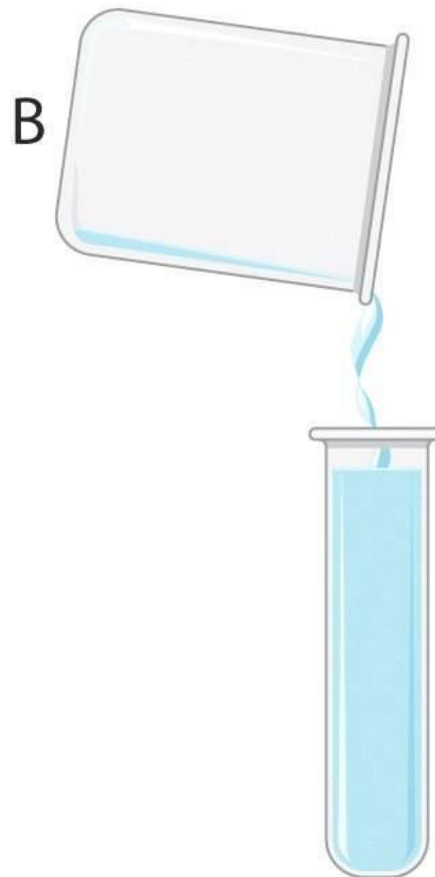
Conservation



A



B



C

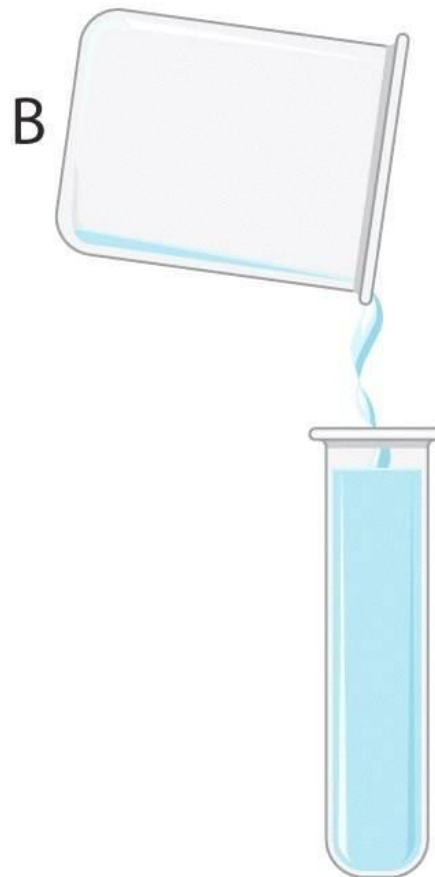
Conservation



A



B



C















A



C

Types of Conservation Tasks

Tests of Various Types of Conservation

Type of conservation	Initial presentation	Transformation	Question	Preoperational child's answer
Liquid	Two equal glasses of liquid. 	Pour one into a taller, narrower glass. 	Which glass contains more?	The taller one. 
Number	Two equal lines of checkers. 	Increase spacing of checkers in one line. 	Which line has more checkers?	The longer one. 
Matter	Two equal balls of clay. 	Squeeze one ball into a long, thin shape. 	Which piece has more clay?	The long one. 
Length	Two sticks of equal length. 	Move one stick. 	Which stick is longer?	The one that is farther to the right. 

Formal Operational Stage

- Piaget's fourth and last stage of cognitive development
- Child can think logically and in the abstract
- About age 12 on up
- Can solve hypothetical problems (What if.... problems)

Cognitive Development

- Play “Infant Cognitive Development” (7:14) Segment #14 from The Mind: Psychology Teaching Modules (2nd edition)

Module 4: Prenatal and Childhood Development

Cognitive Development in Infancy and Childhood: Assessing Piaget

Assessing Piaget's Theory

- Piaget underestimated the child's ability at various ages.
- Piaget's theory doesn't take into account culture and social differences.

Module 4: Prenatal and Childhood Development

Social Development in Infancy and Childhood

Social Development

- Play “Social Development in Infancy” (6:44) Segment #15 from The Mind: Psychology Teaching Modules (2nd edition)

Stranger Anxiety

- The fear of strangers an infant displays around 8 months of age

Stranger Anxiety

- Insert “Stranger Anxiety” Video #16 from Worth’s Digital Media Archive for Psychology
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM

Module 4: Prenatal and Childhood Development

Social Development in Infancy and Childhood: Attachment

Attachment

- An emotional tie with another person resulting in seeking closeness
- Children develop strong attachments to their parents and caregivers.
- Body contact, familiarity, and responsiveness all contribute to attachment.

Harry Harlow

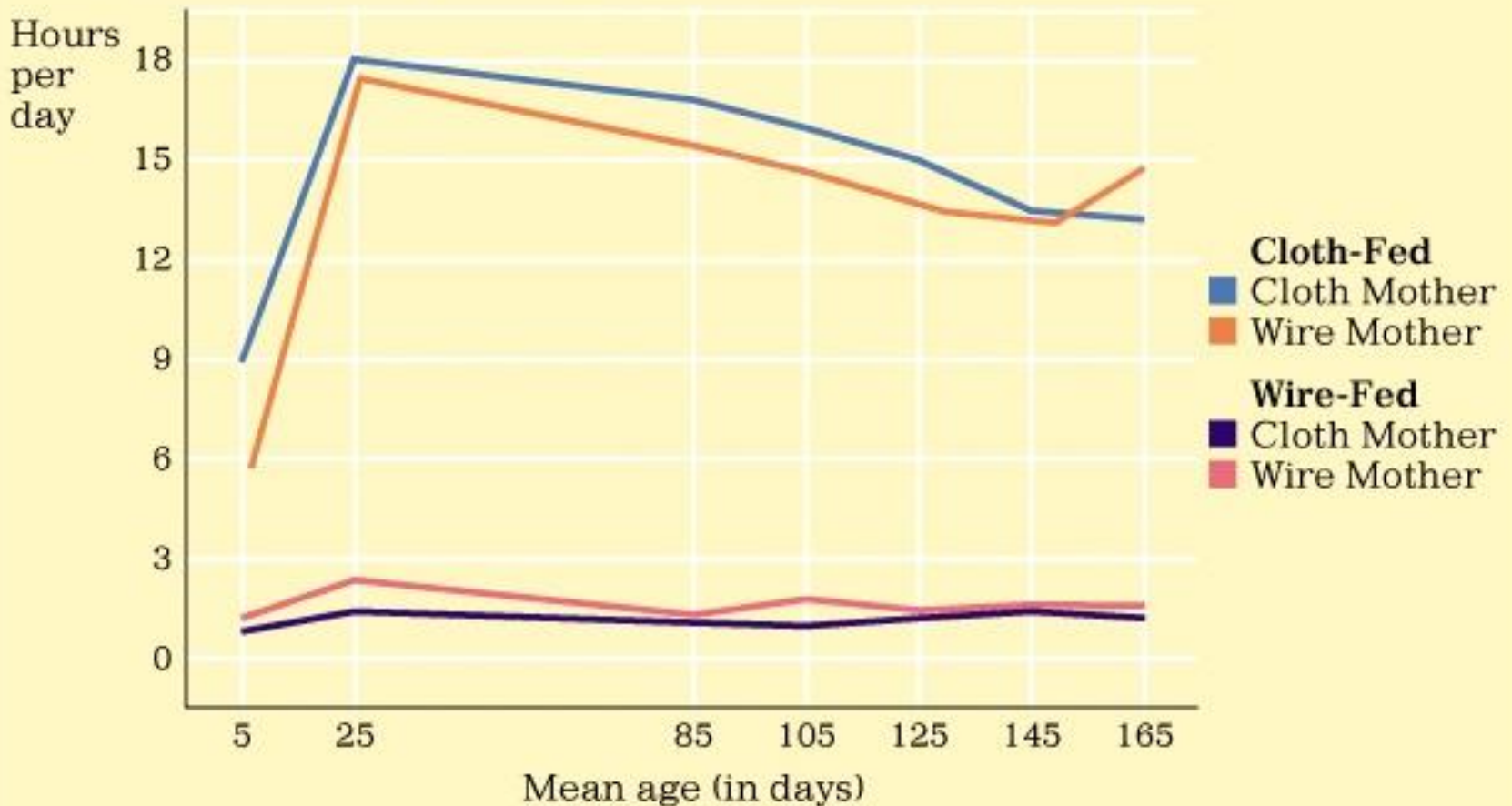
- Did research with infant monkeys on how body contact relates to attachment
- The monkeys had to choose between a cloth mother or a wire mother that provided food.

Harry Harlow

- The monkeys spent most of their time by the cloth mother.

Harry Harlow

Time Infant Monkeys Spent on Cloth and Wire Mothers



Source: Adapted from Harlow, 1958.

Harlow's Studies

- Insert “Harlow’s studies on Dependency in Monkeys” Video #12a from Worth’s Digital Media Archive for Psychology
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM

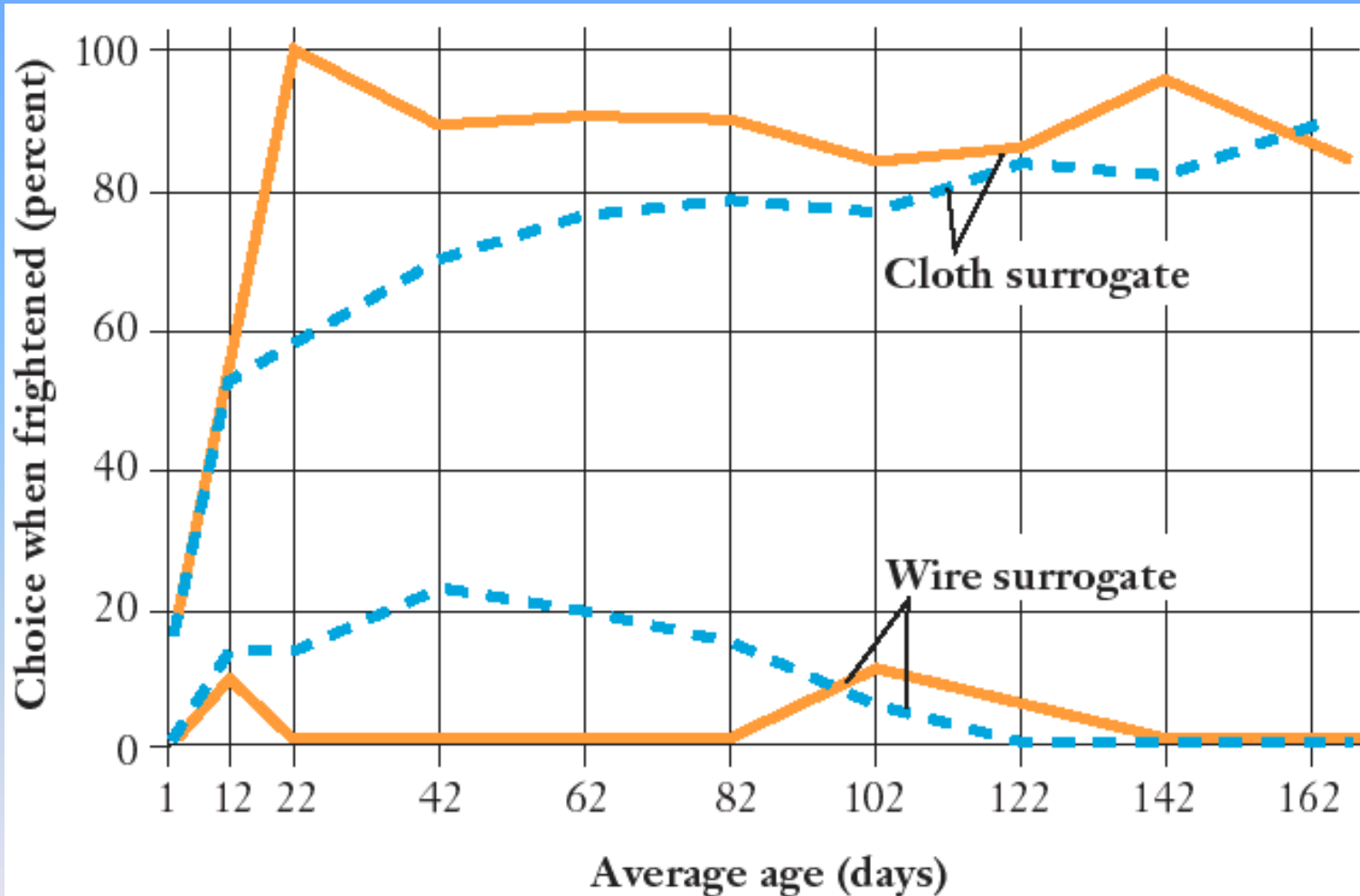
Harlow's Studies

- Insert “Harlow’s studies on Dependency in Monkeys” Video #12b from Worth’s Digital Media Archive for Psychology
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM

Harlow's Studies

- Insert “Harlow’s studies on Dependency in Monkeys” Video #12c from Worth’s Digital Media Archive for Psychology.
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM.
- NOTE: This video clip could also be used later in this module.

Harlow's Study



- Fed on wire mother
- Fed on cloth mother

(b)

Familiarity

- Sense of contentment with that which is already known
- Infants are familiar with their parents and caregivers.

Imprinting and Critical Period

- A process by which certain animals, early in life, form attachments
- The imprinted behavior develops within a critical period--an optimal period when the organism's exposure to certain stimuli produce the imprinted behavior.
- Konrad Lorenz studied imprinting.

Konrad Lorenz

- Studied imprinted behaviors
- Goslings are imprinted to follow the first large moving object they see.

Konrad Lorenz and Imprinting



Module 4: Prenatal and Childhood Development

Social Development in Infancy and Childhood: Parenting Patterns

Responsiveness

- Responsive parents are aware of what their children are doing.
- Unresponsive parents ignore their children--helping only when they want to.

Securely or Insecurely Attached

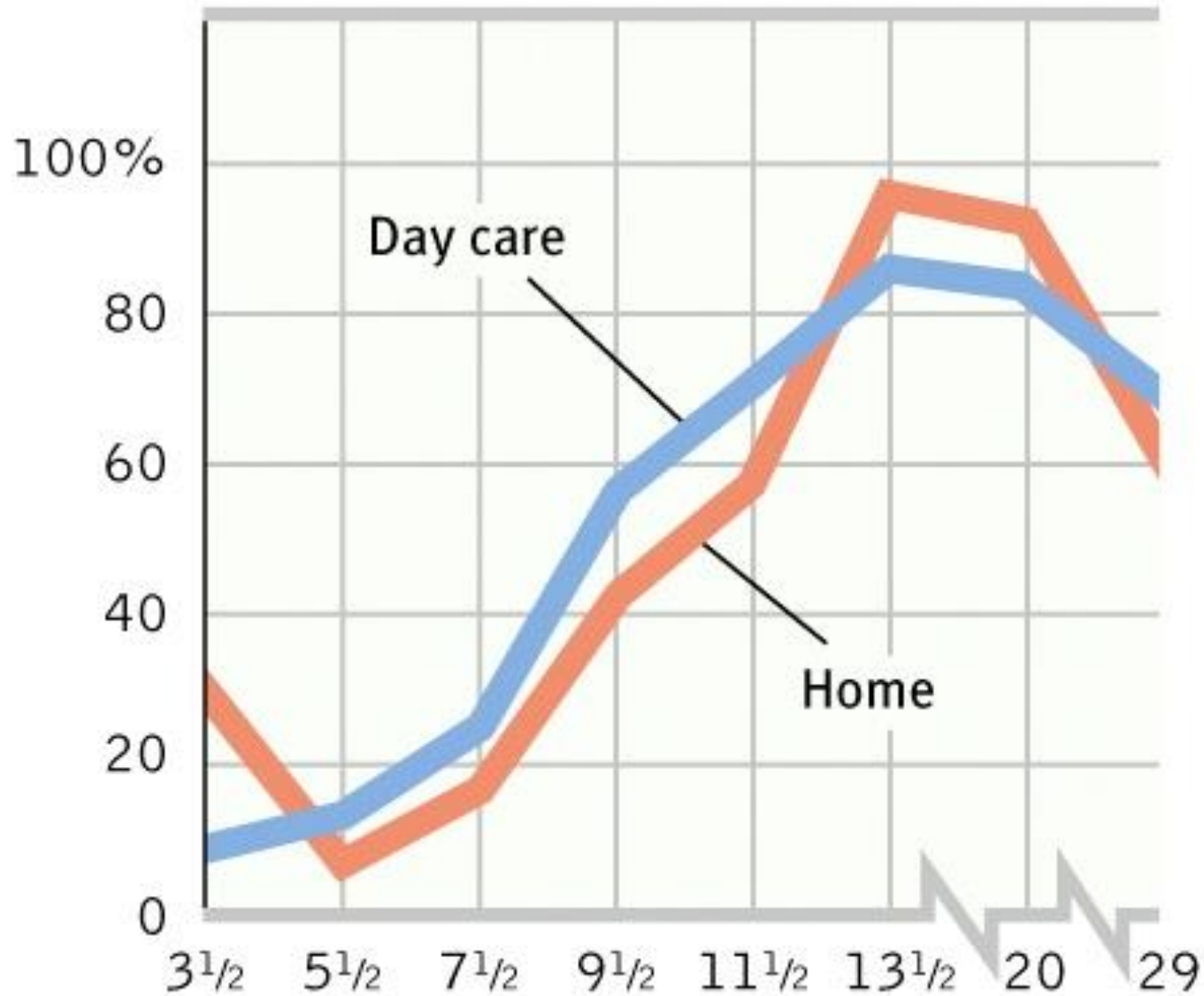
- Securely attached – children will explore their environment when primary caregiver is present
- Insecurely attached – children will appear distressed and cry when caregiver leaves. Will cling to them when they return

Attachment

- Play “Attachment” (5:03) Segment #21 from Psychology: The Human Experience

Attachment

Percentage of infants who cried when their mothers left



Harlow's Studies

- Insert “Harlow’s studies on Dependency in Monkeys” Video #12c from Worth’s Digital Media Archive for Psychology.
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM.
- NOTE: This video clip could also be used earlier in this module.

Strange-Situation Test

- Insert “Morelli’s Strange-Situation Test” Video #17 from Worth’s Digital Media Archive for Psychology.
- Instructions for importing the video file can be found in the ‘Readme’ file on the CD-ROM.

Effects of Attachment

- Secure attachment predicts social competence.
- Deprivation of attachment is linked to negative outcome.
- A responsive environment helps most infants recover from attachment disruption.

Parental Patterns

- Baumrind's three main parenting styles
 - Authoritarian parenting
 - Permissive parenting
 - Authoritative parenting

Authoritarian Parenting

- Low in warmth
- Discipline is strict and sometimes physical.
- Communication high from parent to child and low from child to parent
- Maturity expectations are high.

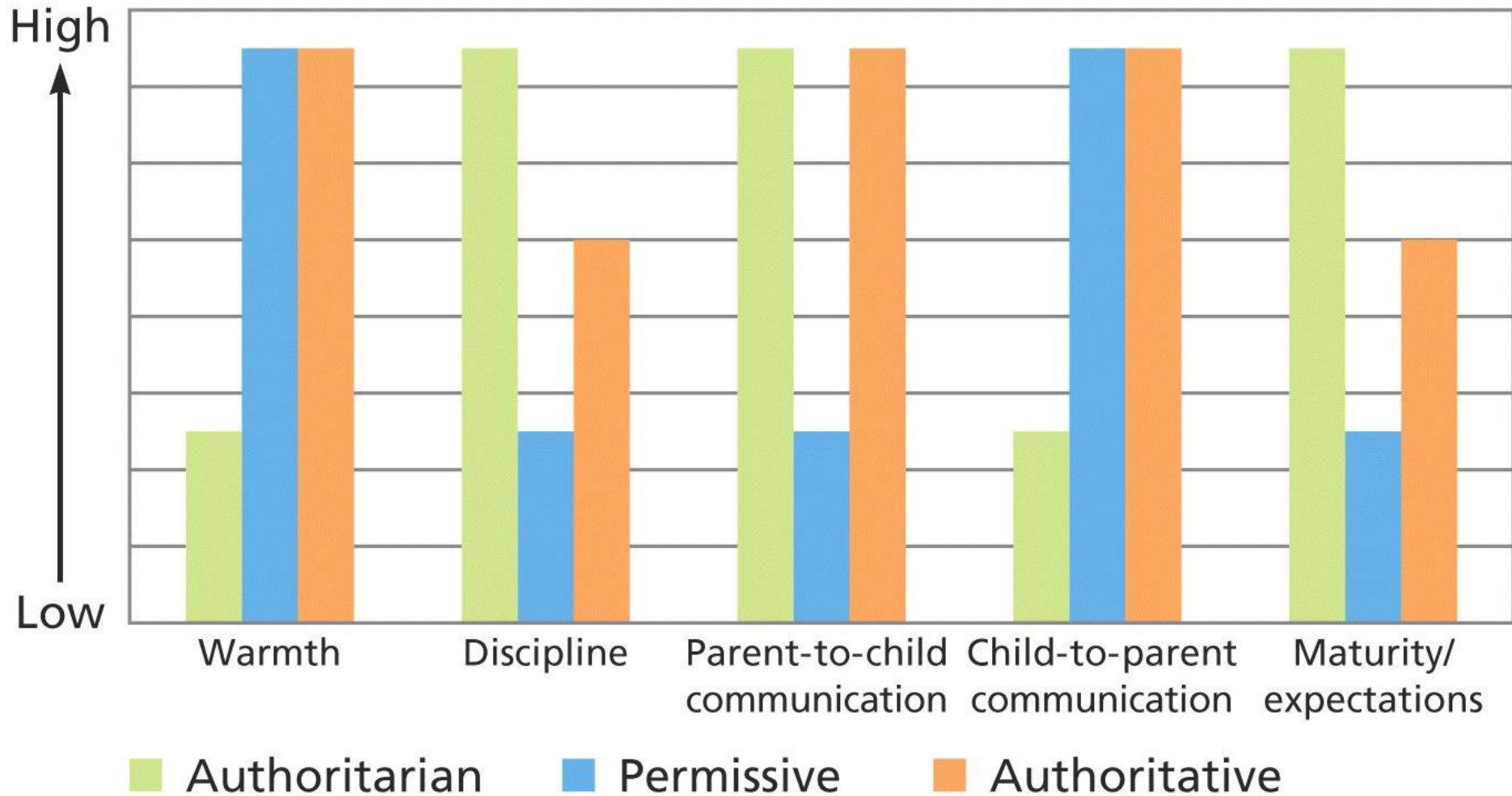
Permissive Parenting

- High in warmth but rarely discipline
- Communication is low from parent to child but high from child to parent.
- Expectations of maturity are low.

Authoritative Parenting

- High in warmth with moderate discipline
- High in communication and negotiating
- Parents set and explain rules.
- Maturity expectations are moderate.

Parenting Styles



Parental Influences

- Play “Gender Development: Social Influences” (4:02) Module #3 from The Brain: Teaching Modules (2nd edition)

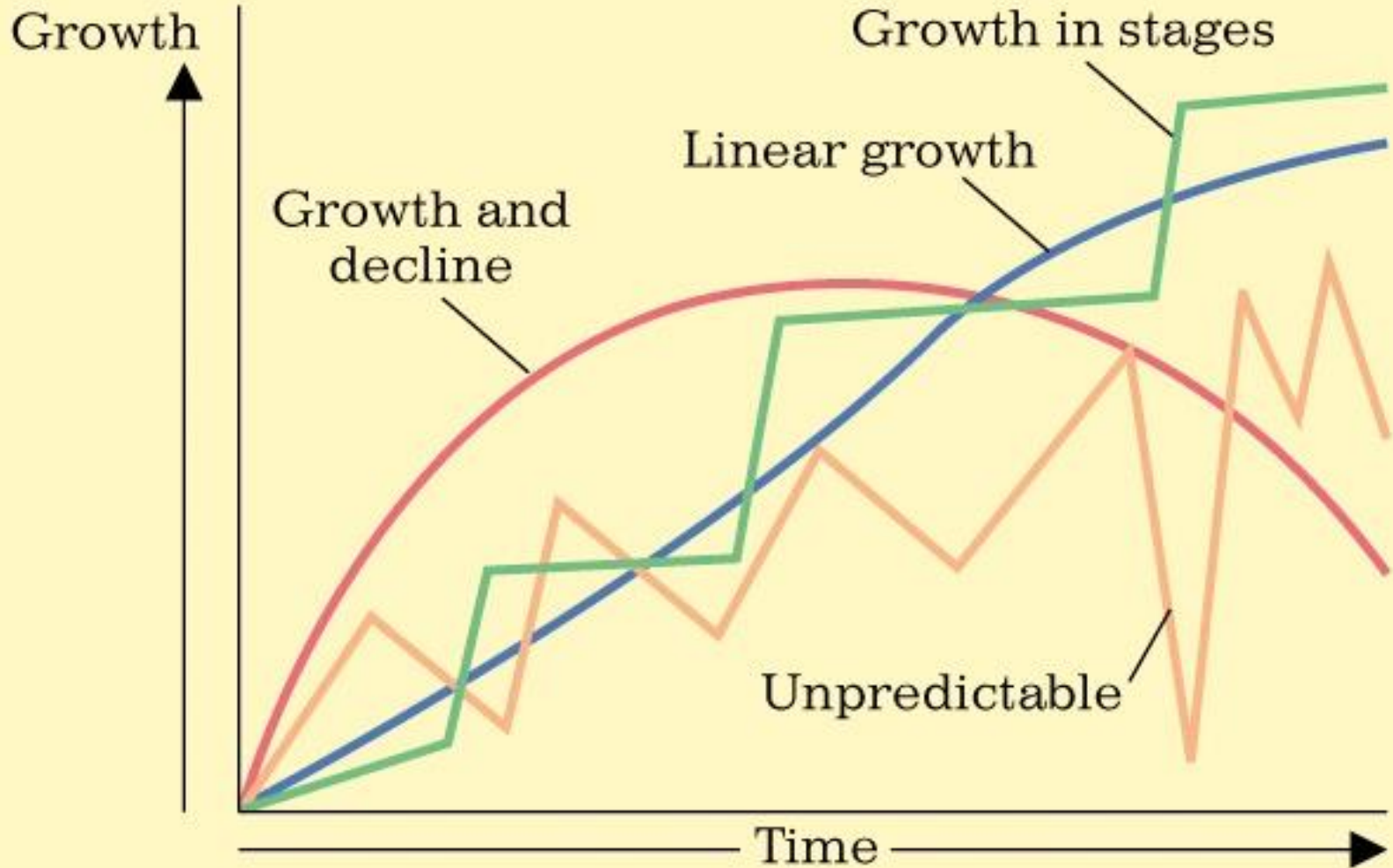
Module 4: Prenatal and Childhood Development

Three Key Developmental Issues

Continuity and Stages

- How much of behavior is continuous and how much follows a more stage like development?

Types of Growth Patterns



Stability and Change

- What developmental traits remain stable over time, and which change?

Nature and Nurture

- How much of our behavior is due to nature and how much is due to nurture?
- How do nature and nurture interact in development?

The End

Name of Concept

- Use this slide to add a concept to the presentation

Name of Concept

Use this slide to add a table, chart, clip art, picture, diagram, or video clip. Delete this box when finished