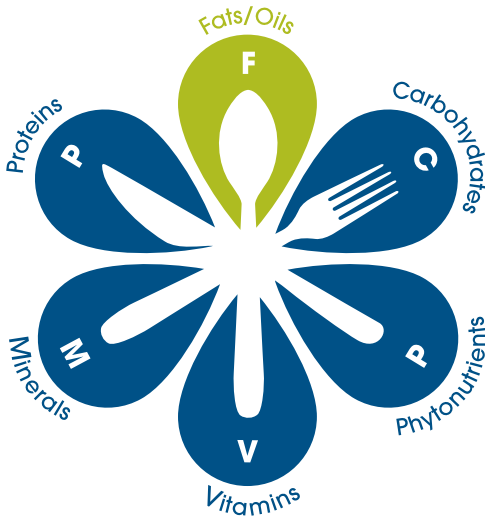




Macronutrients: Fats and Oils



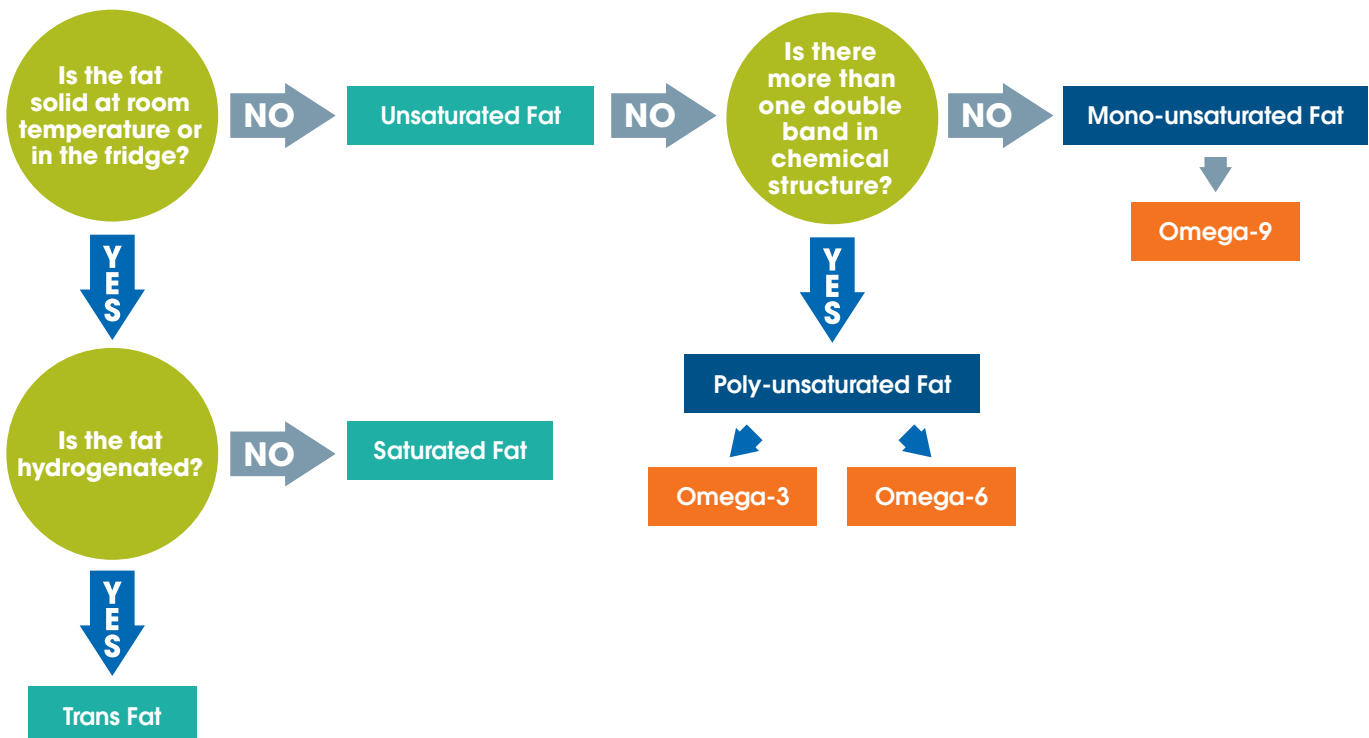
Macronutrients are a class of chemical compounds that provide humans with energy and essential nutrients. They are required by the body in relatively large amounts on a daily basis and make up the bulk of the diet. Proteins, fats, and carbohydrates are the main types of macronutrients that provide the body with energy.

Fats and oils provide a lot of energy in a relatively small amount of food. Once eaten, fat can be stored by the body for later use. When food is scarce, this stored fat becomes a source of fuel. Fat also provides necessary support for the brain, connective tissue, and digestive system. In short, fat plays an important role in health, and is an essential component of a balanced diet.

Different Types of Fat and Their Sources

For many years, all forms of dietary fat were blamed for the rise in obesity rates in the United States. However, current research suggests that the type of fat consumed is much more important than the amount of fat consumed.

The flowchart below walks you through some of the differences between types of fat. The table on the next page describes these fats in more detail.



All fat-containing foods have a mixture of different types. However, the primary sources of the types of fat discussed on the first page are explained and listed here.

Table 1. Fats to Limit or Avoid

Saturated fat	This type of fat is mainly found in animal proteins like beef, pork, and chicken. It's also found in some plant-based fats and oils, including coconut and coconut oil, palm oil, and palm kernel oil. In the U.S., saturated fat in the diet comes mostly from cheese, pizza, dairy products (including ice cream), meats, and grain-based desserts like cookies and cake. Saturated fat was once thought to cause cardiovascular conditions, but current research is proving that connection to be false. Regardless, it is a good idea to limit this type of fat to no more than 7% to 10% of calories each day, and to opt for healthier unsaturated fats when possible.
Trans fat	Trans fatty acids, or trans fats, are found in small quantities in beef and dairy products. But most trans fats are made by heating liquid vegetable oils in the presence of hydrogen gas. This process makes liquid oils more shelf-stable and less likely to become damaged. For this reason, trans fats became popular oils to use in restaurants and food manufacturing. However, because so many health risks are associated with artificial trans fats, the FDA banned them from the food supply in 2015. Examples of trans fats to avoid include margarine, vegetable shortening, and processed foods made with these and other forms of trans fat.
Omega-6 fatty acids	These polyunsaturated fatty acids are essential, meaning that the body can't make them, so we must get them from food. However, Western diets are often too high in omega-6s, which cause inflammation. Processed vegetable oils like corn and soybean oil are high in omega-6s, as are foods fried in or made with these oils. Omega-6s are also found in nuts and seeds (almonds, cashews, walnuts, and sunflower seeds).

Table 2. Fats to Incorporate into Your Diet

Unsaturated fat	These beneficial fats are liquid at room temperature. They can improve blood cholesterol levels and reduce inflammation. They are mostly found in plant foods like vegetable oils, nuts, and seeds.
Mono-unsaturated fat	This type of unsaturated fat has only one double bond in its chemical structure. Good sources of monounsaturated fats are avocados and avocado oil, olives and olive oil, almonds, hazelnuts, pecans, pumpkin seeds, and sesame seeds.
Poly-unsaturated fat	This type of unsaturated fat has more than one double bond in its chemical structure. Sources of polyunsaturated fats include vegetable oils (sunflower, soybean, and corn), flaxseeds and flaxseed oil, and walnuts.
Omega-3 fatty acids	These polyunsaturated fatty acids are essential, meaning that the body can't make them, so we must get them from food. Omega-3s are important for brain health, development, and reducing inflammation, among other things. Good sources of omega-3s are fatty fish (especially herring, mackerel, oysters, salmon, and sardines), flaxseeds, chia seeds, walnuts, and soybeans.
Omega-9 fatty acids	Omega-9s are not an essential part of the diet, because they can be made by the body. They are mostly found in nuts (almonds, cashews, peanuts, walnuts), nut oils, as well as avocado oil and olive oil.

Recommendations for Fat Intake

According to the National Academy of Sciences, adults should get 20% to 35% of their calories from fat. Infants and young children need a slightly higher proportion of fat (25% to 40%) for proper brain development. IFM recommends that fat should account for about 30% of daily calories for most healthy individuals. For those with specific health concerns requiring advanced therapeutic dietary interventions, fat may account for roughly 30% to 60% of daily calories, depending on the specific intervention or health condition. Talk to your Functional Medicine healthcare provider to learn more.

Incorporating Fats and Oils into a Balanced Diet

- Top your salad with healthy oils (like olive and walnut) instead of store-bought, shelf-stable salad dressings. Add a squeeze of lemon and a sprinkle of balsamic vinegar for flavor.
- Try incorporating fatty fish into your meals twice a week.
- Add freshly-ground flaxseeds to your morning smoothie or oatmeal.

References

- Sienkiewicz Sizer F, Whitney E. Nutrition Concepts & Controversies. 12th ed. Belmont, CA:Wadsworth Cengage Learning; 2011.
- Types of Fat. The Nutrition Source. <https://www.hsph.harvard.edu/nutritionsource/types-of-fat/>. Published July 28, 2015. Accessed March 1, 2017.

