

AGE-SPECIFIC COMPETENCY

REVIEW AND TESTING

INTRODUCTION

Knowledge of human growth and development is basic to the healthcare of individuals across the life span. For healthcare professionals to properly and appropriately care for their patients, an understanding of the different stages of development and tasks to be accomplished in each stage are necessary. The following review and testing of development and milestones throughout the life span is intended to familiarize you with and provide a **minimal** competency of growth and development for JCAHO standards. This is an annual requirement.

EIRCKSON'S DEVELOPMENTAL TASKS

According to Erickson, at each stage of development there are certain tasks that must be accomplished for the person to experience normal psychological development.

Infancy _____ (Birth to 1 Year) _____ Trust vs. Mistrust

Toddler _____ (1 – 3 Years) _____ Autonomy vs. Shame and Doubt

Preschool _____ (3-5 Years) _____ Initiative vs. Guilt

Middle Childhood _____ (6 – 12 Years) _____ Industry vs. Inferiority

Adolescence _____ (13 – 17 Years) _____ Identity vs. Role Confusion

Young Adulthood _____ (18 – 40 Years) _____ Intimacy vs. Isolation

Middle Adulthood _____ (40 – 64 Years) _____ Generativity vs. Stagnation

Late Adulthood _____ (65 Years and older) _____ Ego Integrity vs. Despair

Assessment of growth, development and maturation focuses on four major areas: physical, cognitive, social and emotional capabilities. Physical capabilities include gross and fine motor skills as well as strength, stamina, fatigue and pain. Cognitive capabilities include thought, perception, understanding and reasoning. Social capabilities are reflected by relationships established with family, friends, and others. Emotional capabilities reflect one's awareness and ability to apply feelings to people and situations.

This review will describe the major growth and development characteristics and milestones for children and adults. This is only a guide and is in no way to be used to interpret what all people are like or should be like. Remember people are individuals!

As medical professionals, we are expected to adapt our exam and assessments to the developmental level of the individual. Each section will describe various nursing considerations to keep in mind when dealing with each developmental level.

INFANT: BIRTH TO ONE YEAR

NEONATE: Birth to 1 month

Physical Development

Has Strong Reflexes:

- a. a. Automatic Grasp Reflex- Infant's fingers curve around finger placed in infant's palm/
- b. b. Sucking Reflex- Neonate sucks on object placed in mouth.
- c. c. Rooting Reflex- when cheek is brushed, neonate turns head toward stimulus and attempts to grasp with mouth.
- d. d. Moro (Startle) Reflex- Generalized Activity in response to stimulation.
- e. e. Babinski Reflex- when stroking outer sole of foot upward from heel to across ball of foot causes toes to hyperextend.

Normal Vital Signs: Pulse = 150 (+/- 20), Respirations = 35 (+/- 5).

Neonate has poor temperature regulation. Gains about 6 ounces per week. Grows approximately one inch during the first month. Fontanelles are soft and flat. Umbilical cord should dry and fall off during the first or second week of life. Is unable to support the weight of his/her head.

Psychosocial Development

Responds to environment through visual, auditory, tactile and taste senses. Is totally dependent upon caregiver. Perceives self and parent as one. Responds to human voices and faces. Cries when uncomfortable, sleepy or hungry. Soft music and bright colored mobiles provide pleasant stimulation for neonate.

Nursing Considerations

Physical assessment should include temperature, pulse (counted for one full minute), respirations (also counted for one full minute), weight, head and chest circumference, length and assessment of fontanelles. Perform the most uncomfortable or intrusive procedures last. First Hepatitis B Vaccination should be initiated by the age of two months.

Hold and cuddle during feeding. Maintain feeding schedule. Check for soiling of diapers. Always transfer neonate via crib, stretcher, or stroller. Keep warm. Place infant in supine position for sleeping ("Back to Sleep"). When keeping track of Intake and Output, weigh diapers for an accurate output. One cc of urine weighs about one gram.

Two to Three Months

Physical Development

Posterior fontanel closes around the second month. Head circumference increases by approximately 1.5 cm per month for the first six months. Startle, sucking and rooting reflexes begin to at around three months. Normally, infant should gain about one ounce during the first six months of life.

Normal vital signs: Pulse = 130 (+/- 20), Respirations = 35 (+/- 10), Blood Pressure = 80/45 (+/- 20/10)

Can strike at a toy but cannot grasp it. Able to hold head up when supported in the sitting position, but it will bob forward. Rolls over. Around the third month, will purposefully put hand into mouth. Will make crawling movements when in prone position. Can push chest up with forearms. Will visually pursue sounds by turning head.

Psychosocial Development

Laughs out loud, coos, blows bubbles and squeals. Crying becomes differentiated. Smiles at primary caregiver's face. Responds pleurably to gentle touch and motion. Enjoys simple toys, such as a rattle, music box, or brightly colored mobile.

Nursing Considerations

Physical assessment should include vital signs, weight, head and chest circumference, length, assessment of fontanel and reflexes and immunization status. DPT, Polio and Hib (H. Influenzae type B) immunizations are initiated at 2 months. Second Hepatitis B vaccination is should be administered one month after first dose was given, usually at two to three months of age. Perform most uncomfortable and intrusive procedures last.

Take precautions to prevent falls and rolling off surfaces. Keep side rails up on crib at all times. Transport using crib, stretcher, or stroller. Provide play stimulation. Hold and cuddle for feeding. "Back to Sleep."

Four to Five months

Physical Development

Holds head steady in a sitting position. Supports part of weight with legs when held in a standing position. Reaches out with hands. Brings hands together, plays with them, and puts them into mouth. Can grasp objects with both hands. Drooling begins at four months. At five months, birth weight should be doubled. Can transfer objects from one hand to the other. Rolls back to side. Can balance head well.

Normal vital signs: Pulse = 130 (+/- 20), Respirations = 35(+/- 10), Blood Pressure = 80/45 (+/- 20/10).

Psychosocial Development

Begins to discriminate family members from strangers. Laughs out loud. Initiates social play. Sleeps longer periods at night. May have one or two naps during the day. At five months, will babble vowels such as “goo”. Enjoys hearing self make vocal sounds and splashing in water. Imitates others. Searches for objects at point of disappearance.

Nursing Considerations

Physical assessment should include vital signs, weight, head and chest circumference, length, assessment of fontanel, and immunization status. The second Polio, DPT and Hib are given at four months. Perform the most uncomfortable or intrusive procedures last.

Protect from fall injury. Assess environment for safety hazards. Provide variety of small, multi-textured and colored objects that can be held, **BUT** not swallowed. Use floating toys for the bath. Mobiles are entertainment for the crib. Talk, play, smile, and laugh with infant. Hold and cuddle. May introduce solid foods. Introduce one new food at a time, allowing a week before introducing the next new food to assess for food allergies. Introduce in this order: cereals, fruits, vegetables, then meats. “Back to Sleep.”

Six to Eight Months

Physical Development

Brings objects to mouth at will. Bangs objects on table. Drops toy from hand to reach for another when it is offered. Lower incisors may begin to erupt. Upper central incisors may begin to erupt at around seven months. Drools constantly. Can sit alone. Begins to show food likes and dislikes. Can drink from a cup. Sucking and rooting reflexes disappear. At eight months, can eat finger foods, such as crackers, cookies and bread. Crawls forward and backward. Weight gain is approximately half an ounce daily from six to twelve months.

Normal vital signs: Pulse = 120 (+/- 20), Respirations = 30 (+/- 10), Blood Pressure = 90/60 (+/- 20/10)

Psychosocial Development

Begins to recognize the meaning of certain words and vocal tones. Begins to demonstrate fear of strangers. Enjoys looking at self in mirror. Imitates simple acts of others. Recognizes own name. Vocalizing “da”, “ma”, “ba”. Holds arms out when wants to be picked up.

Nursing Considerations

Use drinking cup designed not to spill (“sippy cup”) Provide sound making toys and larger toys with moving parts, such as set of measuring spoons, bowls and pots. Provide large, safe area for crawling, such as a playpen. Provide stimulation with simple games such as clapping hands, placing toy under blanket. Read, talk and sing to infant while holding. “Back to Sleep”. Third DPT and Hib immunization is at six months. Third Hepatitis B vaccination is also given four months after first dose, usually in this time frame.

Nine to Ten Months

Physical Development

Hand and eye coordination perfected. Picks up small objects with pincer grasp. Pulls self to standing position. Able to step sideways while holding on to furniture.

Normal Vital Signs: Pulse = 120 (+/- 20), Respirations = 35 (+/- 10), Blood Pressure 90/60 (+/- 20/10).

Psychosocial Development

Says first words, such as “dada” and “mama”. Waves bye-bye. Enjoys playing games like “peek-a-boo” and “pat-a-cake”. Cries when scolded. Repeats activities that attract attention.

Nursing Considerations

Remove all objects small enough to be swallowed or aspirated from play areas. Provide safe play area keeping objects above infant’s reach. Provide walker for infant to push self around in. Expect some discomfort, drooling, and low-grade fever with teething. Refrain from giving bedtime bottle that contains sugar-containing fluid. Counsel parents to minimize sweets in baby’s diet and avoid adding salt. “Back to Sleep”.

Eleven to Twelve Months

Physical Development

Holds cup alone. Scribble with crayon. Has tripled birth weight by twelfth month. Bowel movements are decreased to one or two per day. At eleven months may begin to stand alone for variable amount of time and begin to walk alone at twelve months. Cooperates with dressing. Takes toys out of box and puts them back into box. Grows about one half inch per month. Anterior fontanel closes between twelve and eighteen months. Babinski reflex disappears at twelfth month. Head and chest are equal in circumference.

Normal Vital Signs: Pulse = 120 (+/- 20), Respirations = 25 (+/- 5), Blood Pressure = 90/60 (+/- 20/20).

Psychosocial Development

Understands simple, short commands. Expresses frustration when restricted. Tantrums may begin. Enjoys simple games. Resists going to bed. Able to form two or three word sentences. Recognizes objects by name.

Nursing Considerations

Set Limits. Maintain a regular bedtime schedule that parents have established at home. Provide toys which allow placing objects into a large container and taking them out again, such as large stacking blocks. Push and pull toys encourage walking. Play simple games such as rolling balls. Provide hazard-free play area. Begin weaning from bottle.

PEDIATRIC: ONE TO TWELVE YEARS

Toddler: One to Three Years Old

Physical Development

At one and a half years old, develops sphincter control. First upper and lower molars appear around fifteen months. At age two, the toddler has about sixteen teeth. Can crawl, run, jump, step backward and sideways. Can climb stairs alone. At two and a half years old, the child's weight is approximately four times birth weight. Height increases by about four to five inches per year. Learns to ride tricycle. Indicates when diaper needs to be changed. Attempts to spoon-feed self. By age three feeds self completely.

Normal Vital signs: Pulse = 110 (+/- 20), Respirations = 25 (+/- 5), Blood Pressure = 99/60 (+/- 20/20).

Psychosocial Development

Less fearful of strangers. Hugs and kisses parents. Begins to imitate parents doing household chores. By age three, can use a noun, verb and object in a three-word sentence. Has a vocabulary of over 300 words. Knows his/her own name. Shows pride in independence. Uses "no" frequently. Tamper tantrums are less by age three. Likes to do things without help. May begin to play with genitals as a process of self-exploration. At age two, treats other children as objects and cannot share possessions. By age three, is just beginning to understand taking turns and sharing. Begins learning simple rules.

Nursing Considerations

Provide toys like stuffed animals, dolls, musical toys, picture books, stacking blocks, balls, low slide, toy telephone, hammer and pegboard, pulling and pushing toys. Begin toilet training between eighteen and twenty-four months old. Teach how to brush teeth. Encourage parents to make first visit to the dentist. Use repetition to enhance memory and understanding. Don't expect child to understand sharing. Toddlers may be examined or have procedure done while sitting in parent's lap. Safety considerations include keeping crib rails up and use of canopy cribs. Immunizations during this time period include MMR (Measles, Mumps, Rubella) at fifteen months, fourth DPT and third Polio vaccine at eighteen months. The fourth and final Hib vaccine is given between twelve and fifteen months of age. A Varicella immunization is also recommended at twelve to fifteen months of age.

Preschool: Three to Five years Old

Physical Development

Birth length doubles by age four. Nighttime bowel and bladder control should be achieved by age three or four. Performs simple self-care skills independently. Moves with speed and agility. Can lace shoes and jump rope. By age five, can use pencil and scissors well.

Normal Vital Signs: Pulse = 92 (+/- 5), Respirations = 25 (+/- 5), Blood Pressure = 99/60 (+/- 10/10).

Psychosocial Development

Can count to five. Knows primary colors. Understands concept of time in terms of morning, nights, later and so on. Believes that whatever moves is alive, such as car, hospital equipment. Thinking is concrete. Enjoys helping with simple chores around the house. Unable to comprehend the whole picture yet. Focuses on concrete details. Becomes concerned about even the smallest injury. Egocentric in thoughts and behavior. Engages in parallel play. Enjoys dolls, large puzzles, taking toys apart, finger paints, hand puppets, large crayons, play-doh, and moving toys, like pulling wagon.

Nursing Considerations

Limited ability to judge distances and own strength predisposes him/her to accidents. Preoperative teaching has little meaning, but post-operative reteaching is meaningful and helpful. Band-Aid small scratches and injection sites. Intrusive procedures, such as throat swabs, rectal temperatures, blood drawing and IV starts are distressing and should be done in a treatment room.

Preschool children are more cooperative during physical examinations when they are allowed to actively participate, such as holding the equipment, examining you as you examine them. Provide simple explanations about the procedure.

Fifth DTP, fourth Polio and second MMR are given prior to entry into school.

Middle Childhood: Six to Twelve Years

Physical Development

Greater muscle strength and coordination is gained. The child works and plays hard but tires easily. Able to complete more complex self-care skills. Starts to lose temporary teeth; acquires first permanent teeth between six and eight years of age. Growth spurt occurs between ten and eleven years with slow increase in height and rapid increase in weight.

Normal Vital Signs: Pulse = 80 (+/ 20), Respirations = 21 (+/- 5), Blood Pressure = 103/60 (+/- 20/20).

Psychosocial Development

Six to Eight Years of Age: Understands and uses classification systems. Enjoys collecting favorite things. Learns to get along with peers. Chooses best friends, usually of same sex. Will accept responsibility for routine household tasks with occasional reminders. Likes to participate in family decision-making. Likes rough and tumble play. Insists on being first in everything. Craves attention.

Eight to Ten Years of Age: Curious about everything. Becoming peer-oriented. Begins hero worship. Ashamed of failures. Interested in schoolwork. Prefers companionship in play. May fight. Enjoys making things. Can consider alternative solutions to simple problems. Likes to belong to clubs. Fears the dark.

Ten to Eleven Years of Age: May leave clothes where they fall. Prefers showers instead of baths. Needs constant reminder of personal hygiene. Preoccupied with right and wrong. Respects parents and their role. Has short outbursts of anger.

Nursing Considerations

Six to Ten Years Old: Enjoys table games, board games, jump rope, punching bags, roller skates, musical instruments, puppets, dolls, painting, coloring, magic tricks, dancing, puzzles, records, tapes, competition games, crafts, athletic sports, collecting things.

Ten to Eleven Years Old: Enjoys parties, talking on the phone, solitary play, reading mystery and love stories, going to the movies.

School-age children often enjoy actively participating in their examination and care. Allow them choices within acceptable limits. Provide simple explanations. Remember that they are modest and proud. Respect their modesty and keep them covered and screened when possible. Do not embarrass them – especially in front of other children. School-aged children are well coordinated and more safety-conscious. Usually may ambulate freely. Keep bed in low position and side rails down during day unless otherwise ordered.

ADOLESCENCE: THIRTEEN TO SEVENTEEN YEARS

Physical Development

A growth spurt takes place between ten and sixteen years old. Girls retain more subcutaneous fat than boys do. Muscle development is greater in boys than in girls.

In females, breast development begins followed by the growth of pubic hair and axillary hair. The average onset of menarche is thirteen. Acne vulgaris may occur due to increased secretion of androgens.

In males, pubic hair growth occurs around age thirteen. The penis, scrotum, and testes become larger. The voice begins to deepen as the larynx and vocal cords increase in size and strength.

Normal Vital Signs: Pulse = 80 (+/- 20), Respirations = 20 (+/- 4), Blood Pressure = 120/78 (+/- 20/10).

Psychosocial Development

May have employment outside the home. Becomes independent and self-directed in schedules and homework. Begins to explore career options. Searches for new beliefs, resolves inconsistencies of old beliefs and begins to form a personal philosophy of life. Frequent mood swings. Sexual curiosity and fantasy are at a peak. Dating may be a major activity. May be sexually active. Engages in organized competitive sports. Uses slang within and outside peer group. Peer-oriented. Begins to sever ties with parents. Has fewer but closer friends. Enjoys shopping, driving cars, riding motorcycles, reading books, and magazines, "hanging out" with peers. Meal skipping is common. Snacking becomes a part of eating pattern. Fast-food consumption is popular. May experiment with smoking, alcohol, and drugs.

Nursing Considerations

Adolescents consider themselves adults. Physical assessments are the same as for an adult. Adolescents may become extremely self-conscious and embarrassed. Provide privacy. Drape parts not being examined. Adolescents need adequate explanations. Allow involvement in decisions about care. Teach adolescent girls about self-breast examination.

ADULT: EIGHTEEN TO SIXTY- FOUR YEARS

Young Adulthood: 18 to 40 Years

Physical Development

Has achieved full physical maturity by age 20.

Psychosocial Development

Interests broaden into community and world affairs. Chooses, prepares for and practices a career. Becomes independent of parents. Adjusts to marriage or other intimate love relationship. Childbearing and child rearing are major concerns of those who have children. Is continually adjusting to stress and satisfaction of work, spouse, parents, and children. Establishes a personal set of values and formulates a meaningful philosophy of life. Need for ability to cope with change. Period of reaching psychosocial maturity.

Understanding level of maturity will enhance appropriate plan of care. Consider the following criteria:

1. 1. Determination of independence
2. 2. Ability to apply knowledge and experience.
3. 3. Ability to communicate experiences to others.
4. 4. Sensitivity to others.
5. 5. Ability to deal constructively with frustration.
6. 6. Ability to maintain self-control.
7. 7. Willingness to assume responsibility.

Nursing Considerations

Hospitalization may pose a serious stress on the family, especially if the ill person provides the major source of income for the family. Illness of a family member necessitates role changes at home, which may also be an additional stressor. Involve in planning own care. Keep informed of treatment plan along with reason for interventions.

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Middle Adulthood: 40 to 64 Years

Physical Development

A decrease in bone density and mass causes a decrease in height as the individual gets older. Muscle tone decreases, causing the person to appear “flabbier”. Visual acuity often diminishes, necessitating eyeglasses. Adjustment to menopause.

Psychosocial Development

Learns and adjusts to role as grandparents. Maintains contact with extended family. Reaches and maintains a satisfactory performance in career. Develops adult leisure time activities. Readies self both financially and psychologically for retirement. First awareness that one is becoming “old”.

Nursing Considerations

Same as for Young Adulthood.

GERIATRIC: 65 YEARS AND UP

(Late Adulthood)

Physical Development

Vulnerability to disease increases due to general diminution of function. Ability to maintain homeostasis decreases. The rate of cellular reproduction declines.

Integumentary changes include wrinkling, sagging, growths, and discolorations, loss of hair for men and growth of hair on women's faces, drying and thinning of hair. Musculoskeletal changes include decrease in bone mass, loss of elasticity in joints, degeneration of cartilage and connective tissue and gradual decrease in muscle mass. Pulmonary alterations include decreases in breathing capacity, residual lung volume, and total lung capacity. Metabolic rate declines. Changes in digestive system include slowed peristalsis, periodontal disease (which is preventable!), and decrease in secretion of digestive juices. Cardiovascular changes include narrowing or loss of elasticity of blood vessels. Renal atrophy predisposes to urinary tract infection and diminished renal function. There is decreased hormone secretion. Sexual function declines due to tissue changes that reduce the flexibility of the vagina and the firmness of the penis.

There is LITTLE change in IQ. Skills and abilities tend to become obsolete from disuse rather than from deterioration of mental capacity. Memory losses affect more recent events, whereas events of long ago are remembered.

Psychosocial Development

Retirement introduces many changes in schedule, reduced income, and leisure time activities. There may be a change in living facilities, such as moving from a home to a congregate living facility. A warmer climate is often sought. Individual has often experienced the death of close family members or friends and may reflect on his/her own death. Often has developed close religious ties.

Nursing Considerations

Feelings of worth, pride, and usefulness need to be maintained. Suggest volunteer work to meet these goals. Suggest natural seasoning for foods such as lemon or onion as sense of taste and smell decline. Encourage intake of high fiber diet and at least two to three liters of fluid to prevent constipation. Acidic fluids will help maintain acid urine, thus reducing the risk of urinary tract infection. Yearly dental check-up should be recommended. A regular exercise program is useful, such as walking or bicycling. Protect from hazards as agility and balance decline with aging. Medications often require smaller doses due to degenerative changes in body functions.

Summary Of Personality, Cognitive, and Moral Development Theories

<u>Stage/ Age</u>	<u>Psychosexual</u> (Freud)	<u>Psychosocial</u> (Erikson)	<u>Radius of Significant Relationships</u> (Sullivan)	<u>Cognitive</u> (Piaget)	<u>Moral</u> (Kohlburg)
<u>Infancy:</u> Birth to One Year	Oral Sensory	Trust vs. Mistrust	Maternal Person	Sensorimotor	
<u>Toddlerhood:</u> 1-3 Years	Anal-Urethral	Autonomy vs. Shame and Doubt	Parental Persons	Preoperational Thought: Preconceptual Phase (2-4 years old)	Preconventional (premoral) level. Punishment and obedience orientation
<u>Early Childhood:</u> 3-6 Years	Phallic- Locomotion	Initiative vs. Guilt	Basic Family	Preoperational Thought, intuitive phase (4-7 years)	Preconventional (premoral): Naïve instrumental orientation
<u>Middle Childhood:</u> 6-12 Years	Latency	Industry vs. Inferiority	Neighborhood, school	Concrete Operations: Beginning Logic	Conventional Level: Good-Boy, Nice Girl. Law and Order
<u>Adolescence:</u> 12-19 Years	Genitality	Identity vs. Identity Confusion	Peer groups, leadership models, partners in friendship, sex, competition and cooperation	Formal Operations (11-15 years)	Post-Conventional or principled level. Social Contract orientation. Universal Ethical Orientation.
<u>Early Adulthood</u>		Intimacy and Solidarity vs. Isolation	Divided Labor and Shared Household		
<u>Young and Middle Adulthood</u>		Generativity vs. Stagnation	Mankind/ "My Kind"		
<u>Later Adulthood</u>		Ego Integrity vs. Despair			

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