

# MACRONUTRIENTS

## What are Macronutrients?

A substance in our diet which are essential in our body's survival. These nutrients are **protein, fat and carbohydrates**.

## Protein

### What is Protein?

Protein plays an important role in building and maintaining a healthy body. The protein in your body is constantly turning over, so it is important that new protein is provided by your daily diet. Eating enough protein will prevent you from losing large amounts of muscle as you lose weight. Eating protein also tends to make you feel more satisfied. After surgery, protein becomes particularly important to help you heal, to help your body resist infections, and to help you maintain healthy skin, hair and nails.

### What Does Protein Do?

- Makes you feel more satisfied when you eat.
- Makes you feel fuller sooner
- Important in building and maintaining lean muscle mass
- Promotes wound healing
- Helps your body resist infections.
- Maintenance of healthy skin, hair and nails.

### How Does Protein Aid in Weight loss?

Protein is broken down more slowly in the stomach this keeps us fuller longer, which will help decrease hunger between meals. It takes more energy to breakdown protein than it does fat and carbohydrates which can also help with weight loss. Protein can also help stabilize blood sugars and make blood sugar highs and lows less extreme.

### How Much Protein is needed after Weight Loss Surgery?

Your goal is to get 60-100 grams of protein daily depending on which gastric procedure you are having. Eating adequate protein may be difficult especially right after surgery. If you are unable to eat the recommended protein with food, you will need to drink protein shakes to guarantee adequate protein intake.

**Guidelines for choosing a protein supplement: Your protein can be from a powdered protein supplement or in "ready-to-drink" form.**

1. It should contain at least 20-30 grams of PROTEIN per serving.

2. The grams of TOTAL CARBOHYDRATES per serving should be less than half the amount of protein per serving. You do not need look at the amount of sugar in the supplement; it is already included in the total carbohydrates.
3. Look for a protein shake that is made from Whey protein or Whey protein isolate.

### What are Indicators of Protein Deficiency?

Slowed or delayed wound healing

Brittle nails, peeling skin and hair thinning

Muscle weakness

Fatigue

Getting sick frequently

Food cravings

### What Foods Sources of Protein?

Protein provides 4 calories per gram.

### Best sources of Protein

Food	Portion	Grams of Protein	Grams of Carbohydrates
Almonds	1 ounce	6g	6g
Anchovies	1 ounce	8g	0g
Beef, Grass fed	1 ounce	6.5g	0g
Bison	1 ounce	7g	0g
Brazil nuts	1 ounce	4g	3.5g
Cashews	1 ounce	5g	9g
Cheese, grass fed whole milk with no additives	1 ounce	7g	0g
Chia seeds	1 ounce	4g	12g
Chicken, Organic or pasture raised	1 ounce	8.7g	0g
Clams	1 ounce	7g	1g
Duck, Organic or pasture raised	1 ounce	5g	0g
Eggs, Pasture raised, organic or omega 3.	1 egg	6g	0.5g
Elk	1 ounce	9g	0g
Flaxseed, ground	1 TBS	1g	2g
Hazelnuts	1 ounce	4g	5g
Hemp seeds	1 ounce	9g	3g
Herring	1 ounce	6.5g	0g
Kefir	8 ounces	11g	12g

Lamb, grass fed	1 ounce	6g	0g
Macadamia nuts	1 ounce	2g	4g
Mackerel	1 ounce	5g	0g
Milk, whole grass fed, in small amounts	8 ounces	8g	12g
Mussels	1 ounce	6.6g	2g
Oysters	1 ounce	2g	3g
Pecans	1 ounce	2.6g	4g
Pistachios	1 ounce	6g	8g
Pork, pasture raised	1 ounce	7g	0g
Pumpkin seeds	1 ounce	5g	15g
Salmon, wild either canned or fresh	1 ounce	7.7g	0g
Sardines	1 ounce	7g	0g
Scallops	1 ounce	6g	1.5g
Sesame seeds	1 ounce	5g	6.5g
Shrimp, from the Gulf of Mexico	1 ounce	7g	0g
Turkey, Organic or pasture raised	1 ounce	8.5g	0g
Venison	1 ounce	9g	0g
Walnuts	1 ounce	4g	4g
Yogurt, Grass fed, full fat unsweetened, that contains milk and live cultures, nothing else ideally goat or sheep milk.	1 cup	8.5g	11.5g

**Good sources of Protein**

Food	Portion	Grams of Protein	Grams of Carbohydrates
Beans, cooked (pinto, chili, kidney, lima-etc)	¼ cup	4g	11g
Beef	1 ounce	7g	0g
Cottage cheese, low-fat	¼ cup	6g	2g
Mozzarella cheese	1 ounce	6g	1g
Chicken	1 ounce	6	0g
Cod	1 ounce	6g	0g
Crab, steamed	1 ounce	5g	0g
Egg, medium	1 whole	6g	0g
Egg substitute	¼ cup	6g	1g
Lobster, steamed	1 ounce	7g	1g
Milk	8 ounces	8g	12g
Non-fat dry milk	1/3 cup, dry	8g	12g
Pork chop	1 ounce	7g	0g
Salmon	1 ounce	6g	0g
Shrimp	1 ounce	6g	0g
Soybeans (edamame)	¼ cup	5g	3g
Soy milk, plain	8 ounces	7g	8g
Soy Nuts	1/4 cup	10g	7g

Tofu	¼ cup	6g	1g
Tuna, canned	1 ounce	7g	0g
Turkey	1 ounce	8g	0g
Lunch meat	1 ounce	5g	1g

## Carbohydrates

### What are carbohydrates?

Carbohydrates are our body's main source of energy. There are 2 types of carbohydrates: Simple and Complex. Simple carbohydrates are found in highly processed grains. They are absorbed and turned quickly into sugar in the blood stream. Complex carbohydrates, which are high in fiber, are absorbed more slowly into the blood stream. Complex carbohydrates can help to stabilize blood glucose levels.

### What Do Carbohydrates Do?

- Provide the body with energy
- Provides fiber to help regulate the GI tract

### How Many Carbohydrates are needed after Weight Loss Surgery?

Keep carbohydrate below 50 grams per day. This will help you to have successful weight loss.

### Which Food are the Best Sources of Complex Carbohydrates?

Beans, non GMO, organic such as:

Adzuki beans

Asparagus bean

Black beans

Black eye peas

Garbanzo beans

Green beans and snow peas

Mung beans

Soy beans: edamame, tofu, tempeh, natto, miso, gluten free soy sauce or tamari

Whole grains

Amaranth

Buckwheat

Corn, whole Non GMO

Rye, whole kernel

Millet

Quinoa

Rice: Brown, black, red or wild

Sorghum

Teff

Complex carbs are higher in fiber and have 3 or more grams of fiber per serving.

## Fats

### What are Fats?

Fats are the main way our bodies store energy. Most fats are made by our bodies but some fats we cannot make and must get them through our diet.

### What do Fats do?

Give you energy

Help your body absorb some vitamins

Keep skin and hair healthy

Fats keep us feeling fuller for longer after our meals

### How Do Fats Aide in Weight loss?

Fats increase satiety with meals. Fats can also replace carbohydrates in your meals helping to keep your insulin level low and regular blood glucose.

### What are the Types of Fats and where are they found?

Saturated Fat: These fats are solid at room temperature.

#### Best Sources:

Butter from pastured grass fed cows or goats

Grass fed ghee (clarified butter)

Organic virgin coconut oil

Organic tallow

Organic lard

Organic duck fat

Organic chicken fat

*Polyunsaturated Fat:* This is a type of fat found mostly in plant-based foods and oils. Eating foods rich in polyunsaturated fats improves blood cholesterol levels, which can decrease your risk of heart disease and may also help decrease the risk of type 2 diabetes.

**Best Sources:**

Walnut oil

Sesame seed oil

Tahini (sesame seed paste)

Flax oil

Hemp oil

**Good sources:**

Soybean oil

Corn oil

Sunflower oil

*Monounsaturated Fat:* This is a type of fat found in a variety of foods and oils. Consuming foods rich in monounsaturated fats improves blood cholesterol levels, which can decrease your risk of heart disease. Research also shows that MUFAs may benefit insulin levels and blood sugar control, which can be especially helpful if you have type 2 diabetes.

**Best Sources:**

Organic avocado oil

Organic extra virgin olive oil

Almond oil

Macadamia oil

**Good Sources:**

Canola oil

Peanut oil

Safflower oil