

OPTIMIZE YOUR BODY WEIGHT: PRACTICAL HEALTHY EATING PLAN FOR LIFE

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PAST AND FUTURE OF DIETS

The Atkins the Zone and South Beach diets are all other fashion diets are designed to lose weight and ultimately feel better in our skin, have a higher quality life. However losing weight for most people is the only goal and they don't think about what happens after. It has been statistically proven that 2/3 of the dieters gain the lost weight back during the first year and gain back more weight than the initial weight after two years.

The reason is you gain back the lost weight, because diets don't work long term!!

A healthy eating plan and lifestyle targeting your health automatically results in weight loss as by product.

A diet where there is any type of restriction, inhibiting foods to eat don't work. It has been the hardest to acknowledge that we need to change our life style and eating habits forever. It does not mean that we cannot eat "bad" foods ever, but if we do eat them, we do it with awareness. A healthy diet is a way of eating and not a diet. The first part of healthy way of eating may target weight loss if the person is overweight, but most of all it will protect your lost weight for gaining it back ever. Healthy eating contributes to our health and the weight loss will occur as a byproduct.

There is a new trend on the „eating healthy” market and that focus on blood sugar regulation. An eating plan or way of eating which is based on the blood sugar effect of the different foods called the Glycemicly Controlled diet. This way of eating was the result of a scientific discovery by Dr Jenkins in Toronto Canada in 1981, who was the first to recognize that different carbohydrates elevates the blood sugar level to different heights. Dr. Jenkins suggested the first diet based on the Glycemic Index (GI) for type 2 diabetic patients. The GI diet has swept through the world eve since to USA, Australia and Europe and now arrived to Asia.

It has been shown in research comparing calorie restricted diets to the GI diet, that the GI diet is the only one which does not reduce Basal Metabolic Rate (BMR: is the amount of energy the body need at rest, for our organs to work and keep us alive without any physical activity) and the weight is lost form fat and not muscle (Dr Ludwig 2004). This is a very important founding because dieting, which causes rapid weight loss is due to water and muscle loss.

Rapid weight loss from starvation comes from water and muscle loss and not fat!

Losing muscle mass slows down the BMR, which is crucial mistake of all diet. When the body does not get enough energy (<1200Kcal per day), the physiological process of starvation begins, therefore the body will go in a "power save" and decrease the amount of energy expended even in rest. During starvation the body

needs to protect our highest organ system the brain, so it must supply it with enough energy. Since the body, so as the brain prefer sugar for energy, the body will break down muscle protein and make sugar out of it to provide the brain with fuel. When we have less muscle we have less tissue to use energy and this is when the BMR slows down. Once the BMR set to a lower level and to your original diet and you start eating more the body will store all the excess energy as fat. Remember this the next time you want to starve yourself because you will lose muscle and on the end you will gain back fat.

Starvation will slow down BMR and when you start eating normal again you gain back fat!

WHY DO WE NEED TO REGULATE OUR BLOOD SUGAR LEVEL TO STAY HEALTHY AND PERFORM WELL?

Sugar is the most efficient fuel for our body. It is the most efficient because the body can make energy of sugar/glucose the fastest way and with the least amount of energy input. Simply it costs the least for the body to make fast energy from glucose. This is why our cells and primarily the brain prefer to use glucose for energy. The brain (the liver and kidney as well) receives the glucose from the blood but all other tissues, such muscles can only take up glucose with the help of a hormone, called insulin. Since the brain is the highest authority regulating our body, it is most important to provide constant fuel for the brain. If the brain does not get enough glucose we can feel it immediately. Low blood sugar level is a stress for the body and it is called hypoglycemia. This is when we became sleepy, tired, cannot concentrate and have the shakes or crave sweets.

Low Blood sugar (Hypoglycemia) is stress for the body.

High Blood sugar levels destroy the blood vessels, causing hypertension and CVD.

Hypoglycemia creates a series of events in the body which is regulated by other hormones as well, to elevate blood sugar level back, mostly by using our sugar storage in the liver and muscle as well as braking down and transforming muscle protein to glucose.

The body does not allow high blood sugar level either. When the sugar is high in the blood for a long time, it can deposit to the wall of the blood vessels, making them lose flexibility and causes high blood pressure and diabetes. Insulin is the hormone which will bring the glucose from the blood to the body's cell so it can be used for energy and it also protects the blood vessel from damage. Having high blood sugar level, therefore result in high insulin levels to reduce blood sugar level the fastest way. The higher the blood sugar level the more insulin is being produced and the fastest the sugar level will be dropping down in the blood. If you eat a lot of carbohydrate which elevate blood sugar high (e.g. rice) a lot of insulin will be produced to decrease it. High insulin level then can drop your blood sugar level so low that you may get a so-called hypoglycemia caused by food you ate.

If you are in a hypoglycemic state you cannot concentrate, you make a lot mistakes, you can train hard and do your best on competition. Further more, low blood sugar level caused by high insulin levels locks the fat storages in, so you cannot lose fat if you are on a weight loss program. High blood sugar level decreases activity of the immune cells. If you eat a lot of sugar you may catch a cold easier. Low blood sugar levels inhibit healing and regeneration of the body, so if you have frequent blood sugar spikes your injury will take longer to heal.

WHAT ARE THE CONSEQUENCES OF HIGH BLOOD SUGAR AND INSULIN LEVELS?

The higher the sugar in the blood the more insulin is being produced in the pancreas. The higher the insulin level the faster it takes sugar to the cells and the faster it drops bloods sugar level. Insulin level peaks approximately 90 – 120 minutes after a meal. This is the time when insulin has the strongest effect and drops blood sugar level down. The blood sugar level reaches the lowest point this time. The fluctuation (increases and decreases) of blood sugar and insulin level after a meal is called the glycemic response of that meal.

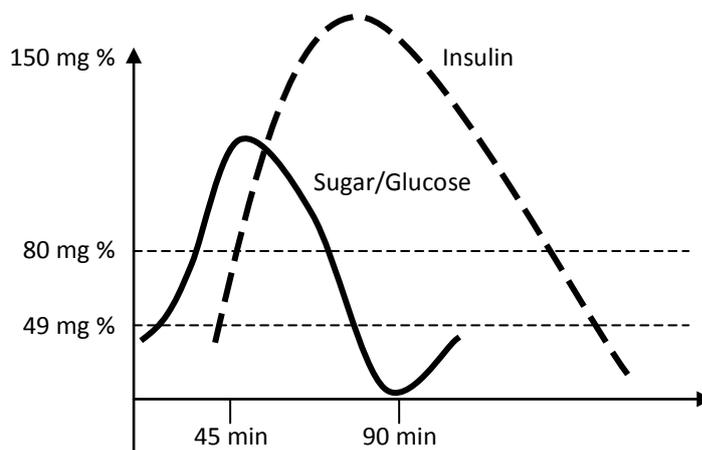
WHAT IS HYPOGLYCEMIA?

Hypoglycemia or low blood sugar level, occurs when blood sugar level drops approximately below 40 mg%. The reasons for hypoglycemia may be genetic, however in most cases it is caused by excess consumption of those carbohydrate, which have an unfavorable glycemic response. These foods are called high glycemic index foods (potato, rice, white bread, corn). After consuming high glycemic index foods bloods sugar and insulin levels rises and drops down fast and causes hypoglycemia.

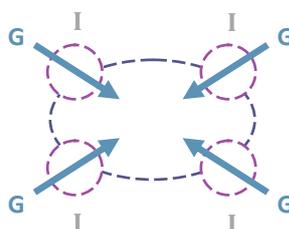
WHY IS HYPOGLYCEMIA BAD FOR THE BODY?

Hypoglycemia is stress for the body. During hypoglycemia the brain does not get enough fuel and can't function well. In hypoglycemic state we can't concentrate, our energy level drops down, we feel tired, sleepy, and have a bad mood. Our body's natural response this time to crave sweets. Once blood sugar level dropped down too low we can faint. Giving sugar immediatly to the person can save life this time.

The consequences of eating too much sugar: Hypoglycemia



The higher the blood sugar level the more insulin is produced and the more insulin receptor called for work. The more insulin receptor works the faster the cell takes up sugar, therefore the faster the bloods sugar level drops.



WHAT HAPPENS TO THE SUGAR IN THE CELL?

1. When we eat normal healthy portion, as much as our body needs, the sugar in the cell is used to keep our blood sugar stable for our cells to functions right, for physical activity, for growing, repairing and regenerating damaged tissue.
2. The body stores sugar in the liver and muscle. The storage form of sugar is called glycogen. An average person stores about 2000 Kcal carbohydrate in the form of glycogen. This glycogen provides energy during sleep at night and during short term fasting. The body uses this glycogen to burn fat, when we don't eat enough from food. The glycogen stored in the liver is responsible for maintaining blood sugar level (provide constant energy for the brain) and the glycogen in the muscle provides energy for muscle movement such as exercise.
3. Eating lots of bread, pasta, rice, pastry and we don't exercise enough the excess carbohydrate will transform to fat and store in the fat depot. Eating too much carbohydrate, which happens on a fat free diet may cause further fat gain

WHAT HAPPENS WHEN THE INSULIN SENSING RECEPTORS ON THE CELL MEMBRANE GET TOO TIRED?

Eating too much carbohydrate for a long time may lead to obesity, high cholesterol level and the desensitization of the insulin receptors. When the blood sugar and insulin levels are always high the insulin sensing receptors cannot sense insulin anymore. They simply become tired, and sugar can't go in to the cell. In this case both, the sugar and the insulin level remain high in the blood stream. This state is called insulin resistance, which lead to type 2. diabetes mellitus.

The second stage after insulin resistance is when the pancreas gets too tired to produce enough insulin to keep up with the demand. In this case the blood sugar level stays high and insulin level is very low. This state is called type 1. diabetes mellitus, where the patient need to receive insulin shots several times a day to stay alive.

WHAT CAN I DO TO REGULATE MY BLOOD SUGAR LEVEL AND KEEP IT STABLE?

Healthy eating is part of a healthy lifestyle, which begins with your thinking, mindset and includes physical activity as well.

Healthy mindset means that you need to look into yourself and view food as fuel for your body and not the main source of enjoyment. The first reason why people overeat, too much sweets and fatty foods to compensate, is the lack of love in their lives.

Eat to live and don't live to eat!

Second part is to accumulate 45-60 minutes of physical activity every day. Aerobic exercise will help blood sugar regulation the next 24 - 48 hours.

Third, there is no magic pill regarding the diet, but here is a healthy eating plan by which you can actually regulate your blood sugar levels, hormones and physiological processes as well as strengthen your immune system, and this is based on the GI of foods.

Living healthy 90% of a time put you on to your journey of living a healthy, teaches moderation and allows you for occasional but conscious treats.

WHAT IS BLOOD SUGAR REGULATING EATING PLAN?

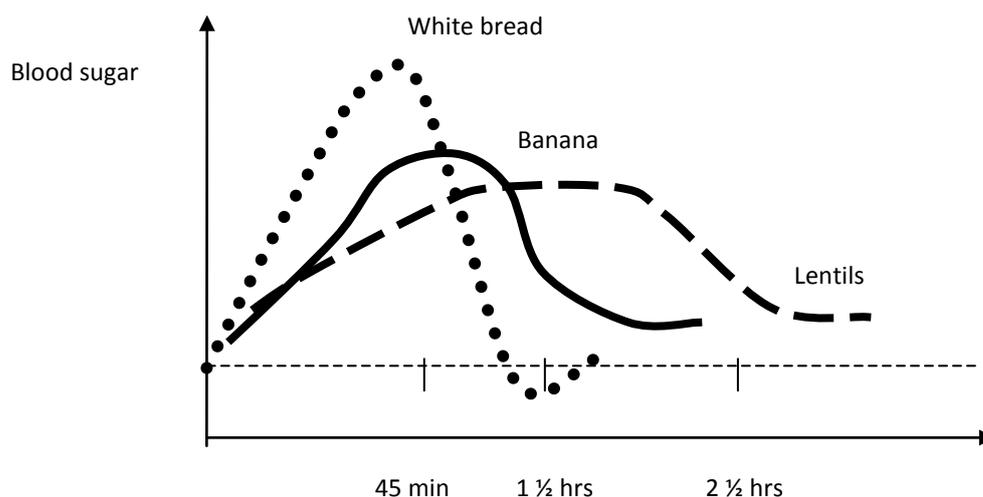
The healthy eating based on the GI and the glycemic load is the part of a carbohydrate aware nutritional planning. It stabilizes the blood sugar and insulin levels therefore gives you high energy level during the day to work and perform efficiently not only your daily activities by improving concentration, your physical performance as an athlete but also to lose fat weight and keep off the lost weight. It will strengthen your immune system as well, so won't get sick so easily.

If you eat a low fat high carbohydrate diet, where the carbohydrates come in form high GI rice, potato and white bread and pastry your blood sugar and insulin levels will be fluctuating like spikes.

In a favorable GI meal you may consume rice and potato but as part of a balanced meal. See below and learn to make your balanced meals.

A low GI way of eating is based on eating lot of vegetables, fruits and legumes (beans lentils, peas) with lean chicken, turkey, fish, beef, lamb, eggs, and tofu in one meal. A GI favorable meal for an average person have about only one handful of high GI rice, potato or white bread on the plate in one meal.

Blood sugar levels after consuming different Carbohydrates



Depending on the speed of the absorption and the corresponding blood sugar level, carbohydrates can be simply divided into three glycemic index categories: high, intermediate or low GI. See tables below.

Low GI Foods (GI < 55)			
Food	Quant.	GI	CHO (g)
Muesli, toasted	56 g	43	41
Orange juice	240 ml	46	26
Orange, 1 medium	112 g	44	10
Apple juice nature	240 ml	40	33
Dried apricot	5-6 pc (30g)	31	13
Apple	1 medium	38	18
Cherry	10 pc	22	10
Grapefruit	½ of medium	25	5
Pear	1 medium	38	21
Fat free milk	240 ml	32	13
Spaghetti par-boiled	168 g	41	56
Yogurt, low fat, strawberry	200 g	28	33
Prunes	6pc (40 g)	29	25
Chocolate bar	42 g	49	26
White chocolate	29 g	42	18
Beans in tomato sauce	112 g	48	21
Oatmeal cooked	224 g	49	26
Lentil soup	240 ml(224 g)	44	24

Intermediate GI Foods (GI = 55-70)			
Food	Quant.	GI	CHO (g)
Carrot cooked	70 g	49	3
Pineapple	2 slices	66	10
Sponge cake	1 slices (60 g)	46	32
Green banana	1 medium	55	32
Pita bread	1	57	38
Whole grain bread	1 slice	69	14
Ice cream vanil.	50 g	61	10
Mango	1	55	19
Strawberry jam	1 tbs	51	18
Grapes	84 g	46-50	15
Honey	1 tbs	58	16
Raisin	30 g	64	28
Rice noodle, cooked	168 g	58	48
Table sugar	1 tsp	65	5
Sweet corn	84 g	55	15
Muesli nature	62 g	56	28
Angel-hair spaghetti	168 g	55	56
Macaroni & cheese	146 g	64	48

CHO "Free" Low GI Foods
Low-GI and have little CHO
Alfalfa sprout
Bell peppers
Bok choy
Cabbage
Celery
Chicory
Chinese cabbage
Cucumber
Lettuce
Endive
Escarole
Lettuce
Parsley
Radicchio
Radishes
Spinach
Salads
Turnips
Watercress

High GI Foods (GI>70)			
Food	Qant.	GI	CHO(g)
White bread	1 slice (35 g)	80	17
Corn flakes	30 g	84	26
Puffed rice	30 g	82	27
White rice, boiled	180 g	109	39
Cracker	3 db	74	17
Candy	10g	80	17
Baked potato,	1 (120 g)	93	15
Watermelon	140 g	72	8
Sport drink Isostar	240ml	73	17

Food is a powerful toll to regulate blood sugar level.

You should be never hungry during the day and night.

The type of food consumed determines our blood sugar response. Food is powerful tool regulating blood sugar. You may remember being hungry soon after a pancake-breakfast, or rice porridge breakfast; a big pile of white rice with vegetables for lunch or a potato meal for dinner. It may also be familiar being tuned out, losing concentration and craving for sweets in the middle of the afternoon after a rice meal. You may have experienced waking up starving at 6 AM after previous night large potato-meat dinner. These meals are glycemicly unfavorable and resulted in poor glycemic response.

Meals such as a garden omelet with a small whole grain toast for breakfast or with baked beans and fruit or a vegetables with chicken curry and peas soup with fruit for lunch and, an apple with nuts, fish with green beans and obergine (eggplant) grilled vegetables for dinner are glycemicly favorable, promoting excellent glycemic response. Your meals are balanced when you feel satisfied, have high energy level and able to focus mentally on your tasks 45 min after eating. You have stable energy level throughout the day without the help of caffeine. Building consciousness to consume balanced meals for stable blood sugar level is the goal of glycemic control.

WHAT HAPPENS WHEN WE MIX DIFFERENT FOODS IN A MEAL?

Glycemic index averages out when we mix them together in one meal. If we add high GI white rice with low beans the result is intermediate GI meal.

What else is important? The GI of foods are influenced by the ***type of carbohydrate; the presence of fiber, protein, acidity, tables sugar or fat; the physical form of food; the method of food preparation; and the size of the consumed food portion.***

Factors Influencing GI of Food

1. Starch Type
2. Fiber Content
3. Protein
4. Acidity
5. Fat
6. Food Form (degree of milling)
7. Method of Preparation (cooking time)
8. Table sugar
9. Portion Size

The first factor affecting GI is the starch type of the carbohydrate. Basic principle is that carbohydrates such as stone¹ and citrus fruits, above-the-ground growing vegetable, whole grain products, and legumes have low GI. Carbohydrates such as potato, grains and rice contain different ratio of starch-carbohydrate molecules (amylose and amylopectin²). Higher amylopectin content promotes lower GI. In case of rice Basmati and Uncle Bens convertedTM rice contain high amount of amylopectin therefore they have lower GI compared to the other types of rice such as brown, white and instant. The GI of rice greatly depends on the cooking time (see later).

The presence of fiber reduces GI. Fiber acts as physical barrier and slows down enzyme activity in the stomach. In the presence of fiber the stomach stays full longer because the content passes slower to the intestines. High fiber foods such as lentils, beans, legumes and whole grain bread products are 'filler' foods and have low in GI.

Adding protein to carbohydrate lowers the glycemic response. Protein digestion in the stomach occurs in a highly acidic environment by gastric acid³. It takes time to break down large protein molecules therefore the stomach content moves slower to the intestines.

Acidity added to a carbohydrate meal also lowers glycemic response. Creating acidic environment in the stomach without adding protein to the meal retards stomach emptying. One tablespoon of lemon juice or

¹ Fruits with a pit in the middle: plum, peach, apple, pear, cherry, nectarine etc

² Amylopectin is branched, amylose is a linear carbohydrate molecule

³ Over produced gastric acid, travels up the esophagus and causes heart burn

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red wine vinegar may reduce GI by 30%. Drinking lemon water or eating a small salad with lemon juice can help you to lower a high GI potato, rice, bread or corn meals.

Fat holds back carbohydrate absorption. Fat is a large molecule and it attaches to carbohydrate. Fat is first broken down to smaller fat drops (emulsification) then to molecules before it can absorb. Fat holds carbohydrate molecules and slowly lets them pass into the blood stream. Fat is not the most favorable factor to use in large amount to lower glycemic response because of its high calories. Adding a small amount of good fats (nuts and seeds, avocado and olive oil) is a healthy way to reduce GI.

The form or the size of carbohydrate particle is an important factor determining glycemic response. The smaller the particle size – the finer the grain is milled or the carbohydrate chopped, mashed or juiced—the higher the GI. For example, whole wheat bread may be more nutritious than white bread, but their glycemic index is almost identically since their flour is refined to the same degree. Whole grain and pumpernickel bread contain the whole grains. The flours of whole grain breads are coarse and their emptying rate is lower from the stomach. Juicing, blending or mashing disrupts the carbohydrate cells and elevates GI. The disrupted sugar cells absorb much faster to the blood and elevate GI considerably as compared to eating the whole fruit. Juicing also removes the fiber from fruits and vegetables and raises GI.

The length of cooking carbohydrates influences the GI. The longer a starch is cooked the more water it can hold and the more gelatinized it become. The more gelatinized a starch the faster it absorbs and raises blood sugar. The longer you cook rice, potato or pasta the more gelatinized they become and the higher their GI. Partially cooked rice and pasta (al dente) is less gelatinized, absorbs slower and has lower GI.

Table sugar (sucrose) surprisingly has an intermediate blood sugar response and also lowers GI. Table sugar consists of one glucose molecule of high GI (100 units) and one fructose molecule of low GI (26 units). The average of the two molecules yields an intermediate GI of 65 units. Table sugar lowers GI by preventing gelatinization of starchy foods. A tsp of jam on your toast is a lower calorie choice than butter. Consuming moderate amount of sugar, jam or marmalade (2-3 tsp per day) is healthy and essential for women, who have genetically lower brain serotonin level. Sugar transports tryptophan (AA) from the blood to the brain, where it converts to serotonin and keeps us 'sane'.

The portion size is key factor influencing glycemic response. Consuming a small amount (one handful) of high GI carbohydrate does not raise blood sugar level too high. Doubling the portion raises blood sugar and insulin levels twice as high. Consuming triple the original amount of food only elevates blood sugar by a marginal amount. The sugar level in the blood can be only raised to genetically determined level, whereas the level of insulin can rise to multiple levels. The higher the insulin level the lower it drops blood sugar level and the faster it triggers a hypoglycemic response.

GLYCEMIC LOAD

Making prediction on all day blood sugar level by using the GI, which is based consuming foods containing 50 g of carbohydrate is less practical. E.G the GI of cooked carrots is 70. Carrot is however is very low in carbohydrate, so in order to eat 50 g of carbohydrate from carrot one has to consume 1,6kg of carrot. Another example is a carbohydrate rich food such as the baguette bread. 100g of baguette bread contains 48g of carbohydrate. So in order to eat 50 g of carbohydrate one has to consume 104g of baguette bread.

Also the scientific statement of the application of a 70 GI says: *"The blood sugar effect after eating 104 g of baguette bread is equal to eating 1,6kg of carrots"*. Nutritionally the practicality of this statement is not so valuable. Who would eat 1,6 kg of carrot in one meal?

An adaptation of the GI diet is the Glycemic Load (GL). GL takes the blood sugar effect of 100g of the consumed food and it is better value to predict the blood sugar effect. It is known that small portion of a high GI meal may not cause such an elevation in GI compared when eating 3 times as much from it. The GL therefore, is a more precise method when designing GI controlled meal.

How to calculate GL

First, you need to calculate the GI per 100g of food. (GI/100)

E.g. a food with GI 70 for 100 g and we actually consume 4,8g of it has a GL $\rightarrow 70/100 \times 4,8 = \text{GL } 3,4$

A 100g of baguette bread which has 48 g of carbohydrate have a GI of 70 and a GL $(70/100 \times 48) = 34$

The actual blood sugar reaction of food also depends on which food do we consume it together. Only by relying on the GI of food therefore is not enough to make a precise judgment for a nutritional sound diet. One of the most important factors here is the effect of fat. Fat slows down the absorption of carbohydrate, however high fat foods are very high in calories. It is very important to remember how much unnecessary calories you bring in when you want to use fat to reduce GI. High fat foods can contribute to fat gain. Healthy meal planning also considers the amount of fat you consume. Think about as condiments and use it in moderation.

Considering the GI of foods, it is preferred to consume low GL meals, so the blood sugar and insulin effects of the meal stay on a moderate and steady level. The insulin promoted fat storage on a low GL diet therefore will be much less. See Table below containing GI and GL of consumed foods

The GI and GL of a sample meal

	GI	GL	Carb (g)	Calories
Fetuccine with eggs	32	15	46	205
Marinara sauce	0	0	8	36
Rye-kernel bread	41	5	12	69
Cranberry juice	52	16	12	124
Total:	36	36	31	434

You may find the GI and GL of thousands of foods on www.mendosa.com

LEARN TO MAKE YOUR OWN GLYCEMICALLY FAVORABLE MEALS

The first step in learning to make a healthy plate is to recognize the major nutrients, what is considered as a carbohydrate, a protein and a fat. See the individual food nutrients below.

Fuel Nutrients

<p>Carbohydrates</p> <ul style="list-style-type: none"> - Starch: Bread, pasta, rice, cereal, corn, pastry - Legumes - Fruits - Vegetables 	<p>Fat</p> <p>Animal - solid: pork lard etc, dairy fat (butter, cream)</p> <p>Plant - liquid: oil – olive, sunflower, corn, soy, nuts and seeds, avocado</p> <p>Fish oil, flax seed</p>	<p>Protein</p> <p>Meat, poultry, fish eggs, dairy, soy</p> <p>Shrimp, tofu</p>
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Mixed meals considered carbohydrate:

Pancake

Baked potato

Banana

Breads

Noodle soup

Steamed rice

Fried rice (made with less oil)

Cereal

Pasta

Fried noodle (made with less oil)

Muffin

Waffle

Oatmeal, Muesli

Fruit salad

Vegetable soup

Beans, Peas, Lentils

Meals considered as Protein:

Chicken curry

Grilled Chicken

Sweet-sour chicken

Steak

Beef /lamb stew

Fish

Omelets

Satay

Sausage

Tofu, Tempeh

Milk (low fat)

Prawn

Meals considered as Fat:

Butter

Cream

Margarine

Oil

Peanut butter

Walnut, almonds (all nut and seed)

Mayonnaise

Thousand island salad dressing

Cheese

Coconut milk

Croissant

Fried potato

Chocolate cake

Ice cream

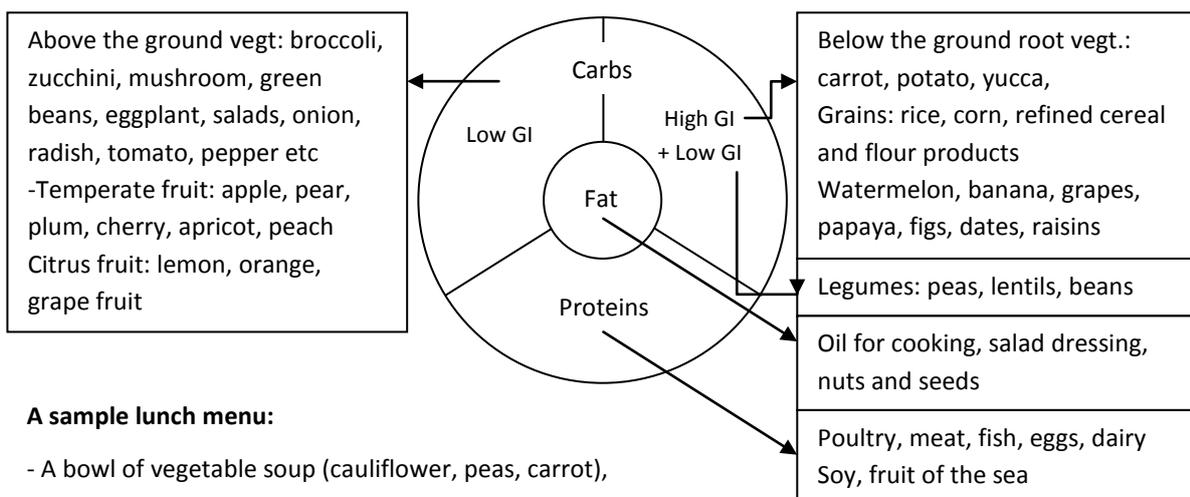
PRACTICE BUILDING YOUR SAMPLE MENU PLAN

Based on the previous guidelines, now it is your turn to design a one-day sample menu.

1. Note the parts of the plate above and chose your foods accordingly You decide how many meals and snacks you would like to try how they work for you.
2. Note the three major parts: **Protein, Carbohydrate** and **Fat**.
3. Look up the protein, carbohydrate choices
4. Pick your foods –protein, carbohydrate and fat—accordingly to the GI your portion size showing on the plate.
5. Use other GI lowering factors – acidity and fiber when consuming high-GI carbohydrates (rice, potato, refined grains).
6. Plan the time of your meals and snacks – they are no more than five hours apart – and the time of your workout. Use low-GI carbohydrates in each meal prior to your workout.
7. Plan to drink 2-3 dl of filtered or mineral water 10 minutes before each meal or snack, the total of 2-2.5L per day.
8. Make notes for easy food shopping
9. Keep low GI foods at home, so you never run out of good foods, such as bean, lentil peas in the can or frozen

Designing one meal

Food Distribution on plate 22-25 cm diameter



A sample lunch menu:

- A bowl of vegetable soup (cauliflower, peas, carrot),
- Grilled chicken (with any spice) with handful of fried rice, and baby bock choy with soy sauce.
- 3 slice of Pineapple

LOW GI EATING GUIDELINE

1. Eat 5-6 times a day every 3 hours
 - 3 meals (breakfast, lunch, dinner) & 2 snacks
 - 4 small meals & 1 snack – due to work and training
 - Don't let more than 5 hours between meals
2. Eat within 1 hour of awakening. Breakfast is your most important meal. Keep it low GI
3. Eat a small snack in the afternoon and before bedtime
4. Eat before you become hungry
 - When you are hungry your blood sugar level is too low. Remember when you stressed and have high anxiety you don't feel hunger and your body is using your muscle for energy
5. Consume 50-70% of your CHOs from low GI foods.
6. Take time and sit down in a calm environment to eat.
 - Stress interferes with digestion.
7. Distribution kcal during the day—this is the time your body needs energy for sport
 - Night eating is unhealthy— consuming 50% of calorie after 19:00, interferes with digestion, rest-recovery and makes you gain fat
8. Drink 2dl water 10 minutes before each meal and drink your sport drink during training. 1,5L water of sport drink every hour of training

You should never feel tired after a meal!**If you do feel tired after eating, that means you had a glycemically unfavorable meal.**

Make changes to your meal (eat more beans, peas, lentils and whole meal bread instead of white rice potato and white bread) use the plate method and see what happens. You have a unique body and unique taste for food, so only individual eating plan will work for life. Once your body gets use to feeling good and energetic all day and you eat a bad meal you will feel bad even more. Your body will protect you to from eating bad. Listen to your body. It takes about 2-3 weeks to from your existing meals and balancing them glycemically favorable. I think it is worth to experiment for 2 weeks which will give you a lifelong healthy eating plan. Get out of your habits and give yourself chance of health by building healthy habits.

Cooking tips for GI favor meals

1. Use brown rice or red rice instead of white
2. Cook rice and pasta so it is little chewy. Overcooked and pasta very high GI
3. Half your fried rice noodle and mee dish should be vegetable
4. Use bean flour, chickpeas flour to thicken sauces or to add with stir fried food
5. Add peas to vegetable soup
6. Use olive oil and lemon/lime for salad dressing instead of too much mayo based Thousand Island dressing
7. Substitute mayonnaise with low fat yogurt in creamy salad dressings
8. Add kidney beans or lentil to green salad and some grilled chicken for a complete meal
9. Drink lemon water or unsweetened lemon tea with rice, potato foods.
10. Celery makes a better choice for crunchy snack than peanuts or other oily seeds
11. Substitute half of the white flour with bean or peas flour in cakes. You can never taste the difference. See recipe below.

GI balanced Brownies**Ingredient:**

5 large eggs,
 1 tsp vanilla extract
 1 tsp ghee or butter
 4 tbs sugar, 2 tbs fructose
 1 large apple cored
 5tbs cooked chickpea/dhal
 100 g flour (rice flour for gluten free version)
 1/2 tsp baking powder
 Salt
 100 g cooking chocolate, chopped
 3 tbs coco powder
 Butter and flour for the baking pan

Preparation time: 10 minutes

1. Preheat oven 180 °C
2. In blender on high speed mix 1 minute: eggs, sugar, vanilla extract, butter, apple and cooked chickpeas
3. In mixing bowl: mix flour with baking powder and salt, then coco powder and chocolate pieces
4. Add the mix in the blender to the dry mix in the mixing bowl. Mix well
5. Pour batter to buttered and floured baking pan

Baking time: 35-40 minutes

Store in fridge or freeze it. After refrigeration the best to preheat brownies in microwave 10 second.