

TRUE AND FALSE

_____ 1. All carbohydrates come from plants.

If #1 is false, what is the exception?

_____ 2. Minerals are inorganic substances required in small amounts.

List the seven minerals that are important to humans.

- 1.
- 3.
- 5.
- 7.

- 2.
- 4.
- 6.

_____ 3. Glucose is also known as blood sugar

_____ 4. If the body does not have enough glucose, fat may be used to produce ATP.

_____ 5. Most of the body's structure is composed of protein.

List several structures in the body that protein is used for.

_____ 6. The liver drains the blood of amino acids until it is "full", and then distributes the rest to the cells.

_____ 7. A person could die in 24 hours without a liver.

_____ 8. Cholesterol is an important energy producing substance for the body.

What are some of the body's uses for cholesterol?

Where does most cholesterol come from?

_____ 9. HDL is bad lipoprotein

_____ 10. Albumin is a blood clotting protein produced in the liver.

_____ 11. Cereals and grains are good sources of minerals

If # 11 is false, name several good sources of minerals.

- _____ 12. Fats can be used to produce ATP if glucose levels are insufficient.
- _____ 13. Fats and sugars are good sources of minerals.
- _____ 14. The liver can make glucose from non carbohydrate sources.

If # 14 is true, what is this process called?

- _____ 15. Cellulose is a type of lipid
- _____ 16. Saturated fats are liquid at room temperature
- _____ 17. The pancreas is responsible for most lipid metabolism.

If # 17 is true, what is the name of this process?

- _____ 18. LDL is good lipoprotein.
- _____ 19. Only 15% of blood cholesterol comes from our diet, the other 85% is produced in the liver.
- _____ 20. 50mg of glucose/100ml of blood is an acceptable blood sugar level.

If # 20 is false, what is the minimum acceptable level?

- _____ 21. Cells cannot build proteins unless ALL needed amino acids are present.

How many amino acids can't be made by the cells?

What are these amino acids called?

- _____ 22. Unsaturated fats are solid at room temperature.
- _____ 23. Vitamins are organic nutrients of different forms required in small amounts.
- _____ 24. If liver tissue dies, it can't be replaced.
- _____ 25. Acidosis or ketosis are common in people with diabetes, or who are on no carbohydrate diets, or who are starving.

If # 25 is true, explain why.

SHORT ANSWER

1. Define "nutrient" and list the six major categories of nutrients.

1.

2.

2.

4.

5.

6.

2. What is the end result of cellular respiration?

What IS ATP?

What do we use it for?

Discuss the importance of glucose in human metabolism.

3. Define metabolism and distinguish between "catabolism" and "anabolism".

4. Describe the functions of each of the following plays in the human body.

Fats –

Carbohydrates –

Protein –

5. List four fates of lipids when they are processed by the liver.

1.

2.

3.

4.

Explain what happens to any lipids that the liver releases back into the blood stream and list the four structures that will be produced.

1.

2.

3.

4.

Where are excess fats deposited?

6. Describe the following liver processes and tell what if any hormones are responsible.

Glycogenesis –

Glycogenolysis –

Gluconeogenesis –

Distinguish between hyperglycemia and hypoglycemia and explain what happens to glucose if there is too much and/or too little in the blood.

7. Discuss the two categories of lipoproteins. Be sure to give the following information for each.

1. Full name
2. Function
3. Benefit or harm to the body, and explain why.

HDL –

LDL –

Considering that both types of lipoproteins are necessary in our bodies, explain what determines their pathology.

What are several things we can do to prevent a pathological ratio of lipoproteins?