

12 Weeks

TO HEALTHY EATING

WEEK TWO – NUTRITION BASIC

There is always new information on the latest in nutrition; we are constantly reading, learning and being inundated about the newest trends and what is “healthiest” for us. Although the nutrition industry is always changing, there are some nutrition basics that stay constant. By knowing these nutrition basics, you will have a strong foundation of nutrition knowledge and be more able to make solid, healthy decisions in your meal planning and everyday food choices.

Understanding the basics, such as the food groups, and becoming more aware of how to incorporate them into your life, will help you to understand the roles that specific nutrients play in a healthy diet. If you want more information or if you have specific nutrition requirements, talk to a dietitian for personalized dietary advice that considers your present health status, lifestyle, food likes and dislikes.

Learning:

- The role of food
- Macronutrients
- Micronutrients
- Specific recommendations

FOOD GROUPS

1. Carbohydrates

Quick facts:

- Carbohydrates are the preferred energy source for the mind and the body.
- Carbohydrates are found in the form of sugar (glucose), starch and fibre.
- One gram of carbohydrates provides four calories and whole grain sources are packed with essential vitamins and minerals.
- The brain functions solely on glucose, the broken down end product of carbohydrate metabolism. Therefore, it is important to make sure you consume the proper amount of the right kind of carbohydrates.
- The main sources of carbohydrates are grains, starchy vegetables, fruits, dairy, milk alternatives and legumes. A small amount is found in non-starchy vegetables, nuts and seeds.

There are two types of carbohydrates, complex and simple.

1. Complex carbohydrates, found in grains, vegetables and fruits, are made up of long chains of sugar units. Complex carbohydrates take much longer to digest and absorb, provide sustained energy release and have a gradual impact on blood sugar.
2. Simple carbohydrates or sugars, whether natural or processed, are digested and absorbed quickly and have an immediate impact on blood sugar. Sugar occurs naturally in fruits, vegetables, milk and some grains. Processed sugars are also added to foods and beverages. Added sugar provides additional calories, but does not enhance the nutrient value of the product. Foods with naturally occurring sugars (e.g., fruits and vegetables) are packed with essential vitamins, minerals and fibre.

Fibre

Quick facts:

- Fibre is a partially indigestible portion of plant-based foods with many health benefits.
- There are two types of fibre, soluble and insoluble.
- Soluble fibre is soluble in water and may help to reduce cholesterol and control blood sugar levels.
- Insoluble fibre helps to keep your digestive system healthy and helps prevent constipation by adding bulk to stool.
- A high-fibre eating plan can lower your risk for heart disease and help to keep your digestive system healthy.
- Females should aim to consume 22–28 grams of fibre per day.
- Males should aim for 28–38 grams of fibre per day.

Soluble fibre is found in oatmeal, oat bran, nuts, seeds, legumes, beans, dried peas, lentils, apples, pears, strawberries, pears, blueberries and many other fruits, vegetables and grains!

Insoluble fibre is found in whole grain and whole wheat bread, barley, couscous, brown rice, wild rice, bulgur, whole grain cereals, wheat bran, seeds, carrots, cucumbers, zucchini, broccoli, celery and many more fruits, vegetables and whole grains!

To better meet your nutrient needs, a recommended range of carbohydrates is 45% to 65% of your total daily calories.

Aim to include at least three servings of whole grains per day and 7–10 servings of fruits and vegetables. Depending on your recommended energy intake — based on age, weight, height, gender and activity level — women may need six to eight grain servings per day and men may need eight to 10 grain servings per day.

Whole grains versus refined grains

Quick facts:

- Whole grains provide many health benefits not achieved by consuming refined grain products.
- Whole grains are foods made from the entire grain kernel, which includes the fibre-rich bran and germ, and the endosperm.
- Refined grains are made mostly with the endosperm.
- Whole grains are an important source of fibre, phytonutrients and other essential vitamins and minerals.
- Aim for at least 50% of your grains to come from whole grains and the other half from enriched or whole grains as well.

Carbohydrate goals for healthy eating

- Carbohydrate intake should come from whole grains, whole fruits and vegetables, beans and low-fat or fat-free milk or milk alternative products.
- Reduce added sugar in your diet; less than 10% of total calories should come from added sugars.
- Aim to consume at least 50% of your grains as whole grains. Whole grains are foods made with the entire grain kernel, including the fibre-rich bran and germ, and endosperm. Refined grains contain mostly the endosperm. (Learn to correctly read food labels to make smart choices.)
- Meet your vitamin and mineral needs by including a variety of colours, textures and tastes. Try whole grains such as quinoa, brown rice, barley, whole grain oats and barley. Reach for nutrient-rich starchy vegetables such as squash, corn, peas, yams and potatoes.

Protein

Quick facts:

- Protein is used to build and repair muscles and tissue and is essential for growth and development.
- Cells of skin, hair, fingernails as well as the tissue inside teeth and bones are all made of protein.
- Protein is made up of 21 amino acid building blocks. These building blocks are used to make hormones, enzymes and antibodies that support body processes, chemical reactions and your immune system. Protein can be used for energy; however, it is not the preferred energy source of the body and the main function remains to build and repair muscles and tissue.
- Protein is found in animal products, such as meat, cheese, milk, yogurt, seafood, poultry and plant-based products, such as beans, lentils, nuts, seeds and soy-based products.
- Protein, similar to carbohydrates, provides four calories per gram.
- A common misconception associated with protein is that if you eat more than your daily requirements of protein it turns into muscle. This is indeed false and the excess protein gets

stored as body fat. Consuming additional calories beyond what your body needs, no matter what macronutrient, will lead to weight gain.

- The recommendation for protein intake is 10% to 35% of your daily caloric intake.

Another way of looking at it is in term of grams per kilogram of body weight.

Adult with low activity level	0.8 grams per kilogram body weight
Adult with moderate activity level	1.0–1.2 grams per kilogram body weight
Adult endurance athlete	1.2–1.4 grams per kilogram body weight
Adult strength training athlete	1.2–1.7 grams per kilogram body weight
Elderly	1–1.2 grams per kilogram
Maximum recommendation for adults	2.0 grams per kilogram body weight

Recommendations:

To meet the protein needs of most people, aim to consume two to three servings per day of dairy or milk alternatives and two to three meat or meat alternative servings. A small amount of protein is also found in grain products. Plant-based protein contains fibre and is low in fat (or contains healthy unsaturated fats). Replacing meats with plant-based proteins like beans, soybeans, tofu, nuts and seeds can reduce your saturated fat intake and help you to meet your fibre needs. Aim to consume at least two servings of plant-based protein per day.

Protein is shown to increase satiety, the feeling of fullness, and takes longer to digest and absorb than carbohydrates. To help control appetite and maintain control of your food choices and intake, aim to consume protein with every meal and snack. For example, pair one tablespoon of almond butter with an apple for a snack, or add $\frac{3}{4}$ cup chickpeas to your salad to add fibre and protein to your lunch.

Protein goals for healthy eating

- Consume a small amount of protein with each and every meal and snack to increase satiety, control appetite and maintain control of food choices.
- Consume at least two servings of plant-based protein per week by replacing animal-based protein. When selecting animal-based protein choose lean versions, such as fat-free or low-fat milk, yogurt or cheese, skinless, boneless chicken breasts, turkey, pork or egg whites.
- Depending on age, gender and activity level, aim to consume two to three servings of dairy or milk alternatives servings and two to three meat or meat alternatives servings per day with emphasis on plant-based proteins to increase fibre and decrease saturated fat intake.

Fat

Quick facts:

- Fat is an essential macronutrient that has many important functions, including supplying energy and essential fatty acids, aiding in the absorption of fat-soluble vitamins and carotenoids, maintaining the structure and function of cell membranes, supporting the immune system, supporting brain function and insulating and protecting internal organs.
- You only need a small amount of fat to meet your dietary needs.
- Unlike carbohydrates and proteins, one gram of fat contains nine calories; because of this, too much fat intake is linked with increased risk of weight gain.
- Consuming too much of the wrong types of fat may increase your risk of heart disease and other health problems.
- Recommendations suggest consuming 20% to 35% of your total calories from fat, with no more than 10% of your total caloric intake coming from saturated fats.
- The three different types of fat are unsaturated, saturated and trans fats.

Unsaturated fats are found in mostly plant-based products and help to improve cholesterol values. There are two types of unsaturated fats, mono- and poly-unsaturated fats. There are two types of essential poly-unsaturated fats, omega-3 and omega-6.

- Unsaturated fats are found in foods such as olive and canola oil, fatty fish (such as salmon, sardines, trout and mackerel), avocado, nuts and seeds (flaxseed, almonds, walnuts, pecans and pistachios) and soybeans.
- Aim to consume at least two servings of fish per week to get your omega-3s, which are linked to lower LDL cholesterol among many other health benefits.

Saturated fats are found most often in animal products such as meats, poultry, eggs, dairy and cheese.

Saturated fats are also found in tropical oils, such as coconut, palm and palm kernel oil. Diets high in saturated fats increase your risk of heart disease by raising cholesterol levels.

Recommendations are to limit saturated fat to no more than 10% of your total calories.

Lowering calories from saturated fats to less than 7% can reduce your heart disease risk.

Trans or hydrogenated fats are synthetically made fats that are formed when liquid vegetable oils are processed using the hydrogenation process to produce semi-solid fats. Manufacturers use these products to make foods more palatable, increase shelf life, taste and texture. Consuming trans fats significantly increases your risk of heart disease by raising your LDL cholesterol, lowering heart healthy HDL cholesterol and impairing blood vessel function.

The recommendation is to completely eliminate trans fats from the diet (less than 1% of your total caloric intake).

How to identify between good and bad fats?

Step 1:

First you must read the nutrition facts panel on the product package to determine if the product has a measurable amount of trans fats per serving. Look for products with zero grams of trans fats per serving.

Step 2:

Reading the food label is not adequate enough to determine if a product has trans fats in it, you must also read the ingredient list on the package. If the ingredient list contains the word "hydrogenated" or "partially hydrogenated," the product contains trans fats and you should select a different product. If you consume more than one serving of the product, you will be consuming a significant amount of trans fats.

- Limit your intake of processed foods such as crackers, cookies, cakes, pies, pastries, doughnuts, desserts and even processed peanut butters and whipped cream.

Fat goals for healthy eating

- No more than 20% to 35% of total caloric intake should come from fats.
- Limit saturated fats to no more than 10% of your total calories; further reducing your intake to no more than 7% of your total calories will reduce your heart disease risk.
- Aim to consume two to three tablespoons of healthy unsaturated fats per day; replace unhealthy saturated fats with healthy unsaturated fats and eliminate trans -fats.
- Aim to consume fat-free or low-fat yogurt, milk and cheese products, lean meats (such as skinless, boneless chicken, turkey, fish, eggs or egg whites), and limit high-fat animal-based products and high-fat processed foods. Most of your fat intake should come from healthy, unsaturated, plant-based fats.
- MODERATION and PORTION are key; high-fat foods are high in calories, so portion size is important.
- If you are trying to lose weight, stick to four servings per day of added fats. One serving is one teaspoon of vegetable oil, butter or margarine; one tablespoon of nuts and seeds; one and a half teaspoons of nut butter; an eighth of an avocado; two teaspoons of salad dressing; or two teaspoons of mayonnaise.

Self-exploration exercise

Goal setting: Set SMART goals to work on for the next week

A key point to any successful plan is to complete and review your goals on an ongoing basis. Complete the following goals sheet based on the information this chapter covered. Put pen to paper to determine what changes you need to make to ensure that you have adequate nutrients from all food groups to create a healthy diet. Focus on what you believe you need to change to improve things in this area. Identify your needs, obstacles, challenges and back-up plan to create long-term positive change.

1. What do you want to do?

2. Why do you want to make this change?

3. How are you going to make this change?

4. When are you going to make this change?

5. How many days per week are you planning on making this change?

6. What barriers might you encounter that might inhibit you from making this change?

7. How might you get past these barriers?

8. What is your back-up plan?

9. Evaluate your confidence and motivation for making these changes on a scale of 1–10.
