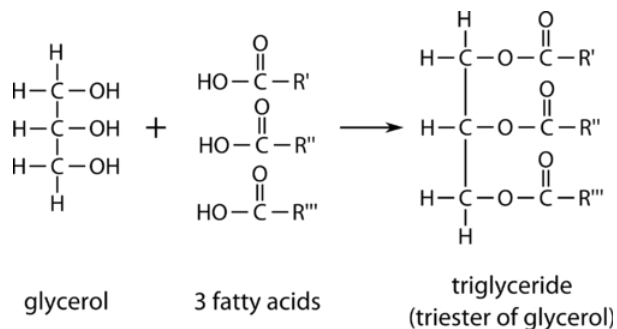
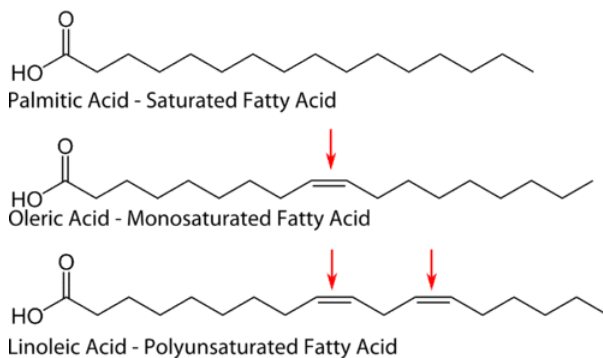


Triglycerides

One type of lipid is called a **triglyceride**, an ester derived from glycerol combined with three fatty acid molecules.



Fats may be either saturated or unsaturated. A **saturated fat** is a fat that consists of triglycerides whose carbon chains consist entirely of carbon-carbon single bonds. Therefore, the carbon chains are saturated with the maximum number of hydrogen atoms possible. An **unsaturated fat** is a fat that consists of triglycerides whose carbon chains contain one or more carbon-carbon double bonds. A fat with one double bond is called monounsaturated, while a fat with multiple double bonds is called polyunsaturated (see figure below).



High consumption of saturated fats is linked to an increased risk of cardiovascular disease. Some examples of foods with high concentrations of saturated fats include butter, cheese, lard, and some fatty meats. Foods with higher concentrations of unsaturated

fats include nuts, avocado, and vegetable oils such as canola oil and olive oil. The figure below shows the percentages of fat types in some common foods.

Composition of Fat Acids in Some Common Foods and Oils

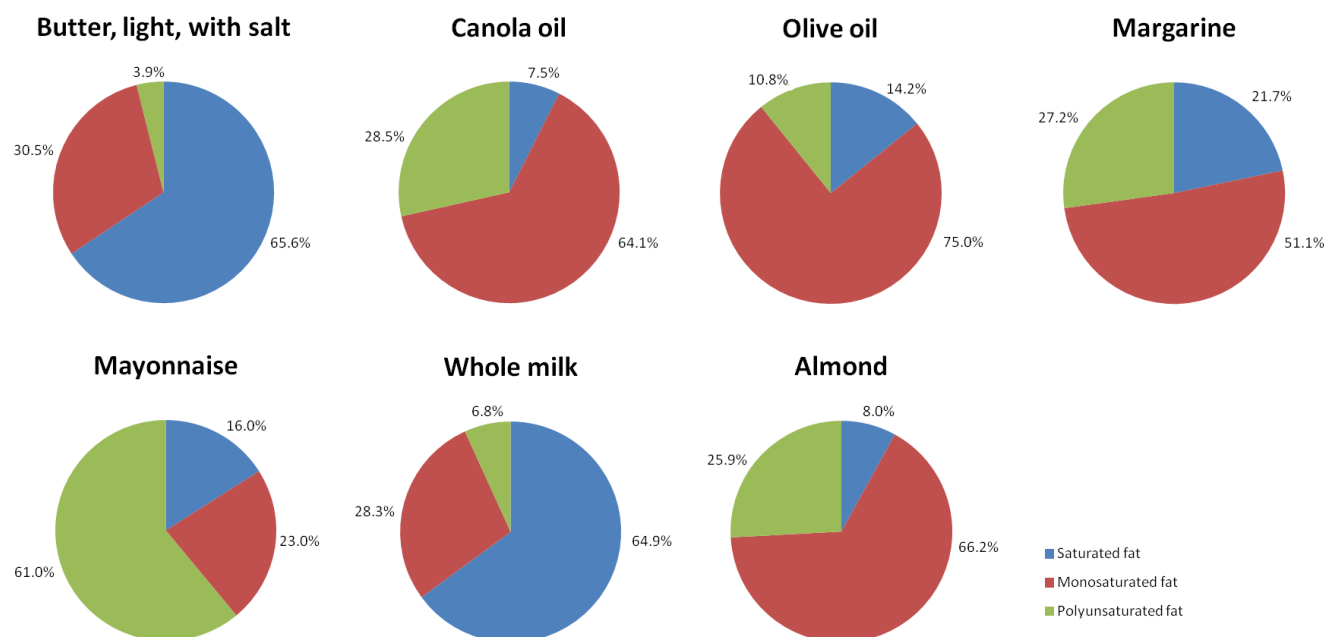


Figure 18.8.3: Some common foods and oils along with their percentages of saturated, monounsaturated, and polyunsaturated fats.

Summary

- A lipid is a member of a class of water-insoluble compounds that includes oils, fats, and waxes.
- One type of lipid is called a triglyceride, an ester derived from glycerol combined with three fatty acid molecules.
- A saturated fat is a fat that consists of triglycerides whose carbon chains consist entirely of carbon-carbon single bonds.
- An unsaturated fat is a fat that consists of triglycerides whose carbon chains contain one or more carbon-carbon double bonds.

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