The Body Mass Index (BMI) measure indicates a patient is overweight with a BMI of

A. 45-59.9
B. 20.9-30.9
C. 25-29.9
D. 55-66.9

A diabetic patient wishes to discuss dietary changes. Which factors do they need to be most concerned about?

A. Salt
B. CHO
C. Potassium
D. Organics
A fast food restaurant utilizes edible products that achieve the ‘bliss point’ of texture along with desirable taste. These products are designed to have longer shelf life. Which of the following substances in these products is most likely to increase atherogenesis?

- A. Medium chain triglycerides
- B. Monosaturated fatty acids
- C. Omega-3 fatty acids
- D. Polyunsaturated fatty acids
- F. Trans fatty acids

A study is performed comparing a modern diet in developed nations to the diet of persons living 5000 years ago. It is noted that dietary patterns have changed, along with modern food processing and packaging. Which of the following patterns fits best with modern diets, compared with ancient people?

<table>
<thead>
<tr>
<th>Choice</th>
<th>Total Calories</th>
<th>Salt</th>
<th>Fiber</th>
<th>Ascorbate</th>
<th>Calcium</th>
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<tbody>
<tr>
<td>A</td>
<td>Increased</td>
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</tbody>
</table>

Which of the following would be the best recommendation for a patient who wants to lose weight and has a BMI of 30 with no associated comorbidities?

- A. Gastric Bypass Surgery
- B. Very low calorie restriction liquid diet
- C. Cauliflower, broccoli and pomegranate cleanse
- D. General calorie restriction
A 20 year old Caucasian male was confirmed to be lactose intolerant and feels symptoms even with small amounts of lactose containing foods. Which product is best for him to consume?

A. Yogurt with live and active bacterial cultures  
B. Almond milk  
C. Evaporated milk or buttermilk  
D. Frozen yogurt

The DASH Diet would support the daily intake of which of the following?

A. 3000 mg of sodium  
B. 2 servings of vegetables  
C. 3 servings of low-fat or fat-free dairy products  
D. 5 servings of nuts, seeds, and dry beans

A serving of which of the following snacks would be “best” for a patient with newly diagnosed hypertension who is committed to life-style changes?

A.  
B.  
C.  
D.  

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A 35 year old obese female who has undergone a gastric bypass surgery for weight loss presents with confusion and ataxia. Her family states she is forgetting things and getting agitated easily. What is the most likely deficiency?

A. Vitamin C  
B. Thiamine  
C. Folic Acid  
D. Zinc

A 55 yo patient on dialysis for end stage renal disease from hypertension wishes to discuss dietary restriction. He reports being told to restrict his fluid volume intake as well as his salt intake. He wishes to discuss salt substitute options. Which of the following is safest for him to use?

50-year old female with cirrhosis from fatty liver disease presents with poor wound healing, hair loss, and taste and smell changes. Which deficiency is most likely?

A. Vitamin A  
B. Vitamin B6  
C. Zinc  
D. Iodine
A 35 year old female had a recent diagnosis of a disease characterized histologically by increased intraepithelial lymphocytes with villous atrophy of the duodenal mucosa. Which of the following would you recommend she consume?

A. Barley  
B. Wheat  
C. Malt  
D. Rice

You assess a 50 year old man with short bowel syndrome due to a small bowel resection secondary to mesenteric ischemia 2 months ago. He is now dependent on TPN 5 days a week. The patient develops gradual onset of shortness of breath, 3-pillow orthopnea and paroxysmal nocturnal dyspnea with mild ankle edema. These symptoms may be a result of which of the following?

A. Copper deficiency  
B. Niacin deficiency  
C. Zinc deficiency  
D. Selenium deficiency

A 52 year-old women recently diagnosed with diabetes mellitus undergoes education about diabetes. Which of the following statements about simple and complex carbohydrates is true?

A. Simple and complex carbohydrate are the same caloric value and there is no advantage of using one over the other  
B. Simple carbs have a higher glycemic index than complex carbs and they may decrease HDL cholesterol levels  
C. Simple carbs have a higher glycemic index than complex carbs and they may increase HDL levels  
D. Simple carbs have a lower glycemic index than complex carbs and they may decrease HDL levels
A patient with widely metastatic colon cancer has a fair appetite but continues to lose weight. He has profound fatigue. Which of the following best explains his symptoms?

A. He is not eating enough high calorie foods
B. The tumors are utilizing the calories he is consuming
C. Cytokines, including TNF, are pathogenic
D. He is likely depressed

A 4-year-old girl has had a succession of respiratory infections during the past 6 months. On physical examination, the child appears irritable, lacking energy. She is 60% of ideal body weight and has marked muscle wasting. Laboratory findings include hemoglobin, 9.4 g/dL; hematocrit, 27.9%; MCV, 75 μm³; platelet count, 182,000/mm³; WBC count, 5760/mm³; serum albumin, 4.1 g/dL; total protein, 6.8 g/dL; glucose, 52 mg/dL; and creatinine, 0.2 mg/dL.

Which of the following is most likely to explain these findings?

A. Folate deficiency
B. Kwashiorkor
C. Lead poisoning
D. Marasmus
E. Bulimia

What are the abnormal lab values for the 4-year-old?

- Hemoglobin: 10.5-12.7 g/dL
- Hematocrit: 31-38%
- MCV: 70-85 μm³
- Platelets: 150,000-300,000/mm³
- WBC: 5300-11500/mm³
- Albumin: 3.4-4.2 g/dL
- Total protein: 5.4-7.5 g/dL
- Glucose: 60-105 mg/dL
- Creatinine: 0.5-1.0 mg/dL
A 5-year-old child has had recurrent upper respiratory infections for the past 2 months. The child is at the 55th percentile for height and the 38th percentile for weight. Physical examination shows generalized edema, ascites, muscle wasting, and areas of desquamating skin over the trunk and extremities. Laboratory studies are most likely to show which of the following findings?
A. Abetalipoproteinemia
B. Hypoalbuminemia
C. Hypocalcemia
D. Hyperglycemia
E. Low plasma zinc

An epidemiologic study observes increased numbers of respiratory tract infections among children living in a community in which most families are at the poverty level. The infectious agents include *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Klebsiella pneumoniae*. Most of the children have had pneumonia and rubella infection. The study documents increased rates of conjunctival xerosis, urinary tract calculi, and generalized papular dermatosis in these children as they reach adulthood. These children are most likely to have a deficiency of which of the following vitamins?
A. Vitamin C
B. Vitamin B1
C. Vitamin E
D. Vitamin A
E. Vitamin K

A 75-year-old man lives alone and eats sparingly because of his low fixed retirement income. For the past 3 weeks, he has noticed pain in his right leg. On physical examination, there is marked tenderness to palpation over the lateral aspect of the left shin, a poorly healed cut on the right hand, and a diffuse hyperkeratotic skin rash. A radiograph shows a right tibial diaphyseal subperiosteal hematoma. Laboratory studies show a hemoglobin level of 10.8 g/dL. A deficiency of which of the following nutrients is most likely to explain these findings?
A. Riboflavin
B. Folate
C. Niacin
D. Ascorbic acid
E. Vitamin A
F. Vitamin K
A 65-year-old man has had worsening problems with memory and the ability to carry out tasks of daily living over the past year. He has had watery diarrhea for the past 5 months. Physical examination shows red, scaling skin in sun-exposed areas. Deep tendon reflexes are normal, and sensation is intact. Which of the following diseases is the most likely to have?
A. Beriberi  
B. Pellagra  
C. Hypothyroidism  
D. Marasmus  
E. Cheilosis

A 48-year-old man with a long history of ethanol abuse has had increasing congestive heart failure for the past year. For the past month, he has experienced increasing confusion, disorientation, and difficulty walking. Physical examination shows nystagmus, ataxia of gait, and decreased sensation in the lower extremities. Laboratory studies show hemoglobin, 13.8 g/dL; hematocrit, 42.3%; MCV, 90 μm³; platelet count, 269,300/mm³; and WBC count 7120/mm³. A long-term dietary deficiency of which of the following nutrients is most likely to produce these findings?
A. Folate  
B. Niacin  
C. Pyridoxine  
D. Riboflavin  
E. Thiamine

A 35-year-old woman had a chronic cough for 6 months. She had a positive tuberculin skin test result. A chest radiograph showed multiple cavitary lesions in the upper lobes of the right and left lungs. She was given isoniazid, rifampin, pyrazinamide, and ethambutol therapy. Now on physical examination 8 months later, a peripheral neuropathy is observed. Administration of which of the following nutrients would most likely have prevented the neuropathy?
A. Calciferol  
B. Calcium  
C. Cobalamin  
D. Pyridoxine  
E. Riboflavin
An infant born at term has Apgar scores of 7 and 8 at 1 and 5 minutes. The infant appears healthy, but 4 days after birth, there is bleeding from the umbilical cord stump, and ecchymoses are observed over the buttocks. Seizures soon develop.

Which of the following nutrients is most likely deficient in this infant?
A. Folic acid
B. Iodine
C. Vitamin K
D. Vitamin E
E. Iron

Sir Robert Falcon Scott reaches the South Pole on January 17, 1912, barely 1 month after Roald Amundsen achieves this goal with a more experienced and prepared expeditionary party. Scott’s dejected party must now make the long trip back to their base, but they are weak and running low on supplies, and the weather is unusually cold, even for Antarctica. Finally, they can go no further because of severe storms. Months later, a rescue team finds the bodies of the men. All have a hyperkeratotic, papular rash; ecchymoses; and severe gingival swelling with hemorrhages. Which of the following was most likely a contributing cause of death in these men?
A. Beriberi
B. Kwashiorkor
C. Scurvy
D. Pellagra
E. Pernicious anemia

An 17‐year‐old pregnant woman receives no prenatal care, eats a diet containing of fast food, and does not take prenatal vitamins with iron. She feels increasingly tired and weak during the third trimester. The infant is born at 35 weeks’ gestation and is listless during the first week of life. Laboratory studies show markedly decreased serum ferritin levels in the infant and the mother.

Which of the following findings from a nutritional deficiency is most likely to be present in both the infant and the mother?
A. Dermatitis
B. Diffuse goiter
C. Microcytic anemia
D. Peripheral neuropathy
E. Skeletal deformities
An epidemiologic study evaluates the rate of dental caries and tooth abscesses among children living in communities within a metropolitan area. Investigators discover that the rate is high among children living in an upper middle class community, but low in children living in a community below the poverty level. The levels of trace elements in the water supplies for those communities are measured. A higher level of which of the following minerals in the water is most likely to be associated with a lower rate of dental decay among the children living in the poor community?

A. Copper  
B. Fluoride  
C. Iodine  
D. Selenium  
E. Zinc

A 50-year-old woman, whose mother, father, brother, and aunt all had a history of heart disease, asks her physician about ways to reduce her risk of developing coronary artery disease. The patient is 171 cm (5 ft 7 in) tall, weighs 91 kg, and has a blood pressure of 125/80 mm Hg. His blood glucose concentration is 191 mg/dL. Which of the following is the best dietary advice to give this patient?

A. Avoid adding salt to food  
B. Drink more water  
C. Increase dietary fiber  
D. Reduce intake of saturated fat  
E. Take vitamin A supplements

What other lifestyle advice would you give this patient?
A 30-year-old woman notes a family history of colon cancer. She asks her physician how best to reduce her risk of developing this type of cancer. Which of the following dietary practices should she be advised to follow each day?

A. Consume more beef
B. Drink a glass of red wine
C. Have a bowl of ice cream
D. Eat more vegetables
E. Reduce intake of chocolate