Chapter Five Study Guide

Child 210

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Sister McLaughlin

**BODY CHANGES**

Body Size:

How much does the average child weigh at birth?

7-7 1/2 pounds

At what age do children reach half their adult height?

By 2 years

Understand percentiles.

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What does 50th percentile mean?

50th percentile being exactly average

What does 20th percentile mean?

Means baby is smaller than most babies.

What might be the significance of a change in percentile?

It may mean the baby is not receiving enough nutrition.

**SLEEP TOPICS**

What is the significance of healthy sleep patterns in infancy?

Regular sleep correlates with: Normal brain maturation, learning, emotional regulation.

How many hours per day do newborns spend sleeping?

New babies spend about 17 hours daily sleeping

What are the basic characteristics of REM sleep?

Rapid Eye Movement sleep (REM) as stage of sleep characterized by Flickering eyes, dreaming, rapid brain waves.

What is transitional sleep?

The term for the dozing half-awake half-asleep state.

What is slow wave sleep? When does it increase?

The term for a deeper dreamless sleep state. It increases around 3-4 months.

What is co-sleeping?

Custom in which parents and children (usually infants) sleep together in the same room.

What is bed-sharing?

Sleeping in the same bed

Why can bed-sharing be harmful?

If you are on a certain drug which causes a deeper sleep you may actually overlay the a baby and suffocate them.

**BRAIN TOPICS**

What is head-sparing?

Biological mechanisms that protects brain when malnutrition affects body growth.

What does a newborn’s brain weigh compared with an adult’s?

What does a two-year old’s brain weigh compared with an adult’s?

At birth the brain is 25% of the adult brain weight, by age 2 the brain is almost 75% of the adult brain weight.

What is the main cause of the increase in weight of a child’s brain?

Increase in brain n weight is due to the proliferation of dendrites in the first year of life.

**Neuroscience vocabulary. Define the following terms:**

Neuron

Brain and nervous system cells, called neurons, are created before birth, at peak production the rate of 500,000 new cells per minute in mid-pregnancy(Brain and nervous system cells)

Axon

Fiber that extends from a neuron. Transmits electrochemical impulses to dendrites of other neurons.

Dendrite

Fiber the extends from the neuron. Receives electrochemical impulses transmitted from other neurons via their axons.

Synapse

Intersection between the axon of one neuron and the dendrites of other neurons

In the synapse, Axons and dendrites do not touch.

Neurotransmitter

Neurotransmitters carry information from one dendrite to another through the gap.

Myelin

Insulated layer that forms around the neurons, made of proteins and fatty substances.

Cortex

Outer layers of the brain. Most thinking, feeling, and sensing involve cortex. Contains all the neurons that make conscious through possible (70% of neurons are in the cortex)

Prefrontal cortex

The front part of the cortex assist in planning, self-control, and self-regulation. It is very immature in the newborn.

(Specializes in planning and impulse control)

Limbic system

Deep in the forebrain: The amygdala, Hippocampus, And Hypothalamus interact to produce emotions.

Amygdala

Almond-shaped structure that registers strong emotions, especially fear.

Hippocampus

Processor of memory, especially of location.

Hypothalamus

Produces hormones, especially cortisol that increase with stress.

Cortisol

Stress Hormone

Pituitary

Responds to signals from the hypothalamus to produce hormones.

What is transient exuberance?

A fivefold increase in dendrites in the cortex that occurs in the 24 months after birth.

Growth called transient exuberance(transient – temporary)

What is pruning?

Pruning occurs when the unused neurons and disconnected dendrites atrophy and die.

What are experience-expectant brain functions?

Experience-expectant brain functions: Require certain basic common experiences, which an infant can be expected to have in order to develop normally.

-Food, touch, light, temperature

What are experience-dependent brain functions?

Experiences-dependent brain functions: Depend on particular, specific experiences that may or may not be available.

-Classical music or bilingualism

What are the effects of lack of brain stimulation on childrens brains? (Severe Social Deprivation)

Isolation and sensory deprivation harm the developing brain, including social and emotional development.

-Implication for Caregivers: Necessary to develop a persons’ potential:

-caressing newborn

-talking to preverbal infants

-showing affection toward you baby

-experience expectant: this is the minimum bedded fir normal development.

What are the effects of stress (too much of the wrong kinds of stimulation) on childrens brains?

IF the brain produces an oversupply of cortisol in infancy and early childhood, responses to stress can be altered lifelong. The adult may be hypervigilant or emotionally flat.

What is shaken-baby syndrome?

Shaken baby syndrome is a life-threatening condition that occurs when a baby is shaken back and forth. Although it is successful in making the infant stop crying, it can cause Death to the infant. (NEVER SHAKE A BABY)

What is self-righting?

Inborn drive to remedy a developmental deficit. Toys don’t have to be expensive.

**PERCEIVING AND MOVING**

What is sensation?

Response of a sensory system to a stimulus. Eyes, Ears, Skin, Touch, Nose

Perception (from class and page 130)?

Mental processing of sensory information when the brain interprets a sensation

Cognition (from class and page 130)?

The mental action or process of acquiring knowledge and understanding through thought, experiences, and the senses.

When does the sense of hearing develop?

Develops during the last trimester.

How do newborns show us they can hear well?

They will turn toward the sounds.

What sense is least developed at birth?

Vision. Newborns are legal blind.

What is the ideal range of an infant’s vision?

Between 4-30 inches away.

What is binocular vision and when does it occur?

The ability to focus the two eyes in coordinated manner, usually develops at 2-4 months.

What are some forms of touch that are soothing to infants?

“Wrapping”, caressing, patting, massage, etc.

What are gross motor skills?

Physical abilities involving large body movements, such as walking and jumping.

Know basic gross motor milestones:

Sitting, Crawling,

When can most babies sit up unsupported?

\*By six months, can usually sit unsupported

When does crawling begin for most babies?

By five months, babies can use their arms and legs to inch forward.

\*By eight to ten months, they can usually life their midsection and crawl

When can the average baby walk independently?

\*One year(12 months)

What are fine motor skills?

Physical abilities involving small body movement, especially of hands and fingers

By what age can babies grasp things intentionally?

two months excitedly wave arms

three months: can touch precise objects

four months: can grab, but their timing is off

Six months: with concentration, can reach for, grab, and hold into an object.

What three factors determine when a baby develops various motor skills?

Muscle Strength

Brain Maturation

Practice

**SURVIVING IN GOOD HEALTH**

Breastfeeding topics:

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What is colostrum?

Thick, high-calorie fluid secreted by woman’s’ breast for first three days after birth.

What are some of the benefits of breast-feeding?

Less likely to get sick. Breast milk provides antibodies against any disease to which the mother is immune. Lower rate of asthma, reduced risk of cancer in adult hold, and its sterol.

Malnutrition topics:

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What is stunting?

The failure of children to grow to a normal height for their age due to severe and chronic malnutrition.

What is wasting?

The tendency for children to be severely underweight for their age as a result of malnutrition.

What is kwashiorkor?

Disease of chronic malnutrition during childhood. Causes a distended belly.

Which position should caregivers place sleeping babies in to reduce the risk of SIDS?

Babies should be put to sleep on their back.

Who was the scientist who developed the “back to sleep” recommendation? (From your textbook)

Susan Beal