

- 1) If you are not attempting to gain or lose weight, you should strive to be in positive energy balance. F
- 2) Visceral adipose tissue located in the abdomen poses no risk for health problems. F
- 3) A waist circumference of 40 inches or greater in men or 35 inches or greater in women indicates an increased risk of developing type 2 diabetes. T
- 4) The hypothalamus is the region of the brain that regulates hunger and satiety. T
- 5) Activities such as fidgeting and sitting up straight do not contribute to one's total energy expenditure (TEE). F
- 6) Obesity increases one's risk of developing type 2 diabetes, stroke, and heart disease. T
- 7) People tend to consume the amount of food they require based on energy needs even when they are presented with more food than needed. F
- 8) In response to changes in body fat mass, the brain signals changes in food intake but not energy expenditure. F
- 9) The most successful weight-loss strategy is to combine a reduction in energy intake with an increase in daily physical activity. T
- 10) Overweight and obese people can be physically fit. T
- 11) During pregnancy, a period of rapid growth and development, one would desire a
 - a) low energy intake.
 - b) **positive energy balance.**
 - c) negative energy balance.
- 12) Hypertrophic growth of adipose tissue describes the process of
 - a) formation of new adipocytes.
 - b) **adipocytes accumulating triglycerides so that their size increases.**
 - c) degradation of triglycerides within adipocytes.
- 13) When a person loses weight, changes in body fat include
 - a) **a return to normal size of the previously enlarged adipocytes.**
 - b) the generation of new adipocytes to replace the previously enlarged cells.
 - c) the selective removal of enlarged adipocytes with replacement by new cells.
- 14) Adipokines are hormones produced by adipocytes that
 - a) initiate adipocyte hypertrophy.
 - b) initiate adipocyte hyperplasia.
 - c) control visceral adipose tissue but not subcutaneous adipose tissue.
 - d) **communicate with other tissues to help regulate energy balance.**
- 15) As a rule, total body fat exists
 - a) mainly in the lower portion of the body (thighs, hips, buttocks).
 - b) **as visceral adipose tissue and subcutaneous adipose tissue.**
 - c) around the organs in the torso.
- 16) Central obesity is best described as
 - a) **the predominant accumulation of visceral adipose tissue within the torso.**
 - b) the classic "pear shape" of adipose tissue distribution.
 - c) the accumulation of adipose tissue around the brainstem and spinal cord.
- 17) Hunger describes a(n) _____ drive to consume food, whereas appetite describes a _____ desire for food.
 - a) constant, temporary
 - b) emotional, intellectual
 - c) **physiological, psychological**
- 18) An example of a physiological phenomenon initiating events that lead to a satiety signal in the brain is
 - a) gastric stretching, which facilitates hormone release in the small intestine, thereby signaling satiety.
 - b) gastric stretching, which causes blood glucose levels to rise and thereby signals satiety.
 - c) **gastric stretching, which signals satiety.**
- 19) Gastric bypass surgery entails
 - a) placing a band around the stomach.
 - b) **diminishing the size of the stomach and bypassing a segment of the small intestine.**
 - c) bypassing the entire stomach by re-routing food directly into the small intestine.
- 20) Total energy expenditure represents
 - a) the amount of energy expenditure needed to balance the amount of energy consumed.
 - b) **the sum of all energy used by the body.**
 - c) the sum of energy used to keep the heart beating and nerves functioning.

- 21) Total energy expenditure is composed of all of the following components except:
- basal metabolic rate.
 - energy losses through excretion.**
 - thermic effect of food.
- 22) Adaptive thermogenesis and nonexercise activity thermogenesis are
- components of total energy expenditure.**
 - different names for the same energy expenditure.
 - heat-generating activities that improve or maintain physical fitness.
- 23) The basal metabolic rate (BMR) is the amount of energy expended per hour in order to carry out basic functions such as breathing and beating of the heart. The BMR makes up approximately _____ percent of the TEE.
- 20-40
 - 50-70**
 - 70-90
- 24) Which choice lists the components of total energy expenditure in order from highest contributor to lowest contributor?
- Basal metabolism, physical activity, thermic effect of food**
 - Thermic effect of food, physical activity, basal metabolism
 - Basal metabolism, thermic effect of food, physical activity
- 25) The energy needed in order to digest, absorb, and metabolize nutrients after a meal is called
- nonexercise activity thermogenesis.
 - the thermic effect of food.**
 - Does not have a name
- 26) Body mass index (BMI) is defined as
- a person's waist-to-hip ratio.
 - the ratio of the fat mass to fat-free mass.
 - a person's height divided by the square of their body weight.
 - a person's body weight divided by the square of their height.**
- 27) According to the U.S. Centers for Disease Control and Prevention, which BMI category represents overweight?
- 18.5-24.9
 - 25.0-29.9**
 - ≥ 30
- 28) The method of assessing body composition considered to be the "gold standard" is
- underwater weighing.
 - dual-energy x-ray absorptiometry (DEXA).**
 - skinfold thickness.
- 29) Factors that contribute to the likelihood of becoming obese include
- large portion sizes.
 - consumption of energy-dense foods, such as most fast foods.
 - genetics.
 - All of the above**
- 30) Exercise is defined as
- planned, structured, and repetitive bodily movement intended to improve or maintain physical fitness.**
 - coordinated whole-body movements that require energy expenditure in both upper and lower extremities.
 - intensive activity lasting at least 75 minutes per day.
- 31) Leptin is a satiety-inducing hormone produced by the _____.
- hypothalamus
 - adipose tissue**
 - thyroid gland
- 32) How does leptin participate in body weight regulation?
- Leptin directly instructs adipose tissue to undergo hypertrophic growth during times of high energy intake.
 - Leptin signals the release of neurotransmitters that promote satiety and energy expenditure.**
 - Leptin directly instructs muscle tissue to expend less energy.
- 33) Components of a healthy weight-loss program include all of the following except:
- choosing nutritious foods in moderation.
 - choosing foods very low in fat.**
 - increasing daily physical activity.
- 34) Physical fitness can reduce blood pressure, lower blood glucose levels, and lower blood lipid levels in
- healthy-weight individuals.
 - overweight individuals.
 - All of the above**
- 35) The 2010 Dietary Guidelines for Americans recommend that adults engage in at least _____ of moderate-intensity aerobic physical activity.
- 4 days per week
 - 150 minutes per week**
 - 60 minutes per day

- 36) When someone attempts to lose weight by decreasing caloric intake while at the same time increasing physical activity, that person is trying to be in a state of
- negative energy balance.**
 - positive energy balance.
 - neutral energy balance.
- 37) Measuring waist circumference will assist in determining
- the total fat content of the body.
 - the risk of developing chronic diseases such as type 2 diabetes and hypertension.**
 - the distribution of muscle and fat in the body.
- 38) Which of the following statements regarding ghrelin is not true?
- Ghrelin is referred to as the hunger hormone.
 - Ghrelin is released by cells in the stomach just after a meal.**
 - Blood levels of ghrelin decrease following a meal.
 - If someone overproduced ghrelin, that person would not always experience a feeling of satiety after a meal.
- 39) Gastric stretching, circulating nutrient levels, and ghrelin all participate in
- inhibition of food intake.
 - long-term regulation of food intake.
 - short-term regulation of food intake.**
- 40) Food aversions and food cravings differ for a number of reasons. Which of the following is not a difference between the two factors?
- A food aversion is a strong dislike of a particular food, while a food craving is a strong desire for a particular food.
 - A food aversion tends to persist for a long time, while food cravings can come and go.
 - Food aversions are psychological factors, while food cravings are physiological factors.**
- 41) Imagine that you have just finished a very satisfying meal and you walk past a bakery full of freshly baked goods. If the sweet smells entice you to buy an item, it is likely that those smells have stimulated
- your appetite.**
 - ghrelin production.
 - a food aversion.
- 42) An example of adaptive thermogenesis is
- sitting up straight.
 - shivering in the cold.**
 - going for a swim on a hot day.
- 43) Given the following characteristics, select the person who would have the highest BMR.
- A 50-year-old woman, 5'6" tall, who has been dieting on and off for 15 years.
 - A 20-year-old woman, 5'7" tall, who is very muscular.
 - A 20-year-old man, 6 feet tall, who is very muscular.**
- 44) If a person consumes 2,000 kilocalories during a day, the thermic effect of food in that person on that day would be
- 5 to 10 kilocalories.
 - 100 to 200 kilocalories.**
 - 200 to 400 kilocalories.
- 45) Which of the following statements about the fat compartment and the fat-free compartment of the body is false?
- The fat compartment consists of stored triglycerides and support structures, while the fat-free compartment consists of muscle, water, and bone.
 - The amount of energy stored in the fat compartment is genetically determined and unchangeable, while the amount of fat-free mass can be increased through exercise.**
 - Recommendations for body fat levels are: between 12 and 20% of total body weight for men and between 20 and 30% of total body weight for women.
- 46) Which method uses differences in the ability of lean and adipose tissues to conduct currents to estimate body composition?
- Dual-energy x-ray absorptiometry (DEXA)
 - Bioelectrical impedance**
 - Skinfold thickness
- 47) Which body composition method uses measurements of the density of fat mass and fat-free mass to determine a person's percent body fat?
- Underwater weighing**
 - Dual-energy x-ray absorptiometry (DEXA)
 - Skinfold thickness