

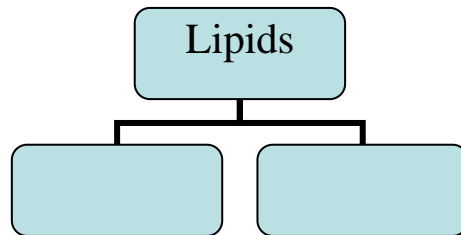
**Names-**

**Questions**

**Directions-** Because you are the doctor in this scenario you need to know a few things about lipids. Below is a list of questions that must be answered when assessing and diagnosing this patient. Answer the following questions based upon the information found on your text book website.

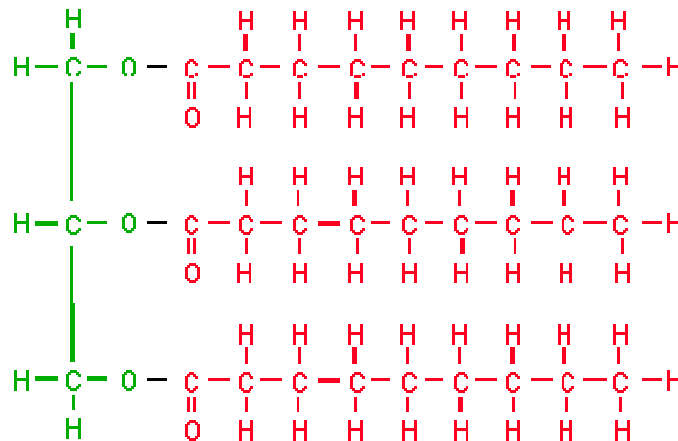
**1)** Because cholesterol is a type of lipid you first need to know what lipids are. In your answer you should include the definition of a lipid, its properties, and its functions. Any key terms that you mention should include a definition of that key term.

**2)** In recalling the definition and characteristics of lipids, you recall that there are two major types of lipids found. Fill in the chart below with the two types of lipid molecules. Then give the definitions of the two types of lipids below the chart.

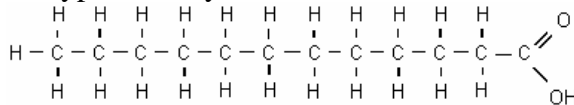


Lipid types-

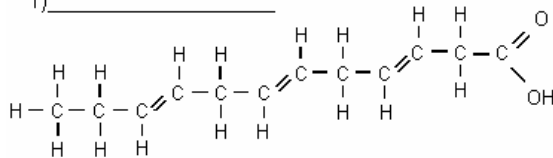
**3)** Below is a picture of a fat molecule. Label both the red and green parts of the fat molecule:



**4)** Below are two types of fatty acids that could possibly be attached to the glycerol molecule. Label the two types of fatty acids below.



1) \_\_\_\_\_



2) \_\_\_\_\_

**5)** As a doctor you know that certain kinds of fats are better for the body than others. When you ask your patient if he has been placed on any diets due to his high cholesterol he says that he can not eat foods that have a high percentage of saturated fats and he needs to stick to a diet that has more unsaturated fats. You realize that this is important and begin to recall the differences between saturated and unsaturated fats (in both the physical and chemical makeup). Below compare the differences between fatty acids and speculate as to why your patient was on a diet of unsaturated fats?

**6)** As you are observing your patient, some results from a blood analysis are delivered to you. The results confirm the patient's original statement that he has high cholesterol levels. You then realize that cholesterol is not a fat but actually a steroid. Below, list the *definition*, some *examples*, and characteristics of steroids. Also include how steroids affect the human body.

**7)** Speculate as to why cholesterol would clump together in the aqueous environment of the blood stream. Do you think saturated would clump easier than unsaturated (HINT- Think about the shapes of a saturated fatty acid, can you stack them on top of each other easily)?

**8)** You observe your patient for several days and decide to discharge him. You want to give him a recommendation form pertaining to what food to eat. Below list foods that you would recommend your patient try to eat and a list of food that that you would recommend he stays away from. Remember he was originally on a low saturated fat diet.