



Nutrition with Pure-Health

Is Nutrition Important?

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Glycemic Index

Many people have heard about the Glycemic Index and are confused as to how it relates to them. Before I explain the Glycemic Index there are a few points that will make it easier to understand.

All carbohydrates (grain, pasta, rice and potatoes) are broken down into sugar in your digestive system. This sugar is then absorbed into your bloodstream, which signals your body to release the hormone insulin. Insulin causes your body to store any excess sugar that is in the bloodstream. The faster sugar is dumped into your bloodstream, the more insulin is released, therefore the more sugar is absorbed. When sugar is absorbed, all excess is stored as fat.

The Glycemic Index (GI) is a ranking of foods from 1 to 100 based on how quickly they raise blood sugar levels after eating. Foods with a high GI are converted into sugar and digested quickly, this causes sugar to quickly enter your bloodstream and insulin levels to quickly rise. This type of food causes great fluctuations in your blood sugar levels. A food low on the GI is digested and broken down into sugar more slowly. This means that sugar is slowly released into your bloodstream and there is no drastic spike in your blood sugar level.

How is this significant to me?

- Low GI diets help people lose weight
- Low GI diets can improve your body's sensitivity to insulin
- Low GI diets can help control diabetes
- Low GI diets can keep you full for longer
- Low GI diets can prolong physical endurance
- Low GI diets have been shown to help with premenopausal and menopausal symptoms

What foods are low on the glycemic index?

Whole grains are much lower on the glycemic index than refined, white grains. Whole grains include oatmeal, barley brown rice, whole wheat, etc. White, refined products are very easy to break down, convert to sugar, and therefore to fat. This is one more reason to eat whole grain bread!

All fruits and vegetables (except potatoes) are fine. Some are high on the glycemic index but are so low in calories that there isn't much sugar in them to begin with. Carrots are very high on the GI but very low in calories and rich in nutrients. No one ever got heavy eating too many carrots.

Obviously, sugar itself is very high on the glycemic index. Keep in mind that sugar is found in many foods that you would not expect to find it in such as yogurt, ketchup, cereal, etc.

Choosing the best carbohydrates is very simple. Choose foods closest to their natural state (muffins and cookies don't grow on trees) and you will probably not go wrong. Grains are meant to be eaten the way they grow, as whole grains.

The Glycemic index does not account for the digestion of proteins or fats, which do not release sugar into your bloodstream. If you would like more information on how your body digests different foods please let the doctors know. We are always very interested in knowing what information we can provide to allow you to optimize your health!

Glycemic Index vs Glycemic Load

There is much confusion centered on the glycemic index and how it relates to our food choices. Let's clear some of that up:

- The Glycemic Index ranks carbohydrates based on how quickly our bodies convert them into glucose (sugar).
- The Glycemic Index compares foods by grams (weight).
- The Glycemic Index ranks foods from 0-100 with higher values given to foods that cause the most rapid rise in blood sugar. Low GI : 55 or less Medium GI : 56-69 High GI : 70 or more
- The Glycemic Index of a food is measured when that food is eaten alone.
- A food high on the GI will cause a more dramatic increase in blood sugar levels.
- Your body is most at balance when your blood sugar is kept constant (no highs or lows).
- If blood sugar rises too quickly, your brain signals your body to secrete a greater amount of insulin.
- Insulin helps bring sugar out of the bloodstream, primarily by converting any extra into fat and storing it in your body.

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- Greater rate of increase in blood sugar leads to a greater insulin release, more storage of fat and, then a drastic lowering of blood sugar levels. This is what leads to an energy rush and then lethargy and hunger after eating a candy bar.
- This is why high GI foods, even though they may be high in calories, don't satisfy your hunger for very long and lead to cravings.

This is not the whole story.....

Another rating that is important is the glycemic load of a particular food, meal or snack. The glycemic load takes into account not only how quickly a certain food is converted into sugar in the body but also how much sugar (carbohydrate) a particular food contains. For example:

Watermelon has a very high glycemic index but does not have a very high glycemic load. (This means that it does not dump a lot of sugar into your bloodstream all at once.) Why?

Your body's glycemic response depends on the type of food eaten and the amount of carbohydrate (sugar) calories consumed. The more concentrated with calories a carbohydrate is, the more sugar it dumps into your bloodstream. Although watermelon's sugar is absorbed quickly, there are not many calories in the watermelon to begin with.

So...even though all of the sugar that is in the watermelon is absorbed into the bloodstream quickly (high glycemic index) there is not a lot of sugar to begin with, (low glycemic load). As you can imagine, the same amount of chocolate would have a high glycemic index and a high glycemic load.

This explains why even though carrots and watermelon are all high on the glycemic index, you are not likely to get fat eating them.

Besides, when you eat a meal or a snack the glycemic load of the meal is the average glycemic index of all the foods eaten. If you balance your meals correctly, no food is off limits.

Other limitations of the glycemic index:

- GI values are affected by the preparation of the food (i.e. al dente pasta has a lower GI than fully boiled pasta).

- There are differences in the glycemic response from person to person. The GI is based on an average, individual results can vary a significant amount.
- One person's glycemic response has been shown to vary from one time of day to another.
- Many people use it as a strict guide for 'what to eat'. The GI does not take into account the health of a particular food.

Sugar and your Immune System

At Pure Health we educate our patients about the best ways to keep health at a maximum. Our patients understand that the nervous system is the master system in our body. The nervous system even controls the immune system. In order to fight off sickness and disease we must keep our immune system at its maximum health by staying subluxation free. Many patients have also heard of us talk about how important it is to limit refined sugar intake especially when we are under the weather. Sugar affects your immune system by lowering white blood cell response.

A scale called the leukocytic index is often used to measure how many invaders a white blood cell can kill within an hour. The average leukocytic index is approximately 13.9. According to Dr. Stoll, author of 'Saving Yourself from the Disease-Care Crisis', within fifteen minutes of consuming 100 grams of refined sugar, the leukocytic index drops to 1.4- meaning the average person loses over 90 percent of immune function! This is important to remember before giving your child suffering from a sore throat a sugary Popsicle to suck on. By doing so, you only further reduce his or her much needed immune response.

The United States Department of Health recommends no more than 10 teaspoons of sugar per day. Most natural health practitioners feel this is still too high. You probably think that you and your children don't consume that much. Consider the chart below:

How Do Low Carb. Diets Work?

High protein/low carb diets are the latest craze to help you lose weight quickly. How do these diets work? Should I avoid all carbohydrates?

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People used to think that the fat in your food is stored as fat in your body; that fat made you fat. In fact, this is not true. The carbohydrates you eat are more easily converted to fat in your body than the fat you eat.

Carbohydrates are foods containing grains, corn, potatoes and sugars. When these products are eaten they are digested and become sugar to fuel your body. Any extra sugar that is not needed for fuel is stored as fat. Even though licorice, for example, says 'fat free' implying it won't make you fat – the complete opposite is true.

Carbohydrates are converted to sugar in your body. More sugar equals more fat.

Eating sugar also creates a sugar rush followed by a sugar crash which feels like hunger. Some people become 'addicted' to the rush and go back to the cookies or crackers to snack and get the rush back. This results in even more sugars (carbohydrates) that are quickly added to the love handles and saddlebags.

As a rule, processed products are more easily converted to sugar. Not all carbs are bad, in fact some are very healthy and necessary. Please refer to previous newsletters for info on the glycemic index. In short, white sugar is very high (think fatty) on the glycemic index while whole wheat is lower (think slow release, less chance of fat storage) on the index.

The next time you see someone (hopefully not you) eating at McDonald's, remember, it is not only the 'fatty' red meat that causes you to gain weight, it's the white buns, sugar in the coke and the potato french-fries along with the ice cream (sugar) that packs it on.

The answer by some diet gurus (Atkins, South Beach, Bernstein) is to go to the extreme of eating no carbs. In other words, only protein and fat. This has the desired effect of reducing the amount of sugars moving about in your blood and being stored as fat. The way meat is digested also avoids the rush/crash cycle of carbs. You tend to feel full longer without hunger and your energy seems more consistent. However, there are very serious drawbacks to a high protein diet. Especially for women, high protein diets cause the loss of calcium from their bones and can lead to osteoporosis. To process the protein requires a lot of water. When the water goes out it also takes a lot of water-soluble vitamins and minerals (see previous newsletter). So now you are thin,

dehydrated and vitamin deficient. To top it off, a high meat diet leads to high cholesterol and the animal fats that are digested make for weak cells in your body that are more likely to become cancerous. Already, the leading cause of death is cardiovascular disease followed by cancer. Too much meat is not wise.

Recent studies have shown that people get results initially from the low carb diet but after one year there was no significant difference in the weight loss achieved by people on low carb diets vs. other diets. People tended to regain their weight loss after the initial six months of 'success'.

What is the solution? Balance. Your body flourishes when balanced. Eat a small amount of high quality, low index carbs and a small amount of lean high quality protein with small amounts of healthy fats. Fill in the difference with some fresh fruit and lots of veggies and you'll have a healthy diet. The key is to experiment and listen to your body. Experiment with different foods, and different eating styles (i.e. not eating after 7 o'clock) to see if they work for you life and your body. Eating tends to be habitual. What you eat daily is often very similar. If you are going to have habits they may as well be good ones! Eat less and move more- that's the secret to losing weight and being healthy. Remember, you can't fool Mother Nature!

Healthy Lunches to go

Planning healthy brown bag lunches is one of the most challenging aspects of parenting. Every parent struggles between what their child wants them to pack, what's easy, while still fitting in some healthy food. I have always found that knowledge is power. The more you are able to understand food labels, the better you will be at making healthy choices. (Sometimes you even get to make healthy choices and keep it a secret from the kids.)

Everyone is aware that healthy foods like fruits, vegetables, whole grains, etc. are best. Unfortunately, in today's society we are often forced to make some less healthy choices. My kids have become aware that not everyone is eating whole spelt wraps with avocado, tomatoes and organic cheese. Other families find it difficult to change their kids' tastes if they have gotten used to less healthy food. I get many questions about this topic so let me give you some insight as to what I look for when reading labels and choosing what to feed my family.

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An easy way to add nutrients to your child's lunch is to make their sandwich/wrap on whole wheat. When you are buying the bread look at the ingredients. Whole grain flour should be the first ingredient. The names of breads can be confusing. 'Whole Flax Bread' may be white bread with flaxseeds in it. Brown bread is often white bread with added molasses to make it brown. Getting your child used to eating whole grains is a great gift to them. Remember though, you will probably have to switch the household to whole grains; lead by example.

Is yogurt a healthy snack? Yes and no. I will not get into the debate about the merits of daily dairy intake here but it is worth researching it rather than taking the Dairy Board's word for it.

Most yogurt has a great deal of sugar in it. A healthy option is to buy unsweetened yogurt and add fruit. Many parents find it hard to get their children to eat it this way if they are used to sweetened yogurt. If your children are eating sweetened yogurt, remember to take the sugar content into account when considering what other snacks to feed them. Moderation is the key.

I would suggest that it is never a good idea to feed your children aspartame. Aspartame is currently the most commonly reported toxin to the FDA. When Aspartame is digested, one of its byproducts is formaldehyde, a known carcinogen. I would, therefore always choose sugar-sweetened yogurt over 'artificially sweetened' yogurt.

Buying full fat yogurt is not necessary. But, many parents say, I always hear that children need fat in their diets. That is true, children need good fat (from foods like olive oil, avocados and nuts). Dairy products and red meats contain saturated (bad) fats. These fats are a major contributing factor to heart disease and many other ailments by depositing in your arteries.

Why do I buy fat free pudding? Pudding has the same downsides as yogurt - too much dairy and sugar.

However, if you buy regular pudding you usually get trans fats! Yes, they add them to the pudding for texture. These fats are not naturally found in any foods. Trans fats are also known as hydrogenated oils, palm oils and many other names. They just might be one of the least healthy things you can consume. What they do to damage your health would not fit on this page. Fat free pudding has no fats, including trans.

Avoiding fat is not necessary in your diet, avoiding trans fats and saturated fats is.

Why do I think it is so important to bake homemade muffins and cookies to send in lunches? What is wrong with store-bought or out of a box? Unless it says otherwise on the label I guarantee you that anything you eat out of a box has trans fats.

When you bake things yourself you can use whole-wheat flour. You can also add bananas, carrots, oatmeal etc. You can make them more exciting for your kids by sprinkling chocolate chips. A whole wheat, home made banana muffin or oatmeal cookie with chocolate chips is still healthier than anything you can buy in the stores. You can bake a double batch and freeze them. It's economical too!

What are good fats?

(Essential fatty acids)

Fatty acids are the key components of fats. Fatty acids are classified into two major groups; those the body can easily make called Non-Essential Fatty Acids, and those that the body cannot make, called Essential Fatty Acids (EFAs).

The body cannot make EFAs, we must get them from our diet. This is not true of other fats because the body can easily create them from protein or carbohydrates we eat. In this way essential fats are like vitamins that we must eat, the body cannot create them on its own. The essential fats are the polyunsaturated fats. The nonessential fats are the saturated and monounsaturated fats.

EFAs support your cardiovascular, reproductive, immune, and nervous systems. EFAs are necessary to produce a wide variety of hormones that effect many functions from our heart, fertility, and immune system. EFAs are also needed for proper growth in children.

To reduce your chances of becoming deficient in EFAs you should eat a diet rich in natural foods. Green vegetables, many seeds, and oils such as soybean, flax and wheat germ are often high in EFAs.

North American diets are very deficient in this most important nutrient. Essential oil supplements are available at health food stores and most drug stores. They can make a huge difference in your health.

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Should I take Vitamins?

As with many great ideas that have taken shape in our society (like chiropractic), vitamins have had and continue to have their detractors despite overwhelming evidence supporting their benefits.

For many years there have been a few common pro and con arguments regarding vitamins. The 'con' or against vitamin camp has maintained that you can receive adequate nutrition from eating a well-balanced meal (what is that and who is doing it?). They state that you can get all the vitamins you need from your food and vitamins are a waste of money. The 'for vitamin supplementation' group answers that with today's mass production of crops in nutrient deficient soil, with the use of pesticides and the fact that much of our produce is shipped green to withstand intercontinental travel, the fruits and vegetables are very low in nutrients (particularly the micro nutrients required to absorb the more commonly known vitamins such as Vitamin C or B.)

In fact, research supports the pro and con group. Vitamins are absolutely necessary for use to receive the necessary nutrients to maintain wellness - but not all vitamins are created equal. A poor grade vitamin is like poor grade food - not much there to absorb. Also, a coated easy to swallow vitamin slips right on through without being absorbed. Like folic acid for nerve development in growing babies, or Vitamin C to raise your immune system against colds, research supports vitamins for recovering your health and maintaining wellness. To choose a good one, the 'Rule of Thumb' is that a good vitamin will tend to cost a little more, won't be heavily coated and shiny on the outside and will have a strong unpleasant smell.

A good basic vitamin routine for wellness will have a good multivitamin, at least 1000mg of Vit. C and some essential fatty acids taken daily. Remember to cut back (out) the things that cause you to lose vitamins - namely caffeine products, a high meat diet and excess alcohol and smoking.

Vitamins don't, however, contain many of the micronutrients our body requires - so keep eating your fruits and veggies!

The Proper Way to Take Vitamins

There is a lot of confusion as to the proper way to take your vitamins; let's clear some of that up.

There are two types of vitamins: water-soluble and fat-soluble. The fat-soluble vitamins are Vitamin A, D, E and K. All other vitamins are water-soluble. Fat-soluble vitamins require fat (i.e. food) in order for them to be absorbed. Taking these vitamins in the morning on an empty stomach is as good as throwing them out the window. Be sure to have food in your stomach when taking them. Water-soluble vitamins can be taken on an empty stomach as they only require water to be fully absorbed; your body has a lot of that.

Fat-soluble vitamins can be stored in the cells of your body. If you took an EXTREME amount of them they would build up in your system. (This may cause mild symptoms which stop when you stop taking the vitamin.) Water-soluble vitamins are not stored in your body, if you take too much of them they are excreted in the urine.

When taking a multivitamin, be certain to take it with food as it contains both fat and water soluble vitamins. It is never advisable to take your vitamins with coffee or soda as they dehydrate you and leach vitamins out of your system.

Please let us know if you have any other question about other supplements (or any other topics.)

Do you need to eat meat to build muscle?

Most people know that protein is the major building block of muscle. All protein is made up of amino acids. Protein in our diet is essential for the ongoing maintenance and formation of muscle tissue. When people think of protein they often think of meat as their major source.

Research has shown that as we age our need for protein increases due to a reduced ability to use and store amino acids. Combined with good nutrition, resistance training (weight lifting) is the most effective way to increase strength and muscle mass. This begs the question ... Will you develop muscle more easily and get more out of your workouts if you eat meat?

A study was published in the American Journal of Clinical Nutrition to help answer this question.

Dr. Mark Haub and colleagues had 21 men in their 60s undergo a 12 week program of strength training three days per week while eating one of two diets. One group ate a vegetarian meal plan with meat substitutes (tofu or soy) as

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their main protein source. The other group ate steak, ground beef and beef tips.

Following the 12-week program, men in both groups showed improvements in strength, with no difference between the two groups. The researchers concluded that as long as a person eats enough protein, the source of protein is not critical.

Eating more protein is necessary for active people of any age. It appears that as long as you take in all of the required amino acids the source of the protein is not crucial. Remember that the body responds to balance and may respond poorly to anything that you eat in excess.

As always, there is no magic answer. Get adjusted, feed the body healthy food and exercise regularly to improve your health and stay young!

References

Haub MD, Wells AM, Tarnopolsky MA, Campbell WW(2002). Effect of protein source on resistive-training-induced changes in body composition and muscle size in older men. American Journal of Clinical Nutrition 76:511-517.