

0 2 ??????Toddlers and Preschool Has definite likes and dislikes Growth slows and appetite diminishes Meal time can become a battle for control School age "6–12" years Usually has a good

appetite. Likes variety Still prefers plain foods TV and friends influence food choices Breast milk benefits

1– Complete diet. Sterile milk 2– Easily digested. 3– Have greater immunity. 4– Breast fed infants are less likely to have G.I disorders and food allergies Principle of child care 1. Informed consent) / Parents should be understood the purpose of medical treatment and the risk o f the treatment. / Consent should be signed by parent. (Children non–eligible.) 2. Preparation for procedure / Clean and shave skin before surgery. Administer analgesic before stressful procedure. Psychological preparation. Establish trust and provide support. / Involve the child in the performance of some procedures. o Let child to express his

feeling. 3. Preparation for surgery. 4. Bathing (never leave children alone in the bath tub). 5. Oral hygiene. 6. Skin hygiene. 7. Prevent cross infection. Wear gloves. Hand washing. Gowning. Mask. 8.

Treat fever38.5 Antipyretic, Never give aspirin to children o Remove clothes. Decrease room temperature Apply cold compresses. Tub bath 9. Assist in infant's position far medical procedure. 10. Collection of specimens. Urine specimen: / For infant use a special urine collector. Clean plastic bag that adhere to the urinary opening before using this bag, clear and dry the area. J. If a urine specimen needed to be sterile use a sterile container. 11. Blood specimen. / Venous blood sample/can be obtained by venipuncture Capillary blood sample can be obtained by finger on ear lobe stick method. o The best blood sample (Capillary) from infant is by heel–stick figure (1). Before procedure warm the heel by moist compresses for 5–10 minutes. o Then clean by alcohol o The puncture should be not deeper than 2.4mm o To avoid complication Arterial blood sample through radial, brachial, femoral artery.

Administration o f medication : Before administer check the five rights. Routes of administering medications a) Oral Easiest, less pain use a standard medicine spoon / cups or use syringes crush tablet if prescribed for child during administration place the dropper or the syringe a long the side of the infants tongue to avoid aspiration b) I.M injection Use small syringes (1ml). Small infant muscle may not tolerate more than (0.5 ml) The preferred site for infant is the vastus lateralis Using the gluteal site is recommended after a child has been walking Don't use the same site of I.vi injection c) intravenous administration Before I.V administration check site for potency . Never administer medication with blood products . Microdropper for some medication to be given in a specific time d) rectal administration

Suppositories. use gloves, lubricant, hold the buttocks for 5 minutes e) optic drops Pull the lower lid downward apply the solution to the conjunctiva but not directly to the eyeball, close the eye gently .) ear drops. for children under 3 years. the external auditory canal is straightened by pulling the pinna downward and straight back. For children over 3 years the pinna is pulled upward and back. g) nose drops. as in adults Maintain fluid balance Intake 1) IV – accurate recording 2) PO – prolonged periods of NPO require IV fluids Out put: – urine – adequate urine out put is (1 ml /kg/ hour). Evaluate, amount, color, concentration , weigh diapers before and after voiding (1g = 1ml) Maintain fluid balance : –

Measure intake and output in certain cases as major surgeries, some medications as diuretics, but, renal diseases, beat failupe, de raration sialete apeltus. – Measure and record all intake (oral, parentral) and all output (urine, stool, vomiting, drainage tube, wounds) Play therapy Play is the work of the child. 1–

Social- effective play :children take pleasure in relationship with people as adult talk, touch... 2- Sense pleasure play : light, color, taste, odor. 3- Skill play as ride bicycle. 4- Dramatic or pretended play, stories, toys, they practice new role using telephone, playing policeman ,teacher role or nurse, 5- Game : example puzzles, computer games, competitive games. Function of the play 1- Sensorimotor development: for muscle development child can explore the nature of the physical world by touching, heating, explore space, coordinate activity. 2- Intellectual activities : learn colors, shape ,size, other objects, numbers, words, solve problems. 3- Socialization: child learn to establish social contact . 4- Creativity : blocks, drawing o 5- Self awareness : explore their bodies, know their abilities . 6- Therapeutic purpose: decrease tension and stress, express emotions Criteria for judging the suitability of toys : 1- Safety 2- Compatibility : childs age, level of development, experienc 3_ Usefulness: challenge the development of the child, enhance social and personality development , increase motor and sensory skills, express emotions, implement therapeutic procedure. Toy Safety Selection Select-toys that suit the skills, abilities, and interests of children. Select toys that are safe for the specific child; look for a label that indicates the intended age- group. Toys that are safe for one age may not be safe for another. For infants, toddlers, and all children who still mouth objects, avoid toys with small parts that may pose a fatal choking or aspiration. Hazard. Toys in this category are usually labeled, "Not recommended for children under 3 years."Check for safety labels such as "flame retardant" or "flame resistant." Select toys durable enough to survive sough play, look for sturdy construction such as tightly secured eyes, nose, or any small parts. Select toys light enough that they will not cause harm if one falls on a child. Look for toys with smooth, rounded edges. Avoid toys with sharp edges that can cut or that have sharp points. Points on the inside of the toy can puncture if the toy is broken. Avoid toys with any shooting or throwing objects that can injure eyes this includes toys with which other missiles such as sticks or pebbles might be used as substitutes for the intended projectiles. Arrows and darts used by children should have blunt tips and be manufactured from resilient materials; make certain the tips are securely attached. Make certain that materials in toys are nontoxic Avoid toys that make loud noises that might be damaging to child's hearing even some speaking toys are too loud when held close to the ear. Supervision Maintain a safe play environment. Remove and discard plastic wrappings on toys immediately; they could suffocate a child. Remove large toys, bumper pads, and boxes from playpens; an adventuresome child can use such items as a means of climbing or falling out. Set "ground rules" for play Supervise young children closely during play.(warm relationship with parents. Learning skills such as toilet training and reading. Biological Growth and Physical Development External proportions Growth of different tissues and organ systems produce changes in body proportions During fetal development the head is the faster growing body head constitutes 50% of total body length during infancy the legs are the most rapidly growing part during childhood; i n adolescence the trunk elongates. in the newborn infant the lower limbs are one third the total length but only 15% of the total body weight; in the adult the lower limbs constitute one half of the total body height and 30% or more of the total body weight. Biologic determinants of G&D. 1- Height: occurs as a result of)skeletal growth growth in height stops when)maturation of the Skeleton is complete 2- Weight the average.Development: It is an increase in the complexity of function and skills progression and it is the behavioral aspect of the growth Health Assessment Of Growth And

Development Of Children Patterns of growth and development: 1-Directional trends later – Cephalocaudal: from head to feet ,the head develops first whereas the feet develops Example: infants control head before they control the trunk and extremities. Table (1) Caloric requirements Age Daily High risk neonate requirements 120–150 cal/kg Normal neonate 100–120 cal/kg 1–2 year 90–100 cal/kg 2–6 years 80–90 cal/kg 7–9 years 70–80 cal/kg 10–12 years 50–60 cal/kg Nutrition considerations Newborn infants Initially infants are usually breast-fed many mothers begin early supplement with formula, Infants should remain on breastfeeding or formula until one year of age. There is a fixed, order to development it does not progress at the same rate pace. (There is periods of accelerated growth and periods of decelerated growth) hiddle chi chood and marked y incrdases al the beginning ol adolescence ,and hecreases in early adulthood. 5- Lymphoid tissues: lymphoid tissues contained in the lymph nodes, thymus, spleen, tonsils, adenoids and blood lymphocytes) o Small in size o Well developed at birth o Increase rapidly to reach adults by 6 years of age and continue to grow. Example: Infant shoulder control precedes the hands ,the whole hand is used as a unit before the fingers – Differentiation: development from simple to complex, from general to specific Example: baby uses palmer grasp(grasp object by hand)before use of pincer grasp(thumb and finger) 2-Sequential trends – Growth and development passing through sequence stages – Example: children crawl before they creep, creep before they stand and stand before they walk. The slow-to-warm-up child: react negatively and with mild intensity to new stimuli, adapt slowly, quite inactive and moodily, Development During Infancy One month – Weight gain 150–210 gm/week for first 6 months. 3- Bone age: both bone age and dentition are used as indicators of development) Bone age is determined by comparing the mineralization of ossification centers and advancing bony form to age related standards. Teach children to be aware of electrical appliances and even electrically operated play things; often children are unfamiliar with the hazards of electricity in association with water. Psychological development may influenced by primary socialization occurs during the first year when the infant makes social attachments and trust in the world. 4- Neurologic maturation (nervous system grows more rapidly after birth than before birth) It is believed that no new nerve cells appear after the sixth month of fetal life (Neurophysiologic changes provide the foundation for language, learning, and behavioral development). M e t a b o l i s m : the BMR highest in the newborn infant, the proportion decreases progressively to maturity. The basal energy requirement of infants is about 108 kcal / kg and decrease s to 40 to 45 kcal / kg at maturity. Temperature – Thermoregulation is one of the most important adaptation responses of the infant during the transition from intrauterine to extra uterine life. The difficult child: highly active, irritable and irregular in their habits, negative withdrawal responses, adapt slowly to new situations., intense mood, frequent period of crying, 3. Immunization of children against communicable diseases Primary Nursing Care of Children Growth and development of children – Growth: An increase in number and size of cells, results in increased size and weight of the whole or any of its parts. Bone formation begins during the second month of fetal life when the first center of ossification appears, at birth the number of centers approximately 400, about half the number at maturity. The lymphoid tissues are: At 10–12 years they reach maximum development that is twice their adult size followed by rapid decline to stable adult by the end of adolescence. I n f a n t C a r e Teething: Some discomfort is common when eruption, drooling, finger sucking, biting objects, difficult sleeping,

low-grade fever. Care Of Toddler Voluntary control of anal and urethral sphincters is achieved after the child is walking 18–24 months. Consequently a careful assessment of caloric requirements and daily caloric intake is essential. Teach children the safe use of utensils that under certain circumstances can cause injury scissors, knives, needles, heating elements, or loops, long string, or cord. Maintain toys in good repair, without signs of possible hazards such as sharp edges, splinters, weak seams, or rust. Example maturation of the central nervous system is influenced by adequacy of stimulation and nutrition. newborn weighs from) 2500 g to 3500 (g. – The birth weight doubles by 6 months of age – The birth weight triples by the end of the first year – The birth weight quadruples by the end of the second year. – Body temperature increase with active exercise, crying, emotional upset, and infection Sleep and Rest o Sleep is a protective function in all organisms, allows for repair and recovery of tissues following activity. o Newborn infants sleep most of the time, as infants grows the sleep time gradually decreases. – Weaning: Process of giving up on method of feeding for another or relinquish the breast or bottle for cup – There is no time for weaning for every child but most infant shows sign of readiness for weaning during the second half of the first year. Insist that children wear gloves and wrist, elbow, and knee pads when using skateboards or in-line skates. Maintenance Inspect old and new toys regularly for breakage, loose parts, and other potential hazards. Look for jagged or sharp edges or broken parts that might constitute a choking hazard. Approximately 2 to 2.75 kg per year until the adolescent growth spurt. The BMR determines the caloric requirement of the child. Temperament (manner of thinking, behaving of an individual) From the time of delivery, children differ in the way of response to the environment and others 1. – Height gain 2.5cm monthly for first 6 months – Head circumference 1.5cm monthly for first 6 month. – Vague, indirect regard of faces and bright objects. 6 months – Body wt doubled – Teeth eruption, 2 lower central incisors (6–8 months). – Apply anesthetic ointment & oral analgesics. – Mother (need Iron supplement when child 4–6 months), when fetal Iron stores are depleted – Mother needs Vitamin D supplement. – Employed mothers are encouraged to express milk and stored in the refrigerator & given every 3 hours. – Addition of solid food to the infants diet, because the gastrointestinal tract developed well, teeth eruption. Nutritional needs of children Nutritional Assessment Most of the pediatric patients admitted to hospital have significant health problem which influence their nutritional status. For infants avoid toys with strings or cords that are 7 inches or longer because they may cause strangulation. Insist that children wear helmets when using bicycles, skateboards, in-line skates. Examine all outdoor toys regularly for rust and weak or sharp parts that could become a danger to a child. o Check electrical cords and plugs for cracked or fraying parts. – Proximodistal or(near-to-far), midline to peripheral. Physiological changes There are some changes in the basic functions such as Metabolism, Temperature, and pattern of sleep and rest. – Infants and young children are highly susceptible to temperature fluctuations. 2 months – Close posterior fontanel – Less flexed position. 3 months – Grasp reflex absent. – Recognize family members – No head lag, hold head erect & steady – Sit erect if supported (4–5 months). – Begin to show regular pattern in bladder, bowel elimination. – Know stranger, quiet, enjoy sitting, looking and exploring 9 months – Ability to use thumb & index fingers to grasp. – Coo ..& babbles. 2.3.4.5.2