

FOOD AND NUTRITION PRACTICE TEST QUESTIONS

1. Fruits, vegetables and cereals are potent sources of:

1. Antioxidants
2. Unsaturated fat
3. Saturated fat
4. Free radicals

2. The leading source of antioxidants in the U.S. diet is:

1. Citrus fruits
2. Spinach
3. Coffee
4. Egg yolks

3. The essential fatty acids that must be derived from the diet are:

1. Stearidonic acid and eicosatetraenoic acid
2. Eicosapentaenoic acid and docosapentaenoic acid
3. Linoleic and alpha-linoleic acid
4. Gamma-linoleic acid and arachidonic acid

4. All of the following statements about omega-3 fatty acids are true except:

1. They help to maintain healthy triglyceride and high-density lipoprotein
2. They have significantly contributed to the obesity epidemic
3. They are necessary for healthy infant growth and development
4. They play an important role in the production of hormones that govern numerous metabolic and biological processes

5. All of the following may be associated with scurvy except:

1. Loss of appetite and irritability
2. Diarrhea and fever
3. Tenderness and swelling in legs
4. First symptom is altered mental status

6. The only fat-soluble antioxidant synthesized in the body is?

1. Vitamin D
2. Thiamine
3. Ascorbic acid
4. CoQ10

7. Good source of vitamin D include all except:

1. blueberries
2. Sunlight
3. Salmon, tuna sardines and mackerel
4. Fortified milk and other dairy products

8. One of the fat-soluble vitamins involved in coagulation is:

1. Vitamin K
2. Vitamin A
3. Vitamin D
4. Vitamin E

9. Products that contain live microorganisms in sufficient numbers to alter intestinal microflora and promote intestinal microbial balance are known as:

1. Antibiotics
2. Probiotics
3. Fruits and vegetables
4. Digestive enzymes

10. Nondigestible food ingredients that stimulate the growth and activity of certain bacteria in the colon are called:

1. Insoluble fiber
2. Probiotics
3. Prebiotics
4. Cellulose

11. A deficiency of thiamine (vitamin B1) in the diet causes:

1. Osteopenia
2. Beri-beri
3. Protein malnutrition
4. Scurvy

12. Symptoms of trigeminal neuralgia may include all of the following except:

1. Extreme, intermittent facial pain in the jaw or cheek
2. Tingling or numbness on one side of the face
3. Pain triggered by contact with the face or facial movements
4. Inability to swallow

13. All of the following are true about Tourette syndrome except:

1. Drug treatment completely eliminates symptoms
2. It is involuntary and may be a chronic condition
3. Symptoms are generally most severe during adolescence
4. Symptoms are generally detected in children

14. The USDA Dietary Guidelines for Americans advise:

1. Limiting carbohydrates to 10 percent of daily calories
2. Limiting total fat intake to 20 to 35 percent of calories
3. Limiting protein to 10 percent of daily calories
4. Limiting intake of fats and oils to 10 percent of daily calories

15. All of the following statements about vitamin B3 (niacin) are true except:

1. It helps to release energy in carbohydrates, fat, and protein
2. It improves blood lipid levels
3. Deficiency causes beriberi
4. It is involved in the synthesis of sex hormones

16. The average American consumes approximately how much sodium per day?

1. 2,300 mg
2. 230 mg
3. 340 mg
4. 3,400 mg

17. All of the following are potentially modifiable risk factors for osteoporosis except:

1. Anorexia nervosa
2. Chronically low intake of calcium and vitamin D
3. Chronically low intake of vitamins C and B6
4. Excessive alcohol consumption

18. Consuming fewer than 130 grams of carbohydrate per day may lead to:

1. Hypoglycemia
2. Kwashiorkor
3. Marasmus
4. Ketosis

19. Characteristics of successful dieters include all of the following except:

1. Maintaining a daily food journal
2. Counting calories
3. Adhering to a strict eating plan
4. Eliminating all carbohydrates from their diets

20. Iron supplements are frequently recommended for all of the following except:

1. Women who are pregnant
2. Infants and toddlers
3. Teenage girls
4. Post-menopausal women

Answers and Explanations

1. A

In addition to the above-mentioned foods, legumes (including broad beans, pinto beans, and soybeans) are good sources of antioxidant vitamins and a variety of phytonutrients that often act as antioxidants, protecting the cells of the body from the damaging effect of free radicals. Some of the best sources of antioxidants are berries, ginger, pomegranate, sunflower seeds, and walnuts.

2. C

Because most Americans do not consume the recommended number of servings of fruits and vegetables each day, coffee is the leading source of

antioxidants in Americans' diets. It is not because coffee is especially high in antioxidants, but because Americans drink so much of it. Their morning coffee gives Americans nearly 1,300 mg daily of antioxidants in the form of polyphenols.

3. C

Although essential fatty acids are required for human metabolism, the body does not produce linoleic acid (LA or ω -6 or omega-6) and alpha-linolenic acid (LNA or ω -3 or omega-3), and they must be derived from the diet. Also known as polyunsaturated fatty acids (PUFAs), omega-3 and omega-6 fatty acids play vital roles in brain function as well as normal growth and development.

4. B

In addition to the above-mentioned facts, omega-3 fatty acids are necessary for the structure of cell membranes, especially in the brain and retina. The cardioprotective effects of omega-3 fatty acids relate to improvements in blood pressure, cardiac function, and arterial and vascular function as well as improved lipid metabolism, antiplatelet, and anti-inflammatory effects.

5. D

Scurvy is caused by insufficient consumption of vitamin C. Although it is rare, older adults, persons who abuse alcohol, and those who eat a diet that does not contain fresh fruit and vegetables may be at risk of developing scurvy. Along with the above-mentioned symptoms, persons with scurvy may suffer bleeding gums, petechial hemorrhage of the skin and mucous membranes, bleeding in the eye, hyperkeratosis, and sicca syndrome.

6. D

Coenzyme Q10 (CoQ10) is a fat-soluble quinone, a vitamin-like compound that is vital for activities related to energy metabolism. CoQ10 is the coenzyme for at least three mitochondrial enzymes as well as enzymes in other parts of the cell and is involved in the key biochemical reactions that

produce energy in cells. It also is a free radical scavenger and is metabolized to ubiquinol, which prolongs the antioxidant effect of vitamin E. The highest amounts of it are found in the mitochondria of cells of organs with high-energy requirements such as the heart muscle, liver, kidneys, and pancreas.

7. A

Humans obtain vitamin D from two natural sources: sunlight and consumed food. Solar UVB radiation penetrates the skin and converts 7-dehydrocholesterol to previtamin D₃, which is rapidly converted to vitamin D₃. Along with the above-mentioned foods, cod liver oil is a potent source of vitamin D and some orange juice, soy, and rice beverages are fortified with vitamin D.

8. A

Vitamin K₁ is a cofactor needed for the synthesis of some of the substances that help blood to clot. In adults, low dietary intake of vitamin K may be the result of chronic illness, malnutrition, alcoholism, multiple abdominal surgeries, long-term parenteral nutrition, malabsorption, gallbladder disease, liver disease, cystic fibrosis, inflammatory bowel disease, and long-term use of drugs such as antibiotics and cholestyramine, which binds to bile acids, preventing fat-soluble vitamin absorption.

9. B

Probiotics protect against harmful bacteria in the following ways: by penetrating and binding to the surfaces of harmful organisms; by stimulating the lining of the digestive tract to prevent penetration by pathogens; and by modifying immunoregulation. Probiotics have been shown to relieve temporary abdominal bloating and to reduce intestinal gas.

10. C

Prebiotics are primarily oligosaccharides—short chains of sugar molecules that can only partially be digested. Most naturally occurring oligosaccharides are found in plants. Prebiotics are often called bifidogenic

factors because they primarily stimulate growth of bifidobacteria. Prebiotics work in concert with probiotics and have been found to produce many of the same health benefits.

11. B

Beri-beri is rarely seen in the United States because many foods are fortified with thiamine. Persons at risk of developing beri-beri include those who abuse alcohol, persons on dialysis, and those taking high doses of diuretics as well as infants breastfed by mothers who lack sufficient thiamine.

12. D

Trigeminal neuralgia is characterized by sudden onset of severe pain that lasts less than a minute. It presents most commonly in persons age 50 and older and among women. The frequency and severity of attacks recurs and remits, progressively worsening over time. While the disorder may be debilitating, it is not life threatening.

13. A

Tourette Syndrome is characterized by tics – repetitive, involuntary behaviors, vocalizations and movements such as eye blinking, grimacing and shrugging, or jerky muscle movements. Tics also may include self-harm such as repetitively punching oneself as well as coprolalia and echolalia. Persons with Tourette syndrome frequently suffer behavioral problems such as hyperactivity, impulsivity, attention disorders, and repetitive behaviors.

14. B

The USDA Dietary Guidelines suggest that most dietary fats should be obtained from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils. The Guidelines also advise limiting intake of fats and oils high in saturated and/or trans fatty acids.

15. C

In addition to the above-mentioned actions, vitamin B3, also known as niacin or nicotinic acid, is a water-soluble vitamin that is necessary for cell respiration and supports the circulation, skin, nervous system, and secretion of bile. Insufficient niacin intake is associated with symptoms such as canker sores, depression, fatigue, indigestion, weakness, skin problems, and inflammation. Chronic niacin deficiency is called pellagra.

16. D

The average American consumes about 50% more sodium than the 2,300 mg per day recommended in the Dietary Guidelines for Americans. Excessive sodium consumption is associated with increased risk for hypertension, which is associated with increased risk of developing cardiovascular disease.

17. C

Long-term inadequate intake of calcium is associated with low bone mass, rapid bone loss, and high risk of fracture. In addition to the above-mentioned risk factors, chronic use of glucocorticoids, some anticonvulsants, inactivity, smoking, and changes in sex hormones such as amenorrhea, menopause, and low testosterone may increase the risk for osteoporosis.

18. D

Low carbohydrate diets promote ketosis, the process of breaking down fat as opposed to carbohydrate to generate energy. Ketones are acidic chemicals, which can build up in the blood and urine. Diet-induced ketosis may be intentional as a treatment for some people with epilepsy, however, for some people, long-term adherence to a very low carbohydrate diet may produce damage to the liver and kidneys.

19. D

Along with the above-mentioned characteristics, successful dieters monitor their weight, practice portion control, increase physical activity, and aim for healthy realistic weight loss ranging from 10% to 20% of initial bodyweight

in a year. Successful dieters maintain their motivation by celebrating the achievement of weight-loss milestones

20. D

In addition to the above-mentioned populations, supplemental iron may be given to treat anemia that occurs during pregnancy or as a result of heavy menstrual periods, kidney disease, or chemotherapy. Supplemental iron also may be recommended for vegetarians and women who are lactating. Iron requirements decrease for post-menopausal women.