Answers Nutrition 120 Exam Review: Unit 3 Fats

Review Questions:

1. Name 2 controllable and 2 uncontrollable risk factors associated with heart disease.

2 uncontrollable rick factors are: age (risk increase with ago most occur after age 65), gender (men are at a greater risk than women) and family history (if one or more blood relative has had heart disease your risk increases)

2 controllable risk factors are: smoking (smokers have 2-4 times greater risk than non-smokers) and high blood pressure (puts pressure on the walls of the arteries and the heart has to work harder to get the blood around). High blood pressure can be controlled by diet, exercise and weight management.

2. What happens in an artery that contains a buildup of plaque, compared to a normal artery?

An artery that contains a buildup of plaque will have to work harder to pump blood through the artery compared to a normal artery. The plaque that builds up causes the arteries to be more narrowed than usual and because the blood is pumping harder the blood pressure will be increased as well.

3. Name and explain each of the three classes of lipids and the differences between them.

The three main groups of lipids are triglycerides, phophlipids and sterols. Triglycerides are the major type of fat found in foods and the body and consist of three fatty acids. The fatty acids in triglycerides can be saturated or unsaturated. Phospholipids are lipids that have a phosphorous compounds in their chemical structure the most common phospholipid is lecithin (omega 3). Phospholipids tend to act as emulsifiers allowing water and fat to mix. Sterols have a more complex molecular structure. Cholesterol is the most common type of sterol and is not essential to the diet like phospholipids and triglycerides because body can manufacture cholesterol.

4. Explain the difference between a saturated and an unsaturated fatty acid, monounsaturated and polyunsaturated fatty acids. Give an example of each.

The difference between saturated and unsaturated fatty acids is that saturated fatty acids have no double bonds in their structure, whereas unsaturated fatty acids have at least one double bond. Monounsaturated and polyunsaturated are both unsaturated fatty acids monounsaturated fatty acids have one double bond and polyunsaturated have two or more double bonds. Examples of saturated fats include butter, margarine, and coconut oil. Examples of monounsaturated fats include olive oil, sesame oil and canola oil. Examples of polyunsaturated fats include sunflower seed oil and corn oils.

5. Explain the difference between "good" and "bad" cholesterol.

HDL stands for high density lipoprotein and this is considered the "good" cholesterol because it helps remove LDL cholesterol from the arteries. LDL stands for low density lipoprotein and is considered the "bad" cholesterol because it contributes to plaque, which builds up in the arteries causing blockages.

6. What happens to blood pressure when arteries are narrowed?

Blood pressure increases when arteries are narrowed.

7. How are trans-fats created and what influence do they have on your health?

Hydrogenation makes foods last longer, but also forms trans fats. Hydrogenation breaks the double bonds and adds more hydrogen making them more saturated. Trans fats are linked to heart disease and stroke because they are known to increase your LDL "bad" cholesterol levels and lower your HDL "good" cholesterol levels.

8. If you are consuming a 2000 calorie diet how many of your calories should come from fat?
   25% to 35% of your calories should come from fat which means if you are consuming a 2000 calorie diet 500 to 700 of your calories per day should come from fat.

Answers Nutrition 120 Exam Review: Unit 4 Proteins

Review Questions:
1. Describe two functions of proteins in the body.
Build and maintain tissue
Make important compounds
Regular mineral and fluid balance
Maintain acid-base balance
Carry vital substances
Provide energy

2. Explain the difference between a complete and incomplete protein. What are some examples of complete and incomplete proteins?
A complete protein contains all the amino acids we need where as an incomplete protein provides some amino acids, but not all of the amino acids our body needs. Examples of complete proteins are meat, poultry, fish, dairy, eggs, quinoa, soy. Incomplete proteins are grains, legumes, nuts and seeds.

3. Name three sources of plain proteins, and 3 sources of animal proteins.
(List three animal sources:) beef, veal, pork, lamb, poultry, fish, eggs, milk, yogurt, cheese, ice cream
(List three plant sources) legumes, nuts, seeds and grains.

4. What percentage of daily calories should come from protein?
5. 10 to 35% of daily calories should come from protein.

6. How can vegetarians and vegans meet their needs for proteins?
Vegans and vegetarians can get the amino acids missing from one incomplete protein source by combining it with another incomplete source. Combining grains, nuts, or seeds with legumes will create a complete source of protein. For vegetarians they can also get their complete proteins from other sources like dairy and eggs or soy.

7. How can a diet that is very low in carbohydrates and fats affect the way the body uses protein?
A diet low in carbohydrates and fats will cause the body to use protein as the source of energy.