

Science 9-Biology

Nutrition Review-KEY



10

Name _____

Due Date _____

Show Me Hand In

Correct and Hand In Again By _____

Pages 100-129 of SP ,Worksheets 6-1,6-2,6-3,6-4,6-5 and Experiments 6-1,6-2,6-3 will help you with the following questions. Doing this worksheet will definitely help you with the Chapter 6 test!

1. The main 4 elements in our body are: **H, C, O, N**

2. Girl’s growth spurt is from about **_10_** to **_15_** and boys from about **12_** to **19_**.

3. Units used to measure food energy in Canada are **__Joules__** and **kilojoules_**.

4. Fructose can be found in **__most fruits__**

- Sucrose can be found in **__white sugar, candies, etc.__**

- Lactose can be found in **__milk & other diary products__**

- Glucose can be found in **__syrup, honey etc.__**

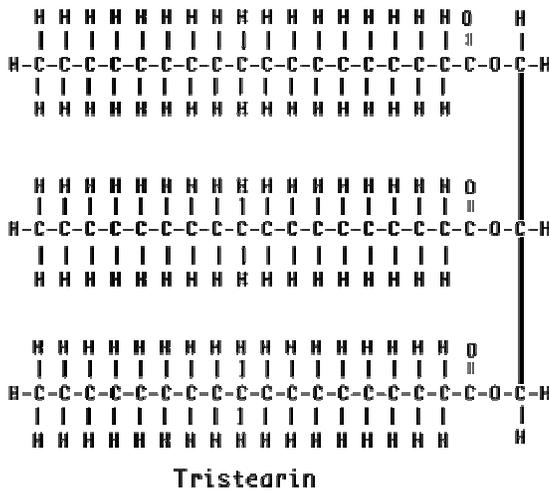
5. When many simple sugar molecules join together, they form larger molecules called **_____complex_____** carbohydrates.

6. Three complex carbohydrates are **_starch_**, **_glycogen_**, and **_cellulose_**.

7. The complex carbohydrate produced in our body which can be broken down and used for energy is **__glycogen__**

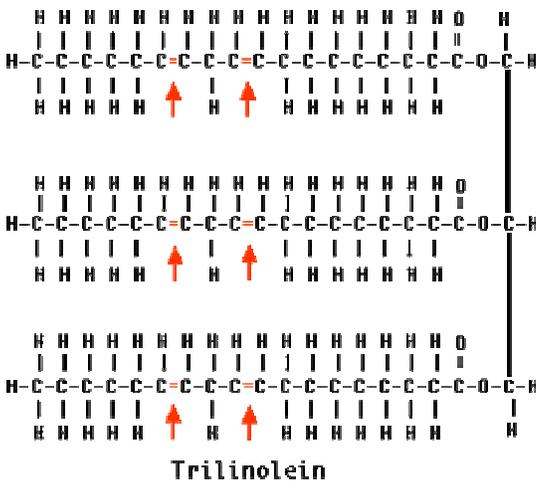
8. A complex carbohydrates produced by plants and used by humans for energy is called **_____starch_____**

9. Fats are large molecules. They are made from smaller molecules called **fatty acids**.
10. The following:



is an example of a
saturated fat

11. The following:



Is a molecule of an
unsaturated fat.

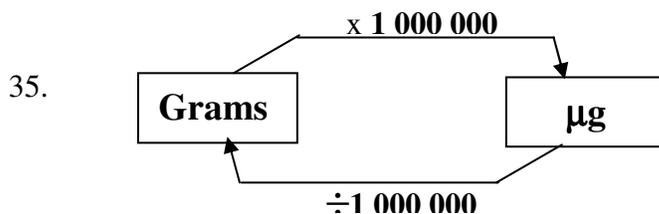
12. Monounsaturated fatty acids have **one** double bond between carbon atoms.
13. Unsaturated fatty acids that have more than one double bond between carbon atoms are called **poly**unsaturated fatty acids.
14. Some oils that are LOW in saturated fats are: **olive oil, canola oil, flaxseed oil**
15. Coconut oil, palm oils and all animal fats are (*low/high*) **high** in saturated fats.
16. A chemical process used to make liquid fats more solid is called **hydrogenation**.
17. LDL is called (*good/bad*) **bad** cholesterol and (*increases/decreases*) **increases** a person's chance of getting heart disease.

18. HDL is called (*good/bad*) **good** cholesterol and (*increases/decreases*) **decreases** a person's chance of getting heart disease.
19. According to most nutritionists, no more than about **30%** of your food energy should come from fats.
20. Fill in the following table using the information on Experiments 6-1 to 6-4

Nutrients to Test For	Material Used in the Test	Results of a Positive Test
Starch	I.K.I.	Turns blue, purple or black
Simple sugars	Benedict's Solution	Turns from blue to green, brown or orange
Fats	Brown Paper	Has translucent spot
Proteins	Biuret's Solution	Turns purple

21. Name five foods which are good sources of protein. **Meats, eggs, fish, dairy products, beans, rice, corn**
22. Protein molecules are very large. They are made up of smaller molecules called **amino acids** joined together.
23. The four main chemical elements found in amino acids are N, **H**, **O** and **C**.
24. In order to make the proteins that it needs, the body uses a total of **20** different amino acids. The body can make 12 of these amino acids by itself. These 12 do not need to be supplied by our diet. They are called **non-essential** amino acids.
25. There are 8 amino acids that our body needs but cannot produce on its own. These 8 amino acids must be supplied by our diet. They are called **essential** amino acids.

26. What is meant by a complete protein? **one that supplies all 8 essential amino acids**
27. What is meant by an incomplete protein? **One that does not supply all 8 essential amino acids but is missing one or more of them.**
28. Meat and dairy products supply our body with (*complete/incomplete*) **complete** proteins.
29. Some people do not eat meat or dairy products. In order to get all the essential amino acids from plant sources, what must you do? (See page 108 SP)
Make sure you eat combinations of foods which will, as a whole, supply all 8 essential amino acids.
30. A major part of our bones, hair, skin and nails are made up of **protein**.
31. How do proteins help us when we get a cut in the skin? **They help our blood to clot and stop flowing out of our body.**
32. Catalysts in our body are made up of proteins and are called **enzymes**.
33. We cannot store amino acids like we can store sugars and fats. The only place amino acids are stored in our bodies is in **in our body parts (muscles, bones, etc.)**.
34. If our body severely lacks carbohydrates and fats, where does it start getting energy from? **It breaks our body parts to obtain the amino acids it needs.**



36. 1.0 grams = **1 000 000** µg
- 0.50 g = **500 000** µg
- 25.0 g = **25 000 000** µg
- 400 µg = **0.0004** g
- 0.80 µg = **0.000 000 8** g
- 6500 µg = **0.0065** g

37. Of the following, circle the elements NOT needed by your body:

Ca Mg Fe **Hg** Na **Pb** K **U** P I Cu

38. Vitamin **D** helps us absorb the mineral calcium.

39. Calcium is found mainly in the **bones** and **teeth** of the body.

40. Does calcium have any effect on our nerves or muscles? **yes**

41. Name some foods that are high in calcium content.

milk, cheese, yogurt, beans, Tums, Roloids

42. What is the main function of iron in our body?

Needed in red blood cells to help the blood carry oxygen to our cells

43. Circle the one which is the best source of iron:

orange juice milk **red meat** popsicles

44. The condition called scurvy is caused by a severe lack of **vitamin C**.

45. Do vitamins make enzymes or assist enzymes? **assist enzymes**

46. See the table on page 114 or SP. Which 3 vitamins help release energy from carbohydrates? **B1 B2 B3**

47. Vitamin **C** helps maintain healthy teeth and gums.

48. Vitamin **K** helps with blood clotting

49. Vitamin **A** helps with night vision, fighting infections and keeping our skin healthy.

50. Vitamin **C** and the **B** vitamins are water soluble. If we consume more of these than we need, the excess gets expelled with the urine.

51. Vitamins **A**, **D**, and **E**, and **K** are fat soluble. We need to have some fat in our diet to help us absorb these vitamins.

52. Orange juice and grapefruit juice are good sources of Vitamin **C**.

53. A vitamin produced in our cells with the help of sunlight is Vitamin **D**.

54. Fish liver oils are high in Vitamins **A** and **D**

55. What are some symptoms of toxic amounts (too much) vitamin A in a diet? (See page 115)
loss of hair, blurred vision, dry skin, nausea, diarrhea. Even death in extreme cases (polar bear liver)

56. What are 3 ways in which water is used in our body? (See 3rd paragraph on p. 116 SP)

carries nutrients and other materials into your cells

carries waste products out of your cells

needed for the chemical reactions which break down nutrient molecules

cools your body by sweating

acts as a lubricant

57. How does your body cool itself on a hot day?

glands produce sweat which evaporates and cools your skin

58. Is dietary fibre considered a nutrient? no

Does it serve any function in the body? yes If so, how does it help us?

It helps the feces stay moist and soft and therefore prevents constipation and perhaps helps prevent intestinal problems including cancer.

59. Name some foods that are high in fibre. **Cereals, whole grain flour, fruits, vegetables**

60. Two types of microorganisms that cause food to spoil are bacteria and fungi.

61. The most important reason for food processing is to help preserve the food.

Other reasons for food processing would be to improve the flavour, colour,

texture or nutrient content of the foods.