Nutrition Resource

Macronutrients

Macronutrients- commonly referred to as “macros”- are the essential elements found in foods that our body requires to function. They include carbohydrates, fats, and proteins, all of which provide the body with energy (calories).

Your body needs all these three macros to maintain its structure and systems. Excluding or significantly restricting them in the diet is not recommended. On the other hand, excessive intake of any of these three macros contributes to weight gain.

Following Canada’s Food Guide and eating well balanced meals will help you to get the necessary macronutrient intake for promoting optimal health.

Carbohydrates:

Carbohydrates are commonly referred to as “carbs.” Carbohydrates are made up of starch, sugar, and fibre. Carbohydrates are found in foods like grains and starches, fruits, milk and milk alternatives, and some starchy vegetables. Starch and sugar are digested and broken down to sugar (glucose) in your body, whereas fibre is not digested. The words “total carbohydrate” on food labels (https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-label-reading.pdf) refers to the sum of all three (starch, sugar, and fibre). It might be important for you to count the number of grams of carbs if it helps with your blood sugar management or when trying to have a balance between the three macros.

An excessive amount of starch and sugar in your diet may increase your blood sugar if you are at risk or already diagnosed with pre-diabetes or diabetes.

Fibre helps with managing chronic health conditions such as high blood sugar, high blood cholesterol and high blood pressure. Learn more about fibre.
(https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-fibre-facts.pdf)

To help you get the necessary amount of carbohydrates, fill a quarter of your plate with high fibre carbohydrate foods such as:

1. Whole grain bread or pasta
2. Brown rice or oats
3. Quinoa or barley
4. Sweet potato or corn

Fats:

Despite the bad reputation they may have, fats are important for your overall health. You need a small amount everyday to help your body absorb fat-soluble vitamins A, D, E, and K. Not all fats are equal, though; some are healthier (called unsaturated fats), and some should be limited in your diet (called saturated and trans fats).

There are four types of fat.

1. Monounsaturated fats found in olive and canola oil, avocado, and nuts (walnuts, pecans, almonds, and cashews).
2. Polyunsaturated fats include omega-3 found in fatty fish, walnuts and flax seed, and omega-6 fats found in nuts, seeds, safflower, and sunflower oils.
3. Saturated fats found in animal-based foods such as fatty cuts of red meat, chicken skin, high fat milk products, and in tropical oils (coconut, palm, and kernel oils).
4. Trans fats found in fried and processed foods such as deep fried french fries, pastries, and pre-prepared frozen TV dinners.

To promote a healthy heart and weight, include a small amount (2 to 3 Tbsp) of unsaturated fats in your diet everyday including oils used in cooking and dressings. Limit saturated fat intake and avoid foods that contain trans fats. All fats provide 9 calories per gram; this means that they contribute a concentrated amount of calories and when eaten in excess, can promote weight gain.

Learn more about fats (https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-healthy-fats.pdf).

Proteins:

Amino acids are the building components of proteins which your body needs for various functions:

- Building, maintaining, and repairing body muscle, tissue, skin, hair, and nails
- Producing hormones, enzymes, and antibodies
- Maintaining body fluids, such as building albumin and globulin, two proteins found in blood

How much protein do you need?

Most adults over 19 years of age require about 0.8 grams of protein per kilogram (kg) of body weight. To calculate your protein requirements:

Weight in kg X 0.8 g/kg/day = average daily protein need (g)

For example, a person that weighs 70 kg needs 56 grams of protein per day.

70 kg X 0.8 g/kg/day = 56 g

Your protein needs might be different if you are:

- Child or youth
- Pregnant or breastfeeding
- Athlete or exercising regularly
- Diagnosed with certain health conditions for example kidney disease

Food sources of protein include animal and plant-based sources:

Food	Portion size	Protein (g)
Meat, poultry, or fish cooked	75 g or 2 ½ oz or ½ cup	21
Egg (chicken)	2 large	12
Yogurt	175 mL (¾ cup)	7
Nuts (walnuts, almonds, peanuts, cashews), sunflower seed	60 mL (¼ cup)	5-9
Beans, peas, or lentils, cooked	175 mL (¾ cup)	12
Quinoa, cooked	125 mL (½ cup)	4
Fortified soy beverage	250 (1 cup)	7

See the additional resources listed below to read more about macronutrients and how to eat a balanced diet:

- Canada's Food Guide (https://food-guide.canada.ca/en/)
- Adding protein to your diet: https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-adding-protein-to-your-diet.pdf
- Foods with protein: https://www.albertahealthservices.ca/assets/info/nutrition/if-nfs-foods-with-protein.pdf
- Diabetes and carbohydrate:https://www.unlockfood.ca/en/Articles/Carbohydrate/Diabetes-and-Carbohydrates.aspx

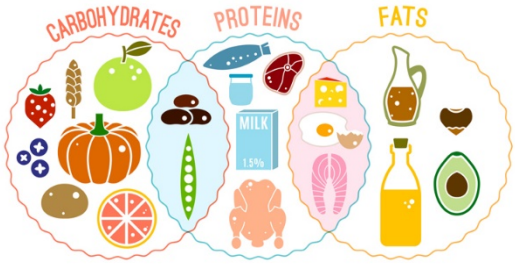

Photo from https://healthyeaton.com/the-scoop-on-macronutrients/