

# DOWNLOAD PDF NUTRITION IN INFANCY, CHILDHOOD, AND ADOLESCENCE

## Chapter 1 : Nutrition in Infancy, Childhood, and Adolescence Flashcards by öŸŒ Languages | Brainscape

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The DRIs may be consulted for appropriate levels of vitamins and minerals for infants. Breast milk or commercial formula should provide infants with all the vitamins and minerals needed for proper growth and development. During the third trimester of pregnancy, the fetus stores iron in its liver to be used during the postnatal period. By 4 months of age, this supply of iron is usually depleted. The iron in breast milk, although lower in absolute amounts, is more bioavailable than iron from commercial formula. Many breastfed infants do not need to be supplemented with iron. However, their iron levels should be assessed periodically. Infants who consume commercial formula should use the iron-fortified variety to prevent iron deficiency anemia. Humans are able to manufacture vitamin D through exposure to the sun; many young infants may not receive enough sun exposure for adequate synthesis. Breast milk contains vitamin D, but it may not be present in levels sufficient to prevent vitamin D-related rickets. There are several documented cases of vitamin D-related rickets, particularly among fully breastfed infants who receive little or no sunlight exposure. Therefore it is recommended that all breastfed infants receive a daily oral supplement of vitamin D, unless they receive substantial sunlight exposure. Vitamin D can be toxic, so the recommended dosage should not be exceeded. Because vitamin D is present in commercial infant formula, formula-fed infants need not receive a supplement. Use of milk alternatives such as rice beverage "rice milk" and soy health food beverage have also resulted in rickets. Healthcare providers need to emphasize to caregivers that although the term "milk" is used in reference to these beverages, they are not nutritionally equal to milk produced by humans or by animals. The water supply of most major cities in the United States contains fluoride as a preventive measure against tooth decay. The availability of fluoride may be particularly important for infants and young children whose teeth are developing. Routine fluoride supplementation is not recommended for infants less than 6 months of age. Older infants may need to receive fluoride if their local water supply is not fluoridated, but an assessment of total exposure to fluoride via water, or juice prepared from local water source should be made before systemic fluoride is prescribed. For example, many rural families who rely on well water should have water supplies assessed for fluoride content. Excess fluoride can result in fluorosis, or mottling of tooth enamel; consequently the dosage should be followed precisely. Newborns are vulnerable to vitamin deficiency and thus hemorrhaging in part because they lack intestinal bacteria to synthesize the vitamin. As a preventive measure, U. Food for Infants The ideal food for the first 4 to 6 months of life is exclusive use of breast milk. As mentioned previously, breast milk has the correct balance of all the essential nutrients as well as immunologic factors that protect the infant from acute and chronic disease. The breast should be offered at least 10 to 12 times per 24 hours in the first several weeks. As the infant develops a stronger suck, more milk will be extracted with each nursing session and the frequency of feeding may decline. Although there is no specified time the infant should stay on the breast, between 10 to 15 minutes per breast offering both breasts per session is a good recommendation. It is important to realize this is a general guideline because all infants have different nursing styles. It may in fact be more appropriate to watch the infant "not the clock" in an effort to allow the infant to dictate when satiety is reached. The Teaching Tool box offers some suggestions to facilitate successful breastfeeding. In addition, a number of specialty formulas, such as protein hydrolysate formulas, are available for infants with medical problems. The parents should consult their primary healthcare provider or nutrition care specialist to identify the most appropriate formula for their infant. Formulas are either ready-to-feed, where no mixing is required, or are a powder or liquid concentrate to be mixed with water. To reduce the chance of lead leaching into water, tap water should be run for 2 minutes after it has been standing in the pipes and only cold water should be used for formula preparation. The formula should be mixed exactly as stated on the package, unless otherwise directed by a primary healthcare provider. Adding

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insufficient water can result in a high renal solute load, placing strain on the immature infant kidneys; overdiluting will precipitate undernutrition. For parents or caregivers who may be non-English speaking or have low literacy skills, pictorial mixing instructions may be useful. Alternatively, asking the caregiver to demonstrate appropriate formula mixing may be suitable. Formula should never be heated in a microwave oven because microwaves heat food unevenly. Contents of a bottle appearing to be cool on testing may actually have portions that could scald an infant. All unused formula at the end of a feeding should be discarded if not used within 2 hours because of contamination by saliva enzymes and bacteria. Homeprepared formulas made from evaporated milk, popular in some cultures, are likely to be low in iron, vitamin C, and other essential nutrients and should be avoided. These higher levels of solutes may lead to dehydration caused by increased urine volume to reduce solute levels in the body. Reduced fat and nonfat milk is not recommended until age 2. Introduction of Solid Foods. Infants who are introduced to solid foods before this time may be prone to excessive caloric intake, food allergies, and GI upset. Many parents and even some healthcare professionals believe offering an infant cereal in the evening will promote sleeping through the night. This belief, however, is not supported by research. How to Introduce Solid Foods. The infant should be able to sit with some support; move the jaw, lips, and tongue independently; be able to roll the tongue to the back of the mouth to facilitate a food bolus entering the esophagus; and show interest in what the rest of the family is eating. Likewise, parents should become familiar with satiety cues so as not to overfeed the infant. To indicate fullness the infant may turn her head to the side, refuse to open her mouth, or grimace when the spoon comes close to her mouth. The caregiver should respect these cues. The infant should never be force-fed. If the infant is overtired or is not interested in food, she ought to be removed from the high chair and the foods offered again later. When an infant reaches the age of 9 to 12 months, he may enjoy self-feeding. Although this may be a messy process, caregivers should encourage the development of these skills through food exploration. The second half of the first year of life should be thought of as a transitional period; breast milk or formula is still the primary food, and the solid foods are complementary. Solid foods should be introduced gradually and one at a time with a 4- to 5-day interval between new foods. This timing is crucial because if the infant has any type of allergic reaction such as GI upset, upper respiratory distress, or skin reactions e. Families with a documented history of allergies should delay introduction of solid foods until the infant is about 6 months old. If solid foods are introduced too early, the large protein molecules of the offending food may cross the intestinal barrier and elicit an immunologic response in the infant. As the gut matures, it is less likely to allow large unhydrolysed proteins to cross the mucosa. Solid foods offered to the infant need not be commercial. Home-prepared foods are a good, practical alternative. There should be strict attention to sanitary food preparation procedures. Although infants should not be offered excessive sweets, naturally sweet fruits such as peaches offer them a taste satisfaction. A variety of textures, colors, and tastes is important for infants, whether they receive home prepared or commercial infant foods. Beverages during the First Year of Life. Fruit juice, particularly apple juice, is offered to many infants. Fruit juice can make an important contribution to the diet as a source of vitamin C, water, and possibly calcium. Its use, though, may need to be monitored. Excess fruit juice greater than 12 fluid ounces per day may lead to diarrhea from carbohydrate malabsorption, growth failure, or, in some children, obesity caused by excess calories. All fruit juice given to infants and children should be pasteurized. Special Nutritional Needs The nutrition requirements of children with congenital or acquired health problems deserve special attention. These infants often have increased nutrient requirements, increased losses, or malabsorption. Significant drug-nutrient interaction often takes place as well. In all of these cases, a registered dietitian should be a part of the medical team. Low birth weight infants may be full term or premature but weigh grams or less at birth. As medical technology becomes increasingly sophisticated, infants are surviving at younger ages and lower weights. However, their developmental outlook may still be tenuous. Nutrition support of these infants plays a crucial role in successful long-term outcome. The major issues of concern in the premature infant are low birth weight, immature lung development, poor immune function, immature GI and neurologic function, insufficient

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production of digestive enzymes, inadequate bone mineralization, and minimal energy and mineral reserves. Many criteria influence the route of nutrient delivery, and thus each infant should receive an individualized nutrition assessment by a registered dietitian who specializes in highrisk pediatrics. Premature infants have increased needs for protein, kcalories, calcium, phosphorus, sodium, iron, zinc, vitamin E, and fluids. Although the infant may not suckle well or may tire easily at the breast, the nurse can play a key role in helping the mother pump and store her milk in the neonatal nursery. The milk may then be given by gavage even when the mother is not present. If the mother chooses not to breastfeed, a variety of specialized infant formulas are available to meet the special nutritional requirements of the infant. Recent research suggests these formulas should be fortified with long chain fatty acids to mimic what would be delivered via the placenta. Long chain fatty acids are essential for proper retinal and neurologic development. Premature and low birth weight infants require continual nutrition follow-up after discharge for at least the first year of life because they are at risk for feeding problems, developmental delays, and growth retardation. Cystic fibrosis CF is an autosomal recessive disorder and is the most common genetic disorder among Caucasian populations, affecting roughly 1 in live births. Clinical features of the disease include chronic pulmonary disease, pancreatic exocrine insufficiency, and increased sweat chloride. The nutrition considerations facing children with CF include growth failure and energy and protein malnutrition. The chronic pulmonary dysfunction leads to malnutrition caused by an increased metabolic rate, increased energy requirement, and frequent use of antibiotics, which can cause anorexia. Steatorrhea, maldigestion, and malabsorption are common because of the lack of lipase secretion in the pancreas. Because of these increased needs as well as greater losses, patients are not always able to meet nutrition needs.

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## Chapter 2 : WHO | Nutrition

*Start studying Nutrition in Infancy, Childhood, and Adolescence. Learn vocabulary, terms, and more with flashcards, games, and other study tools.*

Oddy Find articles by Wendy H. Received Sep 12; Accepted Jan The use, distribution or reproduction in other forums is permitted, provided the original author s or licensor are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms. This article has been cited by other articles in PMC. In this study, we aimed to investigate the long-term associations between breastfeeding duration during infancy, diet quality as measured by a diet score at 1 year of age, and cognitive performance during adolescence. The diet score, which has seven food group components, was based on a h recall questionnaire completed by the mother at 1 year of age. A higher diet score represents a better, more nutritious eating pattern. Associations between breastfeeding duration, diet score, and cognitive performance were assessed in multivariable regression models. Higher diet scores at 1 year representing better diet quality were significantly associated with faster reaction times in cognitive performance at 17 years [Detection Task DET: Nutrition in early childhood may have a long-term association with fundamental cognitive processing speed, which is likely to be related to enhanced brain development in the first year of life. These processes are genetically programed but are also influenced by environmental factors, including nutrition 1 , 3 , 4. Breastfeeding is a nutritional factor that has been widely researched and reviewed in relation to cognitive performance in children. Early reviews have not provided compelling evidence linking breastfeeding to cognitive development 6 â€” 8. However, a recent review 9 concluded that after adjusting for confounders, which strongly influence breastfeeding including socioeconomic status and maternal education or IQ, there was a consistent positive association between breastfeeding duration and IQ with a difference between breastfed and non-breastfed children of approximately 2â€”5 points in IQ. Most of the research conducted to date on these associations has examined the effect of breastfeeding on cognitive development during childhood 6 â€” 9 , while less is known about whether positive longer-term associations between breastfeeding and cognitive capacity are present 10 , One study examined longer-term associations between breastfeeding and cognitive performance in children from 8 to 18 years of age in New Zealand. They found that a longer duration of breastfeeding categorized as: The first aim of our study was to evaluate evidence concerning the prospective association between breastfeeding duration and cognitive performance at 17 years. It is important to determine whether a longer-term association exists between diet in the early years and cognitive capacity in adolescence. This was a secondary aim of our study. While the possible connection between cognitive development and single nutrients has been widely researched in children 5 , fewer studies have undertaken a more comprehensive assessment of nutrition in early childhood and related this to cognitive capacity 12 â€” Moreover, only one study that we are aware of has explored these links in adolescence Previously in the Western Australian Pregnancy Cohort Raine Study, breastfeeding was positively associated with language development at 6 and 10 years of age 17 , 18 and those children who had a better quality diet at 1 year manifested better language and reasoning ability at 10 years In the current study, we hypothesized that longer breastfeeding duration and a better dietary score during infancy would be associated with better cognitive performance in adolescence. Details of the study are described elsewhere In brief, 2, women were initially recruited from King Edward Memorial Hospital the major tertiary maternity hospital in Perth, WA, Australia and surrounding private practices between and The initial cohort included a total of 2, babies [ Families were followed up at regular intervals at ages 1, 2, 3, 5, 10, 14, and 17 years. Predictor variables Breastfeeding Breastfeeding data were collected at 1â€”3 years of age, with data collection being retrospective in the previous year. The method used for collecting these data represents a valid and reliable estimate of breastfeeding initiation and duration The age in months at which breastfeeding was discontinued was

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recorded, giving a continuous measure of breastfeeding duration. These data were also dichotomized as: We chose to include this binary breastfeeding variable in the analysis because at the time of data collection “, the recommendation from the World Health Organization WHO was that all babies should be exclusively breastfed from 4 to 6 months. This differs from the current recommendation that all infants should be exclusively breastfed for 6 months. We did not take into account the introduction of solid foods. Diet score At 1 year of age i. Data were collected only once from each caregiver regardless of season. For our study, a team of three nutritionists categorized 2, individual foods and drinks consumed by participants into food groups. These were further categorized into 20 categories according to the Australian Guide to Healthy Eating. The diet score derived from these data include seven dietary components from 20 broad food categories [i. Each of the seven components received a score between 0 and 10 according to the number of eating occasions of each food group. Conversely, an infant who did not consume snack foods or soft drinks received the highest score for that dietary component, while three or more eating occasions for either of these components received a zero score. These scores were then summed to determine an overall dietary score ranging from 0 to 70, with a higher score representing a more healthy eating pattern 19 Table S1 in Supplementary Material. This overall score was subsequently rescaled for easier interpretation from 0 to 10, with a higher score representing a healthier eating pattern. In summary, a better diet score indicates higher consumption of fruit, vegetables, wholegrain, dairy, white meat, and legumes and less consumption of red and processed meats, soft drinks, and snack food. The diet score was found to be normally distributed and correlated well with the socio-demographic characteristics of the cohort. Furthermore, in a previous study, a better early diet score was associated with an improved cognitive performance in middle childhood. Outcome variables The cognitive assessment was undertaken between and , when participants were a mean age of. Cognitive performance was measured by a computerized cognitive battery developed by CogState. CogState is a valid, reliable, and sensitive test designed to assess neurocognitive functioning across the lifespan 29 , CogState is suitable for different cultures and requires only minimal language skills. In our study, four tasks were chosen from the CogState battery summarized in Table S2 in Supplementary Material , from which four main outcome variables were analyzed. The Detection Task DET was the least complex task in the test battery; a playing card was presented on the screen and participants were required to indicate by pressing a key as quickly as they could as soon as the card turned over. This task measures basic psychomotor speed. The principal outcome variable was reaction time. This task assesses psychomotor speed and visual attention. The principal outcome measure was reaction time. In the One Card Learning Task OCL , participants were required to indicate by pressing a key if they had seen the card that appeared on the screen before within the same task. The task measures visual learning and memory. The principal outcome variable was the proportion of correct responses. This task evaluates visual and spatial learning and memory. The principal outcome measure was the total number of errors made. Confounding factors and covariates Potential confounding factors included in the regression models were as follows: Gender was also included in the regression models. Maternal data were collected during pregnancy. Maternal age was classified as a continuous variable. Maternal education was categorized as follows: Family data were collected at the 1-year follow-up between and. Family income was coded into five categories: The presence of the biological father within the family was categorized as: This procedure was followed as per CogState guidelines. Integrity check criteria were as follows: The distributions of the total error rate for the CPAL task were positively skewed; therefore, a log10 transformation was applied to the data to achieve normality. The reaction time scores for the DET and IDN were also log10 transformed and the square root of the proportion of correct responses for the OCL task was arcsine transformed. These standard procedures with respect to the cognitive data were undertaken by CogState Ltd. We analyzed the data in three steps. Group comparisons, using Pearson chi-square tests for categorical variables and independent sample t-tests for continuous variables, were initially undertaken to compare characteristics of participants who did or did not complete the CogState cognitive battery. Means of outcome variables were compared between breastfeeding categories, using one-way ANOVAs, and

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correlations were computed between diet scores and the outcome variables. These analyses were performed on each cognitive outcome separately, adjusting for relevant confounders and covariates including gender, maternal age, maternal education, family income, and presence of the biological father in the family.

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## Chapter 3 : Child and adolescent nutrition: (EUFIC)

*Nutrition During Infancy: Introduction The first year of life is a time of rapid growth and development. Breast milk or iron-fortified formula is the primary food the first year.*

We take a much broader view by assessing the socio-cultural conditions that are too often overlooked, but essential to sustain improved nutritional outcomes. Training In Bangladesh , Ghana and Senegal , SPRING trained agriculture extension workers to support rural women to improve their agricultural skills to grow and raise nutrient-rich food for a diverse diet while also becoming more economically independent by getting their quality products to markets. SPRING conducted barrier analysis on acceptability of growing sweet potatoes and cowpeas in the off season in Guinea to increase their availability. We also conducted rapid qualitative assessment of barrier and enablers to consumption of Vitamin A-rich sweet potato leaves and protein-rich cowpeas by pregnant and lactating women and children months. In Sierra Leone, we conducted barrier analysis on the consumption of fish and pumpkin by pregnant and lactating women and children months. Our work led to adapted value chain analysis to identify nutrition-sensitive agricultural practices to improve access to these nutritious foods. Also in the Kyrgyz Republic, we assisted the government to develop a new clinical protocol for deworming and helminth infection prevention. Systems Strengthening In Ghana , Nigeria and Senegal , we worked with health extension workers and volunteers to empower mothers through support groups to gain knowledge and skills about nutrition and health for themselves and their children. Implementation Design Through the use of cooking demonstrations and development of cook books , we promoted diet diversity and consumption of healthy diets. To address problems of overweight and poor diets, we supported the promotion against the regular consumption of junk foods in the Kyrgyz Republic. In Ghana, we worked with voluntary savings and loans groups to promote nutrition and we established saving and loan programs within existing mother-to-mother support groups so mothers could purchase more nutritious foods for their families. The evidence is clear, especially when it comes to breastfeeding. Children months who are not breastfed are more than 14 times more likely to die than children who are exclusively breastfed. Appropriate complementary feeding of children months prevents 6 percent of child deaths in this age group and is a central theme in all of our country programs. Through the promotion of exclusive breastfeeding, dietary diversity, frequency of feeding, complementary feeding, and micronutrient fortification and supplementation, SPRING has supported countries and programs while also adding to the global body of knowledge. Training We supported the Baby Friendly Hospital Initiative in Kyrgyz Republic, enabling 17 health facilities to gain certification, with more certifications expected. In Uganda, a study is ongoing on the use of fortified flour for school meals. Policy SPRING worked with the Government of Uganda on national guidelines around food fortification of cereals and oils and anemia prevention and control. In Ghana, we worked with district health staff and individual health facilities in Northern and Upper East Regions to implement quality improvement approaches for growth monitoring promotion and to strengthen the quality of nutrition counseling and demand for services. We included supportive supervision in three country programs in Bangladesh , Ghana, and Kyrgyz Republic. Implementation Design Video was an essential social and behavior change tool used in a few countries. Demonstration videos were developed on breastfeeding techniques in Ghana, where health workers downloaded a video onto their phones to help demonstrate to mothers how to attach babies to the breast. Using the days approach, in Kyrgyz Republic, we worked with community activists to reach families in rural areas and developed an urban communications approach. In Ghana the 1, day household concept mobilized households, communities, and district and regional resources to co-locate multi-sectoral inputs, including WASH, nutrition, agriculture, to reach those most in need- day household. Adolescent Nutrition SPRING works with stakeholders to go beyond the 1,day window to reach adolescent girls whose nutritional status is too often overlooked. Although we know that early marriage and pregnancy contribute to poor adolescent nutrition, we need to know more about the needs of adolescent girls

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based on country contexts. That is why SPRING invests in research with our partners to identify the best, evidence-based strategies to improve the diet and eating practices of adolescent girls and their future families. Training SPRING developed a nutrition curriculum for partners working with orphans and other vulnerable children from 2 to 17 years of age. Research Our work with the WHO led to a systematic review on adolescent nutrition related to diet and eating practices. Participants reviewed insights and lessons-learned to help identify next steps in developing global guidance. Systems Strengthening In Uganda, to improve diet quality, fortified flours are being promoted for school meals to also increase demand while supply of fortified flours is being promoted among small maize millers. Scaling up evidence-based interventions that can address both over- and under-nutrition, especially in urban communities where SPRING has not traditionally focused. Scaling up evidence-based approaches that addresses the nutrition and health needs of adolescent girls and women, as well as infants and children. More research on dietary beliefs and practices of women and children especially of adolescent girls in LMIC and how best to reach these girls in a variety of settings both rural and urban. Using barrier analysis and implementation research to examine specific practices and beliefs that influence MIYCAN from the home and community level to the health and food system level. Incorporating more systems thinking throughout program design, implementation, and evaluation of multi-sectoral approaches to nutrition. More holistic social and behavior change strategies to target the entire family and community, not just mothers and children. More activities are especially needed for pregnant, lactating and pre-pregnant women women of reproductive age and adolescent girls to enhance their participation in economic and social life. Evaluate the impact of integrated multi-sectoral nutrition-sensitive and nutrition-specific interventions on nutritional status and on proximate and distal determinants of nutritional status of women and children. Investigate what are the key metrics for an integrated nutrition-sensitive and nutrition-specific intervention?

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## Chapter 4 : Maternal, Infant, Young Child, and Adolescent Nutrition | SPRING

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Wed, 14 Jun Maternal, Infant, Childhood, and Adolescent Nutrition No headers This chapter is the first of two that exploring nutrition through the life cycle and it looks at pregnancy through the toddler years. Topics include pregnancy, breastfeeding, introducing solid foods, and nutrition during the toddler years. It is imperative to promote and support the best practices for the well-being of infants and mothers alike. In this chapter, we will examine how dietary choicesâ€”from daily caloric intake for pregnant women to serving sizes for toddlersâ€”impact health and wellness during pregnancy and the early childhood years. The Human Life Cycle The human body constantly develops and changes throughout the human life cycle, and food provides the fuel for those changes. The major stages of the human life cycle include pregnancy, infancy, the toddler years, childhood, puberty, older adolescence, adulthood, middle age, and the senior years. Proper nutrition and exercise ensure health and wellness at each stage of the human life cycle. Pregnancy and Nutrition During pregnancy, it is imperative that a woman meet the nutritional needs both she and her unborn child require, which includes an increase in certain micronutrients, such as iron and folate. Starting BMI determines how much weight a woman needs to gain throughout her pregnancy. In an average pregnancy, a woman gains an extra 30 pounds. For the first four to six months of life, children should consume breast milk exclusively. Breast milk is ideal for infants and provides all of the nutrients they need to grow and develop. Nutrition in the Toddler Years By the toddler years, young children are able to self-feed and begin to develop eating habits and preferences. The energy requirements for ages two to three are about 1, to 1, calories per day, and in general, a toddler needs to consume about 40 calories for every inch of height. Growth slows during the toddler years, but children are more active at this stage and undergo a great deal of intellectual, emotional, and social development. Childhood and Nutrition The recommended intakes of macronutrients and micronutrients for children are higher relative to body size compared with nutrient needs during adulthood. Girls ages four to eight require 1, to 1, calories, while boys ages four to eight need 1, to 2, calories. Some food- and nutrition-related problems that can affect school-aged children include malnutrition and food allergies. Puberty and Nutrition The daily energy requirements for preteens differ according to gender, growth, and activity level. Girls ages nine to thirteen should consume 1, to 2, calories per day, and boys should consume 1, to 2, calories per day. Nutritional concerns for older children include malnutrition and obesity. Preteens should be encouraged to develop good habits, including consuming a healthy diet and regularly exercising. Older Adolescence and Nutrition Older adolescents experience numerous physical changes and must increase their energy intake to support these changes and meet nutrient needs. Nutrient needs are greater during adolescence than at any other time in the life cycle, except during pregnancy. The daily energy requirements for ages fourteen to eighteen are 1, to 2, calories for girls, and 2, to 3, calories for boys, depending on activity level. Nutritional concerns for older adolescents include eating disorders.

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## Chapter 5 : adolescence | Definition, Characteristics, & Stages | calendrierdelascience.com

*Nutrition During Infancy: (Introduction of the first year of life is a time of rapid growth and development.)  
Breast milk or iron-fortified formula is the primary food.*

Children are usually referred to a psychiatrist or therapist because of complaints or concern about their behaviour or development expressed by a parent or some other adult. Family problems, particularly difficulties in the parent-child relationship, are often an important causative factor in the symptomatic transition. Physical and psychological stereotypes that portray adolescents as rebellious, distracted, thoughtless, and daring are not without precedent. Young persons experience numerous physical and social changes, often making it difficult for them to know how to behave. During puberty young bodies grow stronger and are infused with hormones that stimulate desires appropriate to ensuring the perpetuation of the species. Ultimately acting on those desires impels individuals to pursue the tasks of earning a living and having a family. Historically, many societies instituted formal ways for older individuals to help young people take their place in the community. Initiations, vision quests, the Hindu samskara life-cycle rituals, and other ceremonies or rites of passage helped young men and women make the transition from childhood to adulthood. An outstanding feature of such coming-of-age rites was their emphasis upon instruction in proper dress, deportment, morality, and other behaviours appropriate to adult status. When a girl reaches puberty, her home is decorated with elaborate representations of the coming of age of a certain goddess who, wooed by a young god, is escorted to the temple in a rich wedding procession. Although Kumaoni teenagers may act in ways that bewilder their elders, tribal traditions ease the passage through this stage of life, helping young people to feel a connection to their community. Social constraints From a biological perspective, adolescence should be the best time of life. Most physical and mental functions, such as speed, strength, reaction time, and memory, are more fully developed during the teenage years. Also in adolescence, new, radical, and divergent ideas can have profound impacts on the imagination. Perhaps more than anything else, teenagers have a remarkable built-in resiliency, seen in their exceptional ability to overcome crises and find something positive in negative events. Studies have found that teens fully recover from bad moods in about half the time it takes adults to do so. Despite this resilience, however, for some teens these years are more stressful than rewarding in part because of the conditions and restrictions that often accompany this period in life. Restrictions on physical movement Teenagers spend countless hours doing things they would prefer not to do, whether it be working or spending hours behind school desks processing information and concepts that often come across as abstract or irrelevant. But even with access to a car, many teenagers lack appropriate places to go and rewarding activities in which to participate. Many engage with digital devices or digital media or spend time with peers in their free time. A group of teenaged students on a school bus. Ironically, the opportunities for participation in such activities have dwindled, largely because budget concerns have led schools to cut many nonacademic subjects such as physical education. In some American public schools, extracurricular activities have been greatly curtailed or no longer exist. Absence of meaningful responsibility In the 1950s the increasingly important teenage market became a driving force in popular music especially rock music, film, television, and clothing. Indeed, in those countries experiencing the post-World War II economic boom, adolescence was transformed by the emergence of teenagers as consumers with money to spend. In the contemporary developed world, adolescents face a bewildering array of consumer choices that include television programs, movies, magazines, CDs, cosmetics, computers and computer paraphernalia, clothes, athletic shoes, jewelry, and games. But while many teenagers in these relatively affluent countries have no end of material amusements and distractions, they have few meaningful responsibilities, in sharp contrast both to their counterparts in countries struggling merely to survive and to earlier generations. On a less exalted level, until a few generations ago, boys as young as age five or six were expected to work in factories or mines for 70 or more hours a week. In almost all parts of the world, girls were expected to marry and take on the responsibilities of running a household as

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early as possible. In German-born American psychoanalyst Erik H. Such a moratorium may be appropriate in a culture marked by rapid changes in vocational opportunities and lifestyles. If young people are excluded from responsibilities for too long, however, they may never properly learn how to manage their own lives or care for those who depend on them. Of course some adolescents create astonishing opportunities for themselves. William Hewlett and David Packard were teens when each began experimenting with electronic machines, and they founded the Hewlett-Packard Company when they were only in their mid 20s. As an adolescent, Microsoft Corporation cofounder Bill Gates was already formulating the business strategy that just a few years later would dumbfound the IBM colossus and make him one of the wealthiest men in the world. In order to feel alive and important, then, many teenagers express themselves in ways that seem senseless to the rest of the population. Isolation from adults In many public schools in the United States, student-teacher ratios of between roughly 12 and 25 depending on whether the school is private or public mean that the classroom atmosphere is influenced considerably more by peers than by teachers. At home teenagers spend at least several hours each day without parents or other adults present. Moreover, during the little time when adolescents are at home with their parents, the family typically watches television or the children disappear to study, play games, listen to music, or communicate with friends on computers, phones, or other devices. Estrangement from parents has clear effects. Teens who do little and spend little time with their parents are likely to be bored, uninterested, and self-centred. This vital facet in the socialization of young men has largely disappeared to the detriment of individual lives and communities. In its place, peer influence can be counterproductive by reinforcing a sense of underachievement or sanctioning deviant behaviour. Deviance With little power and little control over their lives, teens often feel that they have marginal status and therefore may be driven to seek the respect that they feel they lack. Without clear roles, adolescents may establish their own pecking order and spend their time pursuing irresponsible or deviant activities. For example, unwed teen motherhood is sometimes the result of a desire for attention, respect, and control, while most gang fights and instances of juvenile homicide occur when teenagers boys and girls alike feel that they have been slighted or offended by others. Such deviance can take many forms. Insecurity and rage often lead to vandalism, juvenile delinquency , and illegal use of drugs and alcohol. Violence and crime , of course, are as old as humankind. Contemporary juvenile violence is often driven by the boredom young people experience in a barren environment. Ironically, suburban life is meant to protect children from the dangers of the big city. Parents choose such locations in the hope that their children will grow up happy and secure. But safety and homogeneity can be quite boring. In parts of Asia and Africa , similarly, rebel groups have conscripted teens who go on to find excitement and self-respect behind machine guns. Millions of them have died prematurely as a result. Behavioral scientists have gained valuable insight into the conditions that cause teenage strife. In many cases, adults are in the position to alleviate some of the frictions that make intergenerational relations more strained than they need to be. Research indicates that those adolescents who have the opportunity to develop a relationship with an adult role model parental or otherwise are more successful than their peers in coping with the everyday stresses of life.

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## Chapter 6 : Childhood Nutrition Facts | Healthy Schools | CDC

*Nutrition education in schools is considered useful in improving knowledge about nutrition, but few studies suggest that it is effective in altering eating behaviors in the absence of environmental change. The largest study, the Child and Adolescent Trial for Cardiovascular Health (CATCH), was a multicenter intervention that included.*

Diet and exercise patterns during childhood and adolescence may spell the difference between health and risk of disease in later years. Different stages of the life cycle dictate differing nutrient needs. What are the most important nutritional considerations in the first year of life? In the first 12 months of life a baby will triple its weight and increase its length by 50 per cent. These gains in weight and height are the primary indices of nutritional status and their accurate measure at regular intervals are compared with standard growth charts. Breast-feeding on demand remains the ideal form of feeding for healthy babies who are born at term. Human milk provides optimum nutrition for growth and development. The first months are a period of very rapid growth, particularly for the brain, and the amino acid and fatty acid composition of breast milk is ideally suited to meet those needs. Breast milk also contains anti-bacterial and anti-infection agents, including immunoglobulins, which have an important role to play in boosting immune function. The colostrum, which is the fluid produced by the mammary gland during the first few days after birth, is rich in protein and has high levels of minerals and vitamins. Colostrum also contains antibodies, anti-infection agents, anti-inflammatory factors, growth factors, enzymes and hormones, which are beneficial for growth and development. Breast-feeding is strongly advocated for physiological, psychological and emotional reasons. There is no reason why breast-feeding should not continue for as long as it is nutritionally satisfactory for mother and child up to 2 years. However, with changing lifestyles and the availability of commercially prepared formulae, prepared formulae are generally safe provided that an approved infant formula is used under strict hygiene conditions. The infant formulae attempt to mimic as far as possible the composition of human milk and their use must comply with guidelines laid down by the European Union and the World Health Organization. Special attention has to be taken to sterilise all the feeding equipment to reduce the potential risk of contamination, because formula-fed babies do not have the same degree of immunological protection as breast-fed babies. When should solid foods be introduced? Introduction of complementary solid food is usually a gradual process over several weeks or months, starting at about 6 months of age. The exact timing is determined by the individual infant and mother, and reflects the fact that breast milk will suffice in those first months but will no longer be able to provide adequate nutrition by itself as the baby grows. The introduction of complementary foods by about 6 months is important to ensure normal chewing and speech development. The quality, number and variety of solid feeds can be increased gradually at a pace that will be generally dictated by the child. By exclusive breast feeding up to 4 to 6 months of age, the likelihood of allergies is lessened. Foods that are more likely to cause allergic reactions in sensitive children, such as egg whites and fish, are generally introduced after 12 months of age. With present changes in lifestyle, commercially available baby food plays a growing role in the diet of children and should therefore meet strict standards of quality and safety. The convenience and variety of foods available make them a good option to use to complement home-prepared foods. Commercial baby foods are prepared from fresh fruits, vegetables and meat with no added preservatives and must meet very strict standards. An important consideration in the first year of life is the amount of iron supplied in the diet and iron deficiency anaemia is routinely screened for during infancy. The use of an iron-fortified formula or cereal, and the provision of iron-rich foods such as pureed meats can help to prevent this. What are the most important nutritional considerations for toddlers years of age? During these years, a child begins to take on its own unique personality and to exert its independence by moving around freely and choosing foods to eat. Although the child is still growing, the rate of growth is slower than in the first 12 months of life. At the end of the third year of age, girls and boys will have achieved about 50 per cent of their adult height. During this period a child becomes able to drink through a straw and

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eat with a spoon, and frequently they become "fussy" eaters. The provision of a variety of foods will allow the child to choose from a range of foods with differing tastes, textures, and colours to help satisfy their appetite. The most important factor is to meet energy needs with a wide variety of foods. Food intake will be influenced increasingly by family eating patterns and peers. Early food experiences may have important effects on food likes and dislikes and eating patterns in later life. Meal times should not be rushed and a relaxed approach to feeding will pave the way for healthy attitudes to food. What are the most important nutritional considerations in school-aged children? From 5 years to adolescence, there is a period of slow but steady growth. Dietary intakes of some children may be less than recommended for iron, calcium, vitamins A and D and vitamin C, although in most cases deficiencies are unlikely, as long as the energy and protein intakes are adequate and a variety of foods, including fruit and vegetables, are eaten. Regular meals and healthy snacks that include carbohydrate-rich foods, fruits and vegetables, dairy products, lean meats, fish, poultry, eggs, legumes and nuts should contribute to proper growth and development without supplying excessive energy to the diet. Children need to drink plenty of fluids, especially if it is hot or they are physically active. Water is obviously a good source of liquid and supplies fluid without calories. What are the most important nutritional considerations for adolescents? The nutritional requirements of young people are influenced primarily by the spurt of growth that occurs at puberty. The peak of growth is generally between 11 and 15 years for girls and 13 and 16 years for boys. The nutrient needs of individual teenagers differ greatly, and food intake can vary enormously from day to day, so that those with deficient or excessive intakes on one day may well compensate on the next. In this period of life, several nutrients are at greater deficiency risk including iron and calcium. Iron Among adolescents, iron-deficiency anaemia is one of the most common diet-related deficiency diseases. Adolescents are particularly susceptible to iron deficiency anaemia in view of their increased blood volume and muscle mass during growth and development. This raises the need of iron for building up haemoglobin, the red pigment in blood that carries oxygen, and for the related protein myoglobin, in muscle. The increase in lean body mass LBM, composed mainly of muscle, is more important in adolescent boys than in girls. In preadolescent years, LBM is about the same for both sexes. Once adolescence starts, however, the boy undergoes a more rapid accumulation of LBM for each additional kilogram of body weight gained during growth, ending up with a final LBM maximum value double that of the girl. Other factors contributing to elevated iron needs are increased body weight and the beginning of menstruation for girls. All these factors should be taken into account when assessing iron needs in this group of age. One of the most important diet considerations during adolescence is an increase in the intake of iron-rich foods such as lean meats and fish as well as beans, dark green vegetables, nuts and iron-fortified cereals and other grains. Iron from animal foods known as haem iron is much better absorbed than iron from non-animal sources non-haem iron. Adolescents following vegetarian diets are therefore at an increased risk of iron-deficiency. However, vitamin C e. All the calcium for the growth of the skeleton must be derived from the diet. The largest gains are made in early adolescence, between about years in girls and years in boys. The achievement of peak bone mass during childhood and adolescence is crucial to reduce the risk of osteoporosis in later years. By eating several servings of dairy products, such as milk, yoghurt and cheese, the recommended calcium intake can be achieved. As well as a good dietary supply of calcium, other vitamins or minerals, like vitamin D and phosphorous, are needed for building up bones. Physical activity is also essential, particularly weight-bearing exercise, which provides the stimulus to build and retain bone in the body. Activities such as cycling, gymnastics, skating, ball games, dancing and supervised weight training for at least minutes a day, three to five times a week can help build bone mass and density. Making the right dietary and lifestyle choices early in life will help young people develop health-promoting behaviours that they can follow throughout life. Dietary habits, which affect food preferences, energy consumption and nutrient intakes, are generally developed in early childhood and particularly during adolescence. Teenagers, as well as being exposed to periodic food fads and slimming trends, tend to skip meals and develop irregular eating habits. One of the most frequently missed meals is breakfast. Studies show that breakfast plays an important role in providing needed energy and

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nutrients after an overnight fast and can aid in concentration and performance at school. Snacks generally form an integral part of meal patterns for both children and teenagers. Younger children cannot eat large quantities at one sitting and often get hungry long before the next regular mealtime. Mid-morning and mid-afternoon snacks can help to meet energy needs throughout the day. Fast-growing and active teenagers often have substantial energy and nutrition needs and the teaching of food and nutrition in the school curricula will enable children to have the knowledge to make informed choices about the foods in their regular meals and snacks.

**Energy needs** Normally, the energy requirements of adolescents tend to parallel their growth rate, and individuals meet their energy needs by means of their appetite with adequate precision. As a result, the majority of adolescents maintain energy balance, and a varied food intake provides sufficient nutrients to ensure optimal growth and development. Stress and emotional upsets however can seriously affect the energy balance in adolescents, resulting in the consumption of too little or too much food. Mild or severe infections, nervousness, menstrual, dental or skin problems acne can result in alterations of appetite, and those adolescents on marginal diets are the most vulnerable. Emotional stress is often associated with food faddism and slimming trends, both of which can lead to eating disorders such as anorexia nervosa. On the other hand, the prevalence of overweight and obesity in children and adolescents is now a major nutritional problem and the condition is likely to persist into adulthood. Developing adolescents are particularly concerned about their body image and excessive weight can have profound effects on their emotional well being as well as on their physical health. The cause of obesity is multifactorial and socio-economic, biochemical, genetic, and psychological factors all closely interact. Lack of activity plays an important role in the development, progression and perpetuation of obesity in adolescence. Surveys of young people have found that the majority is largely inactive and health professionals and governments are now encouraging higher levels of physical activity among children and adolescents. Physical inactivity does not only have a prime role in the development of overweight and obesity, but also on the development of chronic diseases such as heart disease, certain cancers, diabetes, hypertension, bowel problems and osteoporosis in later life. In addition, physical activity is related to improvements in body flexibility, balance, agility and co-ordination and strengthening of bones. The current recommendation is for children to try to be physically active for at least 60 minutes daily. To know more about physical activity, [click here](#).

**Iron status in exclusively breast-fed infants.** Department of Health and Social Security Present day practice in infant feeding: Report on Health and Social Subjects The relation of overweight to cardiovascular risk factors among children and adolescents to cardiovascular risk factors among children and adolescents: National Diet and Nutrition Survey: International Life Sciences Institute Overweight and Obesity in European Children and Adolescents. Causes and consequences-p evention and treatment. Iron deficiency in toddlers.

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## Chapter 7 : Infancy, childhood, and adolescence Flashcards by Landon Gilfillan | Brainscape

*Chapter 11 Nutrition in Infancy, Childhood, and Adolescence Chapter 11 Lesson Key Concepts Normal growth of children varies within a relatively wide range of measures.*

URL of this page: By about age 2 weeks, an infant should start to gain weight and grow quickly. During the second half of the first year of life, growth is not as rapid. Between ages 1 and 2, a toddler will gain only about 5 pounds. Weight gain will remain at about 5 pounds. Between ages 2 to 10 years, a child will grow at a steady pace. An infant needs more calories in relation to size than a preschooler or school-age child needs. Nutrient needs increase again as a child gets close to adolescence. A healthy child will follow an individual growth curve. However, the nutrient intake may be different for each child. Healthy eating habits should begin during infancy. This can help prevent diseases such as high blood pressure and obesity. A child with a poor diet may be tired and unable to learn at school. Also, poor nutrition can make the child more likely to get sick and miss school. Breakfast is very important. Children may feel tired and unmotivated if they do not eat a good breakfast. The relationship between breakfast and improved learning has been clearly shown. There are government programs in place to make sure each child has at least one healthy, balanced meal a day. This meal is usually breakfast. Programs are available in poor and underserved areas of the United States.

## Chapter 8 : Chapter Maternal, Infant, Childhood, and Adolescent Nutrition - Medicine LibreTexts

*Chapter Nutrition in Infancy, Childhood, and Adolescence Test Bank. MULTIPLE CHOICE. 1. At birth, the reflexes an infant has are a. rooting, biting, and swallowing.*

## Chapter 9 : Normal growth and development: MedlinePlus Medical Encyclopedia

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