

INFANCY: BIRTH TO 1 YEAR

- Development Highlights:
1. Learns to walk
 2. Learns to eat solid food
 3. Begins to talk and communicate
 4. Begins to have emotional relationships with primary care giver and siblings
 5. Develops stable sleep and feeding patterns

| PHYSICAL | MOTOR/SENSORY ADAPTION | COGNITIVE | PSYCHOSOCIAL | INTERVENTIONS | | | | | | | | | | | | |
|---|------------------------|-----------|--------------|---------------|-------|-------|--------|-------|-------|--------|-------|-------|--|--|--|--|
| <ul style="list-style-type: none"> ◆ Gains weight/height rapidly (doubles weight by 50% in 6 months) ◆ Starts as a nose breather (2-3 months) ◆ Towards the end of the first year: <ul style="list-style-type: none"> • primitive reflexes diminish • fontanel closes, anterior 12-18mos.;posterior, at 2 mos. • teething starts; 1 yr. 8 teeth • regular bladder and bowel pattern develops ◆ Temperature: axillary 97.9-98°F ◆ HR: spical 120-140 beats/min ◆ Respirations: 30-60 breaths/min ◆ BP: <table style="margin-left: 20px; border: none;"> <tr> <td style="padding-right: 20px;">WT.</td> <td style="padding-right: 20px;">Systolic</td> <td>Diastolic</td> </tr> <tr> <td>3kg</td> <td>60-80</td> <td>35-55</td> </tr> <tr> <td>2-3 kg</td> <td>50-70</td> <td>27-45</td> </tr> <tr> <td>1-2 kg</td> <td>40-60</td> <td>20-35</td> </tr> </table> | WT. | Systolic | Diastolic | 3kg | 60-80 | 35-55 | 2-3 kg | 50-70 | 27-45 | 1-2 kg | 40-60 | 20-35 | <ul style="list-style-type: none"> ◆ Responds to light and sound ◆ Towards the middle of the year progresses to raising head, turning, rolling over, and bringing hand to mouth; progresses to crawling and walking ◆ Repeats actions to fine tune learning ◆ Begins to develop a sense of object permanence ◆ Reactions move from reflexive to intentional | <ul style="list-style-type: none"> ◆ Manipulates objects in the environment ◆ Recognizes bright objects and progresses to recognizing familiar objects and persons ◆ Towards the end of the year, speaks 2 words, mimics sounds ◆ Obeys simple commands and understands meaning of several words ◆ Seeks novel experiences ◆ Learns by imitation | <ul style="list-style-type: none"> ◆ Significant persons are the parents or primary caregivers ◆ Develops a sense of trust and security if needs are met consistently and with a degree of predictability ◆ Fears unfamiliar situations ◆ Smiles, repeats actions that elicit response from others, i.e. waves goodbye, plays pat-a-cake ◆ 7-8 months: fear of strangers ◆ 9-10 months: separation anxiety | <ul style="list-style-type: none"> ◆ Involve parents in procedures ◆ Keep parent in infant's line of vision ◆ Limit the number of strangers caring for the infant ◆ Give familiar objects to the infant ◆ Cuddle and hug the infant ◆ Use distraction (pacifier, bottle) ◆ Keep crib siderails up at all times ◆ Make sure toys do not have removable parts and check for safety approval ◆ Have bulb syringe available in case there is a need for suctioning ◆ Ask parents about immunization history ◆ Encourage parents to assist in care ◆ If teaching procedures, provide opportunities for parents/caregiver to return demonstrate ◆ Allow time for parents/caregiver to ask questions ◆ Assess for and provide support in managing pain. Use oral route if possible. |
| WT. | Systolic | Diastolic | | | | | | | | | | | | | | |
| 3kg | 60-80 | 35-55 | | | | | | | | | | | | | | |
| 2-3 kg | 50-70 | 27-45 | | | | | | | | | | | | | | |
| 1-2 kg | 40-60 | 20-35 | | | | | | | | | | | | | | |

TODDLER: 1 – 3 YEARS

- Development Highlights:
1. Tolerates separation from primary care giver
 2. Gains bowel and bladder control
 3. Uses words to communicate with others
 4. Becomes less dependent on care giver

| PHYSICAL | MOTOR/SENSORY ADAPTION | COGNITIVE | PSYCHOSOCIAL | INTERVENTIONS |
|---|---|--|---|---|
| <ul style="list-style-type: none"> ◆ Learns bladder and bowel control ◆ Abdomen protrudes ◆ Decreased appetite and growth ◆ Temporary teeth erupt; all 20 deciduous teeth by 2 ½ - 3 yrs ◆ Physiologic system mature ◆ Grows 2-2 ½ inches and 4-6 lbs. yearly ◆ Elimination: 18 mos. Bowel control; 2-3 yrs. daytime bladder control ◆ Temperature = 99°F ± 1° ◆ Pulse = 105 ± 35 ◆ Respirations = 20-35/min ◆ B.P. = 80-100 mm HG systolic 60-64 mmHg diastolic | <ul style="list-style-type: none"> ◆ Responds better to visual rather than spoken cues ◆ Walks independently, progressing to running, jumping, and climbing ◆ Feeds self ◆ Loves to experiment ◆ Goal directed behavior ◆ Fully formed sense of object permanence | <ul style="list-style-type: none"> ◆ Develops concepts by use of language ◆ Sees things only from own point of view (egocentric) ◆ Able to group similar items ◆ Constructs 3-4 word sentences ◆ Has a short attention span ◆ Beginning memory ◆ Ties words to actions, can understand simple directions and requests | <ul style="list-style-type: none"> ◆ Significant persons are parents/caregivers ◆ Discovers ability to explore and manipulate environment ◆ Asserts independence (autonomy) and develops a sense of will, has temper tantrums ◆ Understands ownership (“mine”) ◆ Attached to security objects and toys ◆ Knows own gender and differences of gender ◆ Able to put toys away ◆ Plays simple games, enjoys being read to, plays alone | <ul style="list-style-type: none"> ◆ Use firm direct approach ◆ Use distraction techniques ◆ Give one direction at a time ◆ Prepare child shortly before a procedure ◆ Allow choices when possible ◆ Emphasize those aspects that require the child’s cooperation ◆ Provide favorite, age specific foods ◆ Allow for rest period and eating based on home schedule to the degree possible ◆ Skills may regress during illness/hospitalization ◆ Emphasize the importance of mother (parent) staying with child at night ◆ Follow home routine as much as possible ◆ Set limits ◆ Give permission to express feelings ◆ Maintain safety at all times |

PRE-SCHOOL: 3 – 6 YEARS

- Development Highlights:
1. Increases ability to communicate and understand others
 2. Performs self care activities
 3. Learns difference between sexes and develop sexual modesty
 4. Learns right from wrong and good from bad
 5. Learns to play with others
 6. Develops family relationships

| PHYSICAL | MOTOR/SENSORY ADAPTION | COGNITIVE | PSYCHOSOCIAL | INTERVENTIONS |
|---|---|---|---|---|
| <ul style="list-style-type: none"> ◆ Gains weight and grows in height 2 – 2 ½ inches a year ◆ Becomes thinner and taller ◆ Temperature = 98.6°F ± 1° ◆ Respirations = 30/min ± 5 ◆ Pulse = 80 – 100 beats/min ◆ B.P. = 90/60 mmHg ± 15 mmHg | <ul style="list-style-type: none"> ◆ Skips and hops ◆ Roller skates, jumps rope ◆ Dresses/undresses independently ◆ Prints first name ◆ Draws person with 6 major parts ◆ Throws and catches a ball (5 years) | <ul style="list-style-type: none"> ◆ Major cognitive skill is conversation ◆ Understands that the amount of something is the same irregardless of shape or number of pieces ◆ Able to classify objects, enjoys doing puzzles ◆ Understands numbers, can count ◆ Constructs sentences, questions things (“why”) ◆ Knows own phone number and address ◆ Attention span is short ◆ Ritualistic ◆ Magical thinking | <ul style="list-style-type: none"> ◆ Significant persons are parents, siblings, peers ◆ Increasing independence and beginning to assert self, likes to boast and tattle ◆ Masters new tasks and acquires new skills ◆ Behavior is modified by rewards and punishment ◆ Plays cooperatively, able to live by rules, capable of sharing ◆ May be physically aggressive ◆ Learns appropriate social manners ◆ 5 yr. Old: uses sentences, knows colors, numbers, alphabet | <ul style="list-style-type: none"> ◆ Explain procedures, unfamiliar objects ◆ Demonstrate use of equipment ◆ Encourage child to verbalize ◆ Use doll/puppets for explanations when performing procedures ◆ Involve the child whenever possible ◆ Maintain safety at all times ◆ Provide rest periods ◆ Assess and manage pain • Offer distractions, e.g., count to 20 • Allow to chose the site for an injection • Offer a badge of courage (stickers, etc.) ◆ Focus on one thing at a time ◆ Give permission to express feelings ◆ Praise for good behavior ◆ Limit movement restrictions |

SCHOOL AGE: 6 – 12 YEARS

- Development Highlights:
1. Learns to get along with others and develops friendships
 2. Develops morals and ethical behavior
 3. Develop good feeling and attitude about oneself
 4. Increases independence
 5. Develops and understands behaviors appropriate for one's sex
 6. Develops muscle strength, coordination and balance

| PHYSICAL | MOTOR/SENSORY ADAPTION | COGNITIVE | PSYCHOSOCIAL | INTERVENTIONS |
|--|---|--|---|---|
| <ul style="list-style-type: none"> ◆ Permanent teeth erupt ◆ Starts pubescent changes ◆ Growth is slow and regular ◆ May experience “growing” pains because of stretching of muscles with the growth of long bones ◆ Temperature = 98.6°F ± 1° ◆ Pulse = 60 - 70 beats/min ◆ Respirations = 18 - 21/min ◆ B.P. = 94 – 112 mmHG systolic and 56 – 60 mmHg diastolic | <ul style="list-style-type: none"> ◆ Uses knife, common utensils and tools ◆ Cares for pets ◆ Draws, paints ◆ Makes useful articles ◆ Assists in household chores ◆ Likes quiet as well as active games ◆ 8 years old: awkward, nervous energy | <ul style="list-style-type: none"> ◆ Capable of logical operation with concrete things ◆ Comprehends and can tell time ◆ Starts to think abstractly and to reason, can handle and classify problems, able to test hypotheses ◆ Proud of school accomplishments ◆ Enjoys reading ◆ Starts to view things from different perspectives ◆ Increased attention span and cognitive skills ◆ Functions in the present ◆ Rule bound | <ul style="list-style-type: none"> ◆ Significant persons are peers, family, teachers ◆ Prefers friends to family ◆ Works hard to be successful in what he/she does ◆ Belonging and gaining approval of peer group is important ◆ Behavior is controlled by expectations, regulations and anticipation of praise or blame ◆ Intention is considered when judging behavior ◆ Explores neighborhood ◆ Uses phone ◆ Plays games with rules | <ul style="list-style-type: none"> ◆ Explain procedures in advance using correct terminology ◆ Explain equipment ◆ Allow child to have some control ◆ Provide privacy ◆ Assess and manage pain: <ul style="list-style-type: none"> • May understand use of PCA • Parent controlled analgesia may be appropriate if unable to understand PCA • Medicate to prevent pain, e.g., around-the-clock ◆ Assess response after and prior to next dose ◆ Promote independence ◆ Continue school ◆ Clearly define and reinforce behavior limits ◆ Use visual aids; be concrete and specific ◆ Relate to child's abilities ◆ Major fear is loss of control |

ADOLESCENCE: 12 – 18 YEARS

- Development Highlights:
1. Accepts changes in body and appearance
 2. Develops appropriate relationships with others
 3. Becomes independent from parents and adults
 4. Develops morals, attitudes and values needed to function in society
 5. Accepts male or female role appropriate for one's age

| PHYSICAL | MOTOR/SENSORY ADAPTION | COGNITIVE | PSYCHOSOCIAL | INTERVENTIONS |
|---|--|--|--|---|
| <ul style="list-style-type: none"> ◆ Rapid growth of skeletal size, muscle mass, adipose tissue and skin ◆ Maturation of the reproductive system; development of primary and secondary sexual characteristics ◆ Onset of menarche in girls and nocturnal emissions in boys ◆ Vital signs approximate those of the adult | <ul style="list-style-type: none"> ◆ Awkward in gross motor activity ◆ Easily fatigued ◆ Fine motor skills are improving ◆ Early adolescence; may need more rest and sleep | <ul style="list-style-type: none"> ◆ Increased ability to use abstract thought and logic ◆ Able to handle hypothetical situations or thought ◆ Ability to use introspection ◆ Develops more internal growth of self-esteem ◆ Beginning development of occupational identity (what I want to be) | <ul style="list-style-type: none"> ◆ Interested and confused by own development ◆ Often critical of own features and concerned with physical appearance ◆ “Chum” and belonging to peer group are important and valued; may criticize parents ◆ Interested in the opposite sex; achieving female/male social role ◆ Accepts criticism or advice reluctantly ◆ Longs for independence but also desires dependence ◆ Achieves new and more mature relations ◆ Develops physical activities that are socially determined ◆ Identity is threatened by hospitalization as adolescents are concerned about bodily changes and appearance | <ul style="list-style-type: none"> ◆ Supplement explanations with rationale ◆ Encourage questions regarding fears ◆ Provide privacy ◆ Involve in planning and decision-making ◆ Allow adolescent to maintain control ◆ Provide essential teaching based on how the individual learns best ◆ Provide information on pain control methods, assessment scale, schedule for pain management, need to ask for pain medication as soon as pain begins, need to provide information on degree of pain relief, types of pain medications, and methods of pain reduction ◆ Do not talk about the individual in front of the individual ◆ Present explanations in a logical manner; use visual aids; provide other material for review |

EARLY ADULTHOOD: 19 – 40 YEARS

- Development Highlights:
1. Chooses an education and occupation
 2. Selects and learns to live with a partner
 3. Raises children

| PHYSICAL | MOTOR/SENSORY ADAPTION | COGNITIVE | PSYCHOSOCIAL | INTERVENTIONS |
|--|--|---|---|---|
| <ul style="list-style-type: none"> ◆ Growth of skeletal systems continues until age 30 ◆ Skin begins to lose moisture ◆ Muscular efficiency is at its peak between 20 – 30 years ◆ GI system decreases secretions after age 30 | <ul style="list-style-type: none"> ◆ Visual changes in accommodation and convergence ◆ Some loss in hearing, especially high tones | <ul style="list-style-type: none"> ◆ Mental abilities reach their peak during the twenties (reasoning, creative imagination, information recall and verbal skills) | <ul style="list-style-type: none"> ◆ Searching for and finding a place for self in society ◆ Initiating a career, finding a mate, developing loving relationships, marriage, establishing a family, parenting ◆ Begins to express concerns for health ◆ Achievement oriented; working up the career ladder ◆ Moves from dependency to responsibility ◆ Responsible for children and aging parents | <ul style="list-style-type: none"> ◆ Involve individual/significant other in plan of care ◆ Explore impact of hospitalization/illness to work/job, family, children ◆ Watch for body language as a cue for feelings ◆ Allow for as much decision-making as possible ◆ Assess for potential stresses related to multiple roles of the young adult ◆ Assess and manage pain based on patient needs and response <ul style="list-style-type: none"> • Use a preventative approach • Titrate to effect and monitor response • PCA ◆ Provide information on pain control methods, assessment scale, schedule for pain management, need to ask for pain medication as soon as pain begins, providing information of degree of pain relief, types of pain medications, and methods. |

MIDDLE ADULT: 40 – 65 YEARS

- Development Highlights:
1. Adjusts to physical changes
 2. Has grown children
 3. Develops leisure activities
 4. Relates to aging parents

| PHYSICAL | MOTOR/SENSORY ADAPTION | COGNITIVE | PSYCHOSOCIAL | INTERVENTIONS |
|---|--|---|---|---|
| <ul style="list-style-type: none"> ◆ Bone mass begins to decrease ◆ Loss of skeletal height; calcium loss especially after menopause ◆ Decreased muscle strength and mass if not used; endurance declines ◆ Loss of skin elasticity, dry skin, increased appearance of wrinkles ◆ Decreased renal functioning, metabolic rate, heat/cold tolerance, prone to infection ◆ Receding hair line in males, more facial hair in females | <ul style="list-style-type: none"> ◆ Slowing of reflexes ◆ Muscle activity may increase or decrease ◆ Visual changes especially farsightedness ◆ Noticeable loss of hearing and taste ◆ Muscles and joints respond more slowly ◆ Decreased balance and coordination ◆ More prolonged response to stress | <ul style="list-style-type: none"> ◆ Mood swings ◆ Decreased short term memory or recall ◆ Re-evaluation of current life style and value system ◆ Synthesis of new information is decreased ◆ Decrease in mental performance speed | <ul style="list-style-type: none"> ◆ Future oriented or self-absorbed ◆ May experience empty nest syndrome expressed positively or negatively ◆ Working way up career ladder ◆ Adjustment to changes in body image ◆ Mid-life crisis ◆ Recognition of limitations ◆ Adjustment to possibility of retirement and life-style modifications ◆ Measuring accomplishment against goals ◆ Children leave home; reestablishes as couple; grand parenthood | <ul style="list-style-type: none"> ◆ Allow choices if possible ◆ Explore relation of illness/disease to body image and career ◆ Provide decision-making opportunities related to care ◆ Encourage as much self-control as possible ◆ Provide information on pain control methods, assessment scale, schedule for pain management, need to ask for pain medication as soon as pain begins, providing information of degree of pain relief, types of pain medications, and methods ◆ Provide essential teaching based on how the individual learns best |

LATE ADULT (ELDERLY): 65 PLUS YEARS

- Development Highlights:
1. Adjusts to decreased physical strength and health
 2. Adjusts to retirement and reduced income
 3. Copes with death of spouse or friends
 4. Develops new friends and relationships
 5. Prepares for own death

| PHYSICAL | MOTOR/SENSORY ADAPTION | COGNITIVE | PSYCHOSOCIAL | INTERVENTIONS |
|--|--|---|--|---|
| <ul style="list-style-type: none"> ◆ Decreased tolerance to heat/cold ◆ Decreased peripheral circulation ◆ Declining cardiac/renal function ◆ Decreased response to stress and sensory stimuli ◆ Atrophy of reproductive organs ◆ Loss of teeth leading to changes in food intake ◆ More skeletal changes ◆ Skin becomes fragile | <ul style="list-style-type: none"> ◆ Decreased visual acuity ◆ Hearing loss ◆ Decreased sensitivity of taste buds and smell ◆ Decreased tolerance to pain ◆ Hesitant to respond; skills declining | <ul style="list-style-type: none"> ◆ Decline depends upon earlier cognitive abilities, general health and involvement in society ◆ Sharing wisdom with others ◆ Decrease in memory, slowing of mental functions ◆ Reduced speed of learning | <ul style="list-style-type: none"> ◆ Retirement and reduced income ◆ Death of spouse and friends; acceptance of death ◆ Adapting to changing of social role and functioning ◆ Developing supportive relationships ◆ Pursuing second career, interest, hobbies, community activities, leisure activities ◆ Coming to terms with accomplishments ◆ Concern for health increases | <ul style="list-style-type: none"> ◆ Explore individual's support system ◆ Explore related existing conditions ◆ Involve family with care ◆ Provide adequate nutrition ◆ Keep environment safe ◆ Turn/assist q 2 hrs ◆ Assess skin integrity frequently ◆ Monitor bowel elimination q 24 hrs ◆ Continue with pain assessment and management Narcotics with long half-life may cause problems with side effects, e.g. confusion, constipation ◆ Use adjuvant analgesics with caution, increases side effects ◆ Apply lotion to skin immediately after bathing ◆ Be aware of possible need for a warmer environment (room temperature, need for an extra blanket) |