

## BE CARB SMART – LEARN ALL ABOUT CARBS

Carbohydrates are the ideal fuel source for your body. You can get energy from three other sources — fat, protein and alcohol — but carbs are the most efficient. Find out more...

There are two kinds of carbs:

1. starches (or complex carbohydrates)
2. sugars (or simple carbohydrates)

Your body will convert either kind of carb to the fuel (glucose) it uses for energy. Your muscles and brain require glucose for energy. Muscles, however, can burn fat for fuel when lacking glucose, and they can store excess glucose for future use. Your brain, however, needs a steady supply of glucose from the blood. This is why our mood and behaviour are affected by our blood sugar level.

**Simple carbohydrates** (sugars) include naturally-occurring sugars such as lactose (in milk) and fructose (in fruits and honey), as well as processed sugars like sucrose (table sugar). Other simple sugars include brown sugar, molasses and maple syrup.

Simple sugars are easily converted to glucose and enter the bloodstream shortly after consumption. This can cause a rapid rise in blood sugar levels, giving you a quick burst of energy and a rapid boost in your mood. If blood sugar levels rise too high, your body reacts by secreting insulin to clear out the excess. This often results in headaches and hunger.

Potatoes, grains and grain products are our main sources of **complex carbohydrates** (whole grains). Most complex carbohydrates are digested more slowly than simple sugars and release glucose at a slower rate, resulting in a steadier level of blood glucose.

Whether you consume simple sugars or whole grains, pound for pound you still get the same amount of energy:

One gram of carbohydrate contains four calories. If the nutrition panel on the side of a box of biscuits says one serving contains 15g of carbohydrates, you can determine that you are getting sixty calories from those carbohydrates ( $15\text{g} \times 4 \text{ calories/g} = 60 \text{ calories}$ ).

Aside from the slower, steadier release of energy, there are other compelling reasons to eat complex carbohydrates. Many of them contain other nutrients vital for good health, such as fibre. A slice of wholewheat bread will provide you with B vitamins, zinc and some protein. Complex carbs also tend to be lower in fat. Good choices for complex carbohydrates include pasta, rice, wholewheat bread, sweet potatoes and porridge.

Make sure you eat a variety of complex carbohydrates every day. Here are some suggestions:

- Wholegrain cereals for breakfast
- Wholewheat bread or pasta for lunch
- Potatoes, grains and legumes for dinner

# The Truth About Carbohydrates – Not All Carbs are Created Equal

## By Becky Hand, Licensed and Registered Dietitian

It's true. A carbohydrate-rich diet can inflate appetite and girth. Low-carb diets do promote short-term weight loss, but are accompanied by some severe dangers. So what should you do? The truth is, you can have your carbs and eat them too—you just have to know how to choose them.

### The Truth about Carbohydrates

- Carbohydrates are the body's ideal fuel for most functions. They supply the body with the energy needed for the muscles, brain and central nervous system. In fact, the human brain depends exclusively on carbohydrates for its energy.
- Carbohydrates are found in fruits, vegetables, beans, dairy products, foods made from grain products, and sweeteners such as sugar, honey, molasses, and corn syrup.
- The body converts digestible (non-fiber) carbohydrates into glucose, which our cells use as fuel. Some carbs (simple) break down quickly into glucose while others (complex) are slowly broken down and enter the bloodstream more gradually.
- During digestion, all carbohydrates are broken down into glucose before they can enter the bloodstream where insulin helps the glucose enter the body's cells. Some glucose is stored as glycogen in the liver and muscles for future use, like fueling a workout. If there is extra glucose, the body will store it as fat.

### All carbohydrates are not created equal.

There are basically three types of carbohydrates:

1. **Simple** carbohydrates are composed of 1 or 2 sugar units that are broken down and digested quickly.  
Recent research has shown that certain simple carbohydrate foods can cause extreme surges in blood sugar levels, which also increases insulin release. This can elevate appetite and the risk of excess fat storage.
2. **Complex** carbohydrates (also referred to as **starch**) are made up of many sugar units and are found in both natural (brown rice) and refined (white bread) form. They are structurally more complex and take longer to be broken down and digested. Complex carbohydrate foods have been shown to enter the blood stream gradually and trigger only a moderate rise in insulin levels, which stabilizes appetite and results in fewer carbohydrates that are stored as fat. Unrefined or 'whole grain' carbohydrates found in products like brown rice, whole wheat pasta and bran cereals are digested slowly. They contain vitamins, minerals and fiber which promote health. Fiber and nutrient-rich vegetables, fruits and beans which are carbohydrates also have many important functions for the body and are important for good health.
3. **Indigestible** carbohydrates are also called **fiber**. The body is unable to breakdown fiber into small enough units for absorption. It is therefore not an energy source for the body but does promote health in many other ways.

Simple carbs, complex carbs, and fiber are found in many foods. Some provide important nutrients that promote health while others simply provide calories that promote girth.

- **Sugar**, syrup, candy, honey, jams, jelly, molasses, and soft drinks contain simple carbohydrates and little if any nutrients.
- **Fruits** contain primarily simple carbohydrate but also valuable vitamins, minerals, fiber, and water.
- **Vegetables** contain varying amounts of simple and complex carbohydrates, vitamins, minerals, fiber, and water.
- **Legumes** such as beans, peas, lentils and soybeans contain complex carbohydrates, fiber, vitamins, minerals, and protein.
- **Milk products** contain simple carbohydrates along with protein, calcium and other nutrients.
- **Grain products** contain complex carbohydrates, fiber, vitamins, minerals, and protein. The amounts vary depending on the type of grain used and the amount of processing. Selecting whole grain options whenever possible is recommended.

### **What You Should Know About Low-Carbohydrate Diets**

Following an extremely low-carbohydrate diet is disastrous, dangerous, and above all—boring! Carbohydrates are NOT the enemy. Including the appropriate amounts and types of carbohydrate-rich foods in your diet is essential for long-term health and weight loss/maintenance.

### **The Body's Immediate Reaction to Very Low Carbohydrate Diets**

When there is a severe deficit of carbohydrates, the body has several immediate reactions:

- With no glucose available for energy, the body starts using protein from food for energy. Therefore this protein is no longer available for more important functions, such as making new cells, tissues, enzymes, hormones, and antibodies and the regulation of fluid balance.
- When carbohydrates are lacking, the body cannot burn fat in the correct way. Normally carbs combine with fat fragments to be used as energy. When carbs are not available, there is an incomplete breakdown of fat that produces a by-product called ketones. These ketones accumulate in the blood and in the urine causing ketosis, which is an abnormal state. Ketosis does cause a decrease in appetite because it's one of the body's protection mechanisms. It's an advantage to someone in a famine (which the body thinks it's experiencing) to lack an appetite because the search for food would be a waste of time and additional energy.
- Due to the lack of energy and the accumulation of ketones, low-carb diets are often accompanied by nausea, headaches, dizziness, fatigue, bad breath, and dehydration.
- Because of dehydration and a lack of fiber, constipation can result.
- Exercise and fitness performance is reduced on a low-carb diet. Do not be surprised if your energy level is so low that you cannot make it through your normal workout routine.

### **The Long-Term Effects of Low Carbohydrate Diets**

When you severely restrict carbohydrates, your consumption of protein and fat increases, which has several long-term effects:

- The risk of many cancers increases when fruits, vegetables, whole grain products, and beans are eliminated from the diet.

- Protein foods are also high in purines, which are broken down into uric acid. Elevated levels of uric acid in the blood may lead to needle-like uric acid crystals in joints, causing gout.
- Kidney stones are more likely to form on high protein, ketosis-producing diets.
- Over time, high protein diets can cause a loss of calcium and lead to osteoporosis.
- The risk of heart disease is greatly increased on a low-carb diet that is high in protein, cholesterol, fat, and saturated fat. A temporary reduction in cholesterol levels may be experienced, but this is common with any weight loss.

### **The Million Dollar Question**

How do you include carbohydrates in your diet in a safe, effective, and controlled way? The “Please KISS Me” (Please Keep It So Simple for Me) plan for carbohydrate control is a wonderful tool that only contains 3 simple rules:

**RULE 1: Include** the following in your diet:

- Fruits: 2-4 servings daily
- Vegetables: 3-5 servings daily
- Whole grain breads, muffins, bagels, rolls, pasta, noodles, crackers, cereal, and brown rice: 6-11 servings daily
- Legumes, beans and peas: 1-2 servings daily
- Low-fat and non-fat dairy products: 3 servings daily

**RULE 2: Limit** the following to less than 2 servings daily:

- Fruit Juice
- Refined and processed white flour products (bread, muffins, bagels, rolls, pasta, noodles, crackers, cereal)
- White rice
- French fries
- Fried vegetables

**RULE 3: Eliminate** the following from your diet or eat only on occasion:

- Sugary desserts, cookies, cakes, pies, candies
- Doughnuts and pastries
- Chips, cola and carbonated beverages
- Sugar, honey, syrup, jam, jelly, molasses

That’s it! A simple, effective carbohydrate-controlling plan that, when combined with your Diet, allows you to reap the countless benefits of complex carbohydrates and fiber while enhancing your health and maintaining a healthy weight. The long term result will be a healthy you!

# The Glycemic Index and Carb Confusion

Confusion about carbohydrates is common. Carbs are important because they give your body energy. Certain kinds of carbohydrates that we eat can quickly spike our blood sugar levels. Other carbs are slowly digested and raise the blood sugar level gradually, which helps with appetite control and cholesterol level control. Now, which kind would you rather eat? While the answer is not completely clear-cut, you can use the glycemic index as a tool to help you choose carbs carefully.

The glycemic index (GI) measures how carbohydrate-rich foods affect our blood sugar. Foods are ranked on a 0-100 scale based how much they raise blood glucose levels compared to a reference or standard food (usually white bread or glucose). That's how quickly our bodies break down carbohydrates into sugar for energy. The overall effect of a particular food's GI and the amount of carbohydrate in the food is called the glycemic load (GL).

Foods high on the GI are broken down rapidly and can quickly raise blood sugar levels. Low-GI foods are slowly digested and help control blood glucose and cholesterol levels for people with diabetes. By controlling and delaying hunger, low-GI diets have also been shown to make weight loss easier. In fact, even moderate reductions in a person's glycemic load can speed up body fat loss in overweight or obese adults.

One study compared the impact of four low-fat, high-fibre diets on an overweight or obese person's health. The difference between each diet was the quality and quantity of the carbohydrates that test subjects ate. All four diets resulted in weight loss for the overweight or obese test subjects, but the diet that featured **high carbs** and **low-GI foods** saw the best overall results, lowering LDL (bad) cholesterol and trimming body fat mass.

The Human Nutrition Unit at the University of Sydney in Australia is "home" of the glycemic index, conducting ongoing research and maintaining a database of foods and their GI rankings. Their advice is not to worry too much about the numbers game and simply focus on choosing the best foods and eating a variety of healthy foods. A few things to think about:

- Select fresh foods. In general, the more cooked and processed foods are usually higher on the GI, but this is not always the case.
- The GI rule of thumb: choose slow carbs, not low carbs. Carbs can be healthy additions to your diet (for example, they provide fibre), so you shouldn't rule out all of them. Instead, opt for carbs that are lower on the GI.
- Lots of foods, including meats, tofu, eggs, avocados, fruits, and alcoholic beverages like wine or beer, have little or no carbohydrates. Thus, they don't have a GI.
- Pasta is special. Thanks to its unique, starchy structure, the carbohydrates in pasta are less able to break down rapidly. Pasta should be cooked *al dente* or just a bit firm. Overcooked pasta gets a GI boost. Adding acidic ingredients like vinaigrette to a meal can reduce its GI level, and starchy high-GI potatoes can be made healthier by serving them cold, as in a refrigerated potato salad tossed with vinaigrette.

## Here are some sample GI levels of some common foods:

Low GI (55 or less)	Oat bran bread, al dente pasta, chick peas, lentils, kidney beans
Medium GI (56-69)	New potatoes, oatmeal, popcorn, brown rice, basmati rice, whole wheat bread
High GI (70 or higher)	Instant mashed potatoes, baked white potato, short-grain rice, corn flakes, white bagels, soda crackers, French fries

# Health Benefits of Complex Carbohydrates

There are numerous health-related reasons why you should increase your complex carbs, while decreasing the amount of simple sugars in your diet:

## 1. Complex carbs aid weight management

Foods that are high in complex carbohydrates are often lower in calories. It generally takes more time to eat 100 calories of a banana than it does to consume 100 calories of soda. Calorie for calorie, complex carbohydrates are more satisfying and the calories add up more slowly when compared to simple carbs.

## 2. Fiber keeps your feeling full longer

Most Americans don't get the recommended amount of fiber per day: 25-35 grams for women and 38 grams for men. Increasing your complex carbohydrate foods always means an associated rise in fiber intake. And fiber helps you feel fuller for longer, meaning you'll feel the need to eat less often.

## 3. Complex carbs contain nutritional benefits

There is no limit to the amount of nutritional benefits you get from switching to complex carbohydrates. These foods contain vitamins, minerals, phytochemicals and other nutrients that are rarely present in simple-sugar food items.

### **Be a smart consumer: choose complex carbs over simple carbs**

People and dieters alike are finally waking up to the fact that carbs are not the enemy. The recent focus on the detriments of low-carb diets has had a positive effect—there's a renewed interest in the benefits of complex carbohydrates and whole grains.

But beware; food manufacturers are exploiting this interest with numerous ways to confuse complex-carb seekers. A good whole grain food choice should be made primarily from whole grains. It sounds intuitive, but it's easy to get misled:

### **Be wary of misleading food labels**

Regulation surrounding labeling claims on whole grain foods is weak. Any food with a modicum of whole grain in it can be labeled "whole grain". Check the ingredient list: if "enriched" is in the first ingredient, put it back on the shelf. Look for the word "whole" in the first ingredient to assure it is indeed a good whole grain food.

### **Keep an eye out for the fiber content in your food**

The truth is in the label, and particularly the "fiber" section of the label. A good serving of whole grains will have 3 grams of fiber or more per serving. Only choose breads, pastas, cereals and grains that meet this requirement.

### **You can't go wrong with eating fresh fruit and vegetables**

These are your best low-calorie sources of complex carbohydrates. They are packed with nutrients and fiber and make great snacks throughout the day.

### **Balancing carbs, proteins, and fat is key**

Keeping your carbohydrates to 50-60% of your total calories is a good way to divvy up your nutrients. Follow this rule of thumb: "Make half your grains whole" and eat 5 servings of fruit and vegetables a day. These strategies will ensure that your complex carbohydrate intake is adequate.

# Choose Preferred Carbohydrates

## **GO!—Preferred carbohydrates**

Preferred high-carbohydrate foods are:

- Rich in water
- Rich in fiber
- Minimally processed, natural food—not concentrated, refined, or processed
- Low to moderate in calorie density

**Nonstarchy vegetables** are optimum foods for a weight-loss plan because their calorie density is so low, around 65-195 calories per pound.

**Fresh fruit** is a delicious treat that is high in moisture and fiber. Whole fruit is preferable to dried fruit, fruit juice, or canned fruit in syrup. If you are purchasing canned fruit, try to find a variety that has been packed in water or its own juice.

**Starchy vegetables and legumes** are high in moisture and fiber, and they are nutritious too! Potatoes and sweet potatoes are easy to microwave and are great for lunch or snacks in the office.

**Cooked whole grains** have a high water content, are high in fiber, and fill you up on fewer calories than low-moisture items like bread or crackers.

(Tip: White rice is lower in calorie density than white pasta.) White rice and pasta are cooked and high in moisture so they are still low in calorie density, around 517 calories per pound. If you don't like whole-grain items, these would be preferable choices over bread. Bread is more than double the calorie density with calories per pound at 1224 to be exact.

## **Caution: Cut Back on More Calorie-Dense Nutritious High-Carbohydrate Foods**

While whole-grain bread is 1224 calories per pound, it is not that much different from white bread at 1229 calories per pound. It is nutri-

tious but they should not make up the bulk of your diet if you are trying to lose weight. Whole wheat bread is a better choice than white bread because of the fiber and nutrients, but you should not have all of your grain servings from bread.



Dried fruit is around 1360 calories per pound so it should be eaten in addition to plenty of fresh fruit.

## **WHOA: Keep Intake of Refined, High-Carbohydrate Foods to a Minimum**

What are refined carbohydrates?

- Refined starchy foods
- Foods high in refined sugars
- Foods with high calorie density
- Foods with little or no fiber

Examples of refined carbohydrates include: crackers, bakery items, donuts, bagels, cookies, pretzels, brownies, candy, bread and cake.

**Items made with white flour and sugar are very high in calorie density and usually contain little moisture or fiber.** These foods should be a once-in-a-while treat rather than daily staples for those who want to lose weight.

The amount of calories found in a piece of cake is about the same as that in three baked potatoes. While it is MUCH EASIER to eat a piece of cake than it is three potatoes, the three potatoes would make you feel fuller longer. In fact, most people would have a hard time to eat three potatoes. They would feel full on one potato which is about a third the amount of calories as the cake.

# Why Is It Important to Eat Grains, Especially Whole Grains?

Eating grains, especially whole grains, provides health benefits. People who eat whole grains as part of a healthy diet have a reduced risk of some chronic diseases. Grains provide many nutrients that are vital for the health and maintenance of our bodies.

## Health benefits

- Consuming foods rich in fiber, such as whole grains, reduces the risk of coronary heart disease.
- Consuming foods rich in fiber, such as whole grains, as part of a healthy diet, may reduce constipation.
- Eating at least 3 ounce equivalents a day of whole grains may help with weight management.
- Eating grains fortified with folate before and during pregnancy helps prevent neural tube defects during fetal development.

## Nutrients

Food sources of the nutrients in bold can be found in the Dietary Guidelines for Americans. Click on the nutrient name to link to the food sources table.

- Grains are important sources of many nutrients, including **dietary fiber**, several B vitamins (thiamin, riboflavin, niacin, and folate), and minerals (**iron**, **magnesium**, and selenium).
- Dietary fiber from whole grains, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease. Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods such as whole grains help provide a feeling of fullness with fewer calories. Whole grains are good sources of dietary fiber; most refined (processed) grains contain little fiber.
- B vitamins (thiamin, riboflavin, niacin, and folate) play a key role in metabolism – they help the body release energy from protein, fat, and carbohydrates. B vitamins are also essential for a healthy nervous system. Many refined grains are enriched with these B vitamins.
- Folate (folic acid), another B vitamin, helps the body form red blood cells. Women of childbearing age who may become pregnant and those in the first trimester of pregnancy should consume adequate folate, including folic acid from fortified foods or supplements. This reduces the risk of neural tube defects, spina bifida, and anencephaly during fetal development.
- Iron is used to carry oxygen in the blood. Many teenage girls and women in their childbearing years have iron-deficiency anemia. They should eat foods high in heme-iron (meats) or eat other iron containing foods along with foods rich in vitamin C, which can improve absorption of non-heme iron. Whole and enriched refined grain products are major sources of non-heme iron in American diets.
- Whole grains are sources of magnesium and selenium. Magnesium is a mineral used in building bones and releasing energy from muscles. Selenium protects cells from oxidation. It is also important for a healthy immune system.

## Great Grains

The easiest way to get more healthful whole grains into your diet is to make sure your pantry is stocked with them at home. You're probably familiar with some whole-grain options – 100% whole-wheat bread, brown rice, and oatmeal, for example – but what about some of the less common, more "exotic" grains? The next time you shop for food, pick up a box or a bag of a whole-grain product that you've never tried before. You should be able to find plenty of novel whole grains at your grocery store or local natural foods store, such as:

- Bulgur (cracked wheat) consists of wheat berries that have been steamed, dried, and then cracked apart — it has a nutty taste and cooks quickly.
- Quinoa is an ancient, protein-packed grain from South America that cooks up light and fluffy; it should be rinsed before cooking.
- Millet, which has been cultivated since prehistoric times and is popular today in Asia and Africa, is rich in vitamins and minerals and is best toasted before boiling.
- Buckwheat in its various forms can be found as a breakfast cereal (farina), in Japanese soba noodles, as roasted groats (kasha), and more.
- Cornmeal is ground from whole corn and can be baked into a variety of products or boiled up as polenta.
- Don't forget about whole-wheat versions of couscous and pasta.

The best way to tell if a product is whole grain is to check the ingredient list on the label. Ideally, you should find the words *100% whole wheat*, or *100% whole grain*; at the minimum, whole wheat or whole grain should be one of the first ingredients.

## The Top Ten Carbohydrate Sources/Categories Are:

- 10. Brown rice:** The key here is brown, with the fiber husks in place. Rice allergies are rare and it digests readily without too much distress, bloating or gas. It is best for fat loss to keep serving sizes under 1 cup cooked or ¼ cup dry weight.
- 9. Steel cut whole oatmeal:** Not the rolled oats you grew up eating, but maybe what your grandmother grew up eating. This is the whole oat with all valuable fiber and nutrients in tact. It takes a bit longer to cook, but the nutty flavor and slower insulin response are worth it. As with brown rice, keep serving sizes under 1 cup cooked or ¼ cup dry weight.
- 8. Quinoa:** Another high fiber, gluten-free cereal grain. Higher fiber and mineral content than the oats or rice for even better insulin control. If taste doesn't suit you at first, mix 1:1 with oatmeal until you get used to it. Once you are, you'll be hooked!
- 7. Yams/sweet potatoes:** These tubers are best prepared baked, in the skin. Not much more carbs than a regular russet of similar size, but more fiber, vitamins and minerals. I like them baked, then refrigerated cold and sprinkled with a little cinnamon, nutmeg and allspice.
- 6. Winter squashes:** Butternut, pumpkin, spaghetti or acorn squash are all very nutritious and now can be found in markets year round in most places. Cut them in half, scoop out the seeds and bake them skin side up over a ¼" of water. These are full of fiber, vitamins and minerals and a nice change of pace.
- 5. Peas and Legumes:** Most beans varieties and green peas fit this bill. Choose from black, pinto, navy, kidney, white, red, chickpeas, garbanzo, etc. beans or green peas, as all of these are high fiber and very filling. Protein content, along with the fiber, fills you up without filling you out by keeping insulin response low. For best results, soak and cook slowly. As a snack, try hummus!
- 4. Colorful fibrous veggies:** Red, yellow and orange bell peppers, green beans, beets, yellow summer squash, zucchini, purple eggplant, carrots, parsnips, red and green chili peppers... the colors mean carotenoids, and plenty of mixed carotenoids means more antioxidant coverage. A wide variety of colorful vegetables in your diet will improve your health and make your skin glow. There is almost no downside to the amount of vitamins, minerals, phytonutrients, and fiber (at low calories) they provide.
- 3. Super fruits:** Fruits are great foods, full of fiber and enzymes, and with their quick digestion yet slow insulin response makes them ideal for an instant energy boost. But not all fruits are created equal and most don't even make this list, but a select few make it almost to the top. Blackberries, blueberries, raspberries, pomegranates, cranberries, and [acai](#) are amazing foods. You will feel the difference when you eat them versus other fruits. They are excellent when your sick, or when you [workout](#) hard, for that extra level of protection. High antioxidant, phytonutrients, enzymes, fiber and vitamins at moderate calories give you a lot of bang for the buck. They also have cleansing alkalizing effects on you internally, which along with all the antioxidants, provides an enormous immunity boost and keeps your digestive system functioning properly.
- 2. Leafy green vegetables:** Kale, sea kelp, turnip greens, collard greens, mustard greens, beet greens, chlorella, wheat grass, endive, alfalfa sprouts, spring green lettuces, spirulina, and spinach are so low calorie, yet so nutrient dense, they rank very high on my preferred carbohydrate list. Include these several meals a week and they will cover almost any base you missed. They've got the minerals, phytonutrients, fiber and vitamins in high quantities. These also are alkalizing and cleansing, keeping your digestive system running at full capacity.
- 1. Cruciferous vegetables:** Broccoli, broccoli rabe, cauliflower, bok choy, napa cabbage, Chinese cabbage, green and purple cabbages are maybe not as high in micronutrients as the leafy green vegetables or super fruits, yet they contain DIM or Diindolymethane, a phytonutrient that acts as an estrogen disposal agent. Excess estrogen plagues almost anyone who is overweight or has practiced poor dietary habits for any amount of time. When you rid yourself of excess estrogen, you free up testosterone to do its job of building muscle at the expense of body fat. It is best to consume these incredible foods in large quantities. Try broccoli rabe or baby bok choy, sautéed in a little olive oil, with sea salt and garlic. Try mashed cauliflower in place of mashed potatoes, it's terrific.

Now, I would suggest **80% or more of your total carbohydrate intake** come from above preferred foods list. That doesn't mean you can't have other complex carbohydrates like dairy products, bananas, white rice, pasta or whole grain bread ever again. It just means we will eat those foods more sparingly now. Simple sugars (other than whole fruit sources) should be used very rarely, if at all.

# The Correct Balance of Carbs, Protein and Fats in our Diets

The recommended dietary needs of active or sedentary people aren't really that different. But active or athletic people consume more calories and the exact amount of caloric intake depends on the age, body size, activity and the intensity of training.

A diet that lacks the essential nutrients can make a person feel weak and performs at a sub par level, so identifying the proper balance of fats, carbs, proteins, vitamins and minerals in a person's diet is really needed for nutritional health.

## Carbohydrates

Is the most efficient fuel for the body and should supply 55 - 60 % of the daily caloric intake for all types of people. But the carbohydrate intake for an athlete should make up for 60- 70% of his/her diet.

But please do take note : The total calorie count from simple carbs (sugars) should not exceed 15 % of a person's diet, the rest should come from complex carbs. Since carbs cant be stored in huge amounts, a person can increase his energy reserves by eating more of these complex carbs.

Examples of Complex Carbohydrates:

1. All types of Pasta
2. Brown or red rice
3. Potatoes
4. Whole grain Cereals
5. Whole grain Breads

## Protein

We need protein to build, maintain and repair our body's tissue. The protein needs of sendentary and most active people are about the same. In an adult's diet 20%-30% of calories should come from protein.

These days, the average person gets more than enough protein in their diets. Let me point out that excess protein will not build muscle- only exercise does that. Extra protein is stored as FAT.

Common Sources of Proteins:

1. Milk
2. Eggs
3. Fish
4. Yogurt
5. Beef
6. Chicken
7. Pork
8. Tofu

## Fats

Fat is the most concentrated form of energy that is stored in the body. Fat is the primary fuel during prolonged aerobic exercise.

For all people, less than 30% of your daily caloric intake should come from fat, and less than 10% from saturated fat. Fats have always been considered as a health risk since a diet that is high in fats can actually impair performance.

But please don't confuse body fat from excess dietary fat (the fats you eat); Body fat is the stored form of dietary protein, carbs and fats. Believe it or not, even lean people have enough fat stores for emergency energy reserves.

1. What are Saturated Fats- are mostly found in meats and processed foods and this type of fat is not heart friendly.
2. What are Unsaturated Fats- these are fats that are derived from nuts, fruits and olives. Please note that these type of fats remain liquid at room temperature.

## Vitamins

Vitamins are needed by the body to process the carbs, protein and fats we consume. Active people generally don't require supplementary vitamins IF their caloric intake comes from a varied, balanced diet that is high in complex carbs.

## Minerals

Minerals are needed for the metabolism of carbs, protein and fats. Iron for example, is a vital component in the transport of oxygen in the blood. Sodium and potassium help insure the balance and maintenance of the body's water.