

Pediatric Nutrition: Review Questions

Ulfat Shaikh, MD, MPH

Alicia Briggs, MD

QUESTIONS

Choose the single best answer for each question.

- 1. A 6-year-old boy is brought to your office because his mother is concerned that he is not eating enough and may need vitamins. You plot the child's growth and note that his body mass index (BMI) is at the 97th percentile for age and he is at the 50th percentile for height. Results of his physical examination are otherwise normal. Which of the following statements best reflects the appropriate management for this child?**
 - (A) No intervention is required at this time
 - (B) Subcutaneous skin fold thickness should be followed closely
 - (C) A dietary history should be elicited
 - (D) This child needs intervention only if the family history is significant for heart disease
 - (E) Laboratory tests should be performed to rule out endocrine disorders
- 2. An 8-week-old Caucasian boy is brought by his mother to your office for a routine check-up. He was delivered at 38 weeks by via uneventful vaginal delivery. His mother had an uncomplicated pregnancy with regular prenatal care and daily prenatal vitamins, which she is currently continuing. He is being exclusively breastfed, and his mother seems to have a balanced diet. Which one of the following nutritional supplements should you recommend for the baby at the present time?**
 - (A) Iron
 - (B) Vitamin D
 - (C) Vitamin C
 - (D) Fluoride
 - (E) Calcium
- 3. Breastfeeding is contraindicated in the United States if the breastfeeding mother is positive for:**
 - (A) Hepatitis B surface antigen
 - (B) Hepatitis C
 - (C) HIV
 - (D) Group B streptococcus
 - (E) Chlamydia
- 4. A 7-month-old boy who is formula-fed presents to your clinic. The parents ask you how much fluoride should be in the water he drinks. Which of the following would be your reply?**
 - (A) None
 - (B) At least 0.3 ppm
 - (C) At least 0.6 ppm
 - (D) At least 1 ppm
 - (E) At least 2 ppm

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Dr. Shaikh is an Assistant Professor of Pediatrics, University of Nevada School of Medicine, Las Vegas, NV. Dr. Briggs is a Pediatric Resident, University of Nevada School of Medicine, Las Vegas, NV.

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EXPLANATION OF ANSWERS

- 1. (C) A dietary history should be elicited.** This child is overweight. The initial steps in management include taking a detailed dietary history. In children, a dietary history is most useful for determining family eating and snacking habits, rather than for estimating caloric intake. About 1 in 4 children in the United States is overweight or at risk of being overweight, and this population is increasing.¹ Overweight in children is defined as a BMI greater than 95th percentile for age and sex, as plotted on a growth chart. A child at risk for being overweight is defined as having a BMI over the 85th percentile and less than 95th percentile for age and sex on the growth chart. BMI is calculated as weight in kilograms divided by height in meters squared. The term “overweight” is preferred in pediatrics, instead of “obese,” because the relationship between BMI and body fatness is not as strong in children as it is in adults. Measurement of subcutaneous skin fold thickness is limited by the skill of the observer. Intervention to address this child’s weight problem would be indicated even in the absence of a family history of heart disease. In the presence of normal stature, it is rare for an endocrine disorder to be the cause of obesity in a child.
- 2. (B) Vitamin D.** The American Academy of Pediatrics has recently issued a policy statement with respect to vitamin D supplementation in the United States. Vitamin D supplementation of 200 IU per day is recommended for exclusively breastfed babies (ie, those whose intake of vitamin D–fortified formula is less than 500 mL per day), regardless of ethnic status, skin color, or geographic location.² Full-term neonates have adequate iron stores and therefore do not need iron supplementation in their diet until the age of approximately 6 months. They also do not require vitamin C or calcium supplements if adequately breastfed or formula-fed. Dietary supplementation with fluoride may be considered after 6 months of age, depending on the fluoride content of the infant’s water supply.
- 3. (C) HIV.** In the United States, breastfeeding is currently contraindicated if the mother is HIV-positive to reduce the risk of postnatal transmission of the virus to the infant. Except for HIV and human

T-cell leukemia virus type 1 (HTLV-1), no other infections are an absolute contraindication to breastfeeding in the United States. There is no evidence that hepatitis B is transmitted in breast milk or by breastfeeding. In infants of mothers who are positive for hepatitis B surface antigen, the initiation of breastfeeding can begin after delivery without waiting for hepatitis B immunoglobulin or the vaccine to be given. Hepatitis B immune globulin should be given within the first 12 hours after birth, and the vaccine should be administered before discharge from the hospital.

- 4. (B) At least 0.3 ppm.** Fluoride plays a major role in the prevention of dental caries. The combination of the fluoride ion with tooth enamel increases resistance of the tooth to *Streptococcus mutans*. Fluoride supplementation is indicated in this age group if the water supply contains less than 0.3 ppm of fluoride.³ Some household water purification systems filter out fluoride; therefore, a history regarding these systems should be elicited. Fluoride is best administered at bedtime because taking the supplement with food decreases its absorption.³

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SUGGESTED READINGS

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