

# Section 1 Quiz

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100%

1. Which of the following accurately describes the shift in U.S. food consumption patterns since World War II? 1/1 分

- ☒ As food manufacturers decreased the fat content in many highly-processed foods, they tended to increase the sugar content.
- ☐ As women entered the workforce, families tended to eat more meals at home.
- ☐ Though sugar consumption has increased on average, total calorie intake has remained mostly the same since the end of World War II.
- ☐ Though processed food consumption has increased on average, energy expenditure (physical activity) has also increased since the end of World War II.
- ☐ The shift in U.S. food consumption patterns has resulted in a situation where the body’s physiological adaptation to store calories is adaptive because it protects against obesity and diabetes.

✓ 正确

In the 1980s and 1990s, many food manufacturers reduced the fat content in processed food products and instead added more sugar. Families tended to eat fewer meals at home. Total calorie intake, sugar consumption, and processed food consumption have all tended to rise, while physical activity has tended to decrease. Our bodies are adapted to store calories. With increasing calorie consumption, this adaptation is maladaptive, increasing risks for obesity and diabetes.

2. Which of the following accurately describes nutrient metabolism? 1/1 分

- ☐ Protein contain more calories per gram than fat.
- ☒ Energy from carbohydrates, proteins, and fats can all be stored by the body in the form of fat (adipose tissue).
- ☐ Eliminating single nutrients in the diet is an effective weight loss strategy because it is a sustainable approach.
- ☐ All dietary amino acids are stored as muscle in the body.
- ☐ Carbohydrates provide more caloric energy per gram than other macronutrients.

✓ 正确

Fat contains about 9 calories per gram, while carbohydrates and proteins contain about 4 calories per gram each. All three of these macronutrients can be stored by the body as fat (adipose tissue). These macronutrients are commonly found in foods (though in different proportions). Eliminating a single nutrient is not likely a sustainable solution - we eat foods, not nutrients in isolation.

3. In considering animal and plant sources of protein, which of the following is true? 1/1 分

- ☐ Animal sources of protein tend to be incomplete because they do not provide all of the essential amino acids in adequate amounts to be considered complete proteins.
- ☐ The human body cannot make any amino acids, so we need to get these from protein-rich foods.
- ☐ In general, animal sources of protein are overall healthier sources of dietary fiber than plant sources of protein.
- ☒ In many global food traditions, two or more plant sources of protein are combined to enhance the amino acid profile of a dish, incorporating more essential amino acids into the diet.
- ☐ In general, meat-based diets tend to be lower in saturated fat than vegetarian diets.

✓ 正确

Our body can produce many amino acids, but some must be supplemented through the diet. Though animal sources of protein tend to be complete (providing all essential amino acids), they also tend to be sources of fat (and can include saturated fat). Thus, plant sources of protein tend to be overall healthier sources of protein - especially when multiple plant sources of protein are combined, as in many global food traditions.

4. Which of the following recommendations would be best to give to a friend who derives most of his dietary fat from animal sources (like beef and fish) and wishes to improve his eating habits? 1/1 分

- ☐ He should take an Omega 3 supplement, as no animal sources contain this essential fatty acid.
- ☐ He should reduce his consumption of unsaturated fats and instead add more saturated fat to his diet.
- ☒ He should reduce his consumption of saturated fat and instead choose foods with naturally occurring unsaturated fats.
- ☐ He should try to consume more red meats (like beef and lamb) than white meats (like chicken and fish).
- ☐ He should make sure to have a plant-based fat with his meals whenever he eats animal products.

✓ 正确

A good dietary recommendation about fat intake is to choose foods with naturally occurring unsaturated fats, reduce consumption of saturated fats, and eliminate trans fats. Omega 3 is an essential fatty acid found in fish oil, nuts, flaxseed, and some other vegetable oils. In general, white meats tend to be leaner in that they contain lower levels of saturated fat compared to red meats. A recommendation to eat a plant-based fat whenever eating an animal product would not decrease consumption of saturated fats and may lead to an inappropriately high level of fat in the diet - it is not the best recommendation here.

5. Consumption of foods with a high glycemic index (compared to a low glycemic index) usually leads to: 1/1 分

- ☐ A more rapid release of glucose into the bloodstream and a relatively muted insulin response
- ☒ A more rapid release of glucose into the bloodstream and an “insulin spike”
- ☐ A slower release of glucose into the bloodstream and a more stable blood sugar level
- ☐ A slower release of glucose into the bloodstream and a less stable blood sugar level
- ☐ A slower release of glucose into the blood and an “insulin spike”

✓ 正确

Whole grains (like brown rice and quinoa) tend to have a lower glycemic index than refined foods (like white bread). High glycemic index foods tend to lead to rapid release of glucose into the bloodstream and an insulin spike to lower blood glucose levels. This leads to unstable levels of blood glucose, earlier return of hunger, and a tendency to overeat. In contrast, low glycemic index foods (which tend to have higher amounts of fiber) lead to a slower release of glucose into the bloodstream, a less extreme release of insulin, and more stable blood sugar levels.

6. Which of the following is true of dietary fats and fat metabolism? 1/1 分

- ☐ Unsaturated fats tend to be solids at room temperature.
- ☐ The human body can make all essential fatty acids given adequate sugar intake.
- ☐ Saturated fats tend to contain unstable chemical bonds that can create trans fats.
- ☐ Trans fats tend to increase the amount of HDL cholesterol in the blood.
- ☒ Saturated fats can raise LDL cholesterol but have not been shown to reduce HDL cholesterol as significantly as trans fats.

✓ 正确

Like trans fats, saturated fats can raise LDL (bad cholesterol) levels, but saturated fats have NOT been shown to reduce HDL (good cholesterol) as significantly as trans fats. In short, trans fats should be avoided entirely while small amounts of saturated fat can still be part of a generally healthy diet.