

Supplementary Guide to Creating New Eating Habits.

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Preparing for Week One: RESET

You should always check with your doctor before beginning to be sure that the program is right for you.

This is Lifestyle change not a diet.

Clear the shelves of goodies and unhealthy foods. White breads, pastries, rice etc. Replace with healthier foods so when you snack, you snack well

Plan ahead have good snacks available. Carry an extra drink or bar with you.

Have a large glass of water with your snacks.

If you have given up coffee for RESET and are feeling fatigued, try a couple of large glasses of water. That may help.

Do not go hungry. If you feel weak, tired or dizzy have a snack. Either a serving of fruit or an extra nutrition bar would be a good choice.

After Reset Begin to exercise, start slow if you do not already exercise.

Some people say day one is rough. Keep going!

Some people say that they have a bar and shake together and feel full for a longer time.

Some people notice that they are...how should I say.... A little gassy ☹.... ☺ bear with it, that should pass, no pun intended! as your body becomes used to the soy. (The vanilla shakes are soy protein based, the choc. and strawberry are whey.) Beano is an over the counter product that should help.

Experiment with the shakes a bit. Add frozen fruit, or make it with a fruit juice.

Plain yogurt with a scoop or two of chocolate Nutrimeal is yummy. Almost like chocolate pudding!

If you feel hungry as you move through Phase I or II some people report that adding a scoop of Fibergy- (we have two flavors-Peach Mango or Vanilla Almond) helps to combat this.

If you hit a plateau, in Phase I, add a little more exercise or consider doing the reset again.

Remember...no one is perfect. You are making lifestyle changes be patient with yourself and persevere. If you fall off of the right track just start again. You will make the changes you need to. Believe it and say it to yourself over and over. (Your brain is attracted to the messages it receives over and over.No kidding!)

Real Life Recipes using the Nutrimeal Shakes.

Unique Ways to Enjoy the Shakes

Peach Vanilla

2 Scoops Vanilla Nutrimeal
1 peach (skin included)
1 c. pineapple juice (add more juice or water to make 12 oz.)
ice
1 scoop of Soyamax

Chocolate Mint

2 scoops Dutch Chocolate Nutrimeal
12 oz. water, skim milk, or soy milk
10 ice cubes
1-2 scoops Almond Fibergy
The naughty part...we add 4 Junior Mints or a portion of Peppermint Candy Cane. Could try peppermint flavoring.

Orange Chocolate

2 scoops Chocolate Nutrimeal
12 oz orange juice
1 med banana (optional)
1-2 scoops of Soyamax
(Sometimes I will take off the Orange peel, leave the white part) and toss it into the blender for a difference. Add ice or the banana to make it thicker.

Banana Smoothie

2 scoops Vanilla Nutrimeal
8 oz orange juice
4 oz water
1 med banana
1-2 scoops Soyamax

Tropical Smoothie

2 scoops Vanilla Nutrimeal
1/2 c. crushed pineapple
2 Tbls. Grape nuts
12 oz. milk/water/soy milk
1/2 banana
1/2 tsp. coconut extract
1-2 c. ice
1-2 c. Soyamax

Chocolate Malty

2 scoops Choc. Nutrimeal
1/2 tsp. coconut extract
1/2 tsp. vanilla extract
1/2 sm. banana
1 scoop Soyamax
12 oz. milk/water/soy milk

Strawberry Shake

2 scoops Strawberry Nutrimeal
12 oz. milk/water/soy milk
1/2 c. frozen strawberries
1 tsp. vanilla extract (optional)
1 scoop soyamax

Mixed Berry Shake

Substitute strawberries for frozen mixed berries

Other Ideas from People

2 scoops of Soyamax (sometimes I exchange with French
Vanilla Nutrimeal)
2 scoops of Fibergy
1 cup water
Strawberries & Bananas (or any fruit of your liking)
Mix in a blender and Voila, a 5 minute,
nutritious, great tasting breakfast. --John

Nutrimeal:

Every day I give my children this drink for breakfast. (This is a recipe for 3):

3 cups soyamilk

1 banana

1/2 cup frozen strawberries (or blueberries, etc) I vary this daily

4 scoops nutrimeal (or if I am out, I substitute Soyamax and 2 bananas)

2 teaspoons OptOmega

Blend until smooth.

If I am out of frozen fruit, I use chocolate and slices of frozen bananas.

My boys have ADD and have benefited from this regime. No more Ritalin. Have done this for about three years now. Daily!

If the drink is for myself:

1 scoop soyamax OR 1 scoop nutrimeal

1/2 frozen banana slices

2 strawberries, or a few blueberries --Christine

—

I have a LEAN shake every morning with:

1 scoop Soyamax

2 scoops Nutrimeal

1 scoop vanilla Fibergy

2 cups either Chocolate Soymilk or Strawberry Soymilk or Vanilla Almond Milk and change the Nutrimeal flavor accordingly.

Chocolate Nutrimeal goes well with vanilla or strawberry Soymilk

Vanilla Nutrimeal goes well with chocolate or strawberry Soymilk

Strawberry Nutrimeal goes well with any Soymilk

The Soymilk gives it a thicker consistency and is non-dairy for lactose intolerant.

Others have added ice, fruit (strawberries, banana (thick), etc.) -- Torrie

I just put the soyamax in my shaker glass with 8 oz of orange juice and use it to take my pills. Gosh it is so good I can't imagine orange juice without it anymore.

I put the Nutrimeal in the blender with a banana and 8 oz skim milk. I start with blend and when it is thoroughly blended I switch to whip and have that for lunch. Again it is delicious. --Marlene

I put in the blender: 1 cup of FF milk, 1 scoop Nutrimeal, 1 scoop Fibergy, 1 scoop Soyamax, 1/2 to 1 whole frozen banana, a squirt of Opt Omega and blend it. (I prefer

Strawberry Nutrimeal and Almond Fibergy, the Chocolate tastes good too). It makes a delicious milkshake that, when the kids here the blender starting, they come running, begging for me to share it with them. No kidding! --Jacki

For our family, the key is getting the products blended well. My husband and son like to use the blender for their concoctions; one of my son's favorite breakfasts is a cup of milk, 2 t. Opt Omega, a scoop of Chocolate Nutrimeal, a scoop of Almond Crème Fibergy, and 2 T. peanut butter.

I prefer to use soy milk and skip the peanut butter. To make clean-up easier, I use a Tupperware plastic shaker that has a wheel in the top to break up any clumps of powder. Alternatively, one ice cube in the plastic shaker helps to blend the products better. --Sandy

My favorite drink is a scoop of Soyamax, one scoop of Choc Nutrimeal, and two scoops of the Almond Fibergy.

It's my usual breakfast drink! I add 2 teas. of Opt omega, so I get my Essential Fatty Acids I mix it in a large glass (14-16 oz.) with a Braun hand mixer. I usually also use 1/3 soy milk and the rest water for the base. It keeps me going until lunch time - easily - and I love the taste and texture. --Cathy

My husband and I have a wonderful (and quick) breakfast every morning and feel like we start our day the best way possible! We start with an empty blender:

add frozen fruit (strawberries, peaches...) or a banana,
add non-fat yogurt (any flavor - it's fun to try different ones),
add about 8-10 ounces of cold water,

While it's blending, add:

2 servings of Opt omega,
2 servings of Nutrimeal (all one flavor or two different ones),
another 8-10 ounces of cold water,
add 2 servings of Fibergy (we always use Peach Mango reduced sugar),
add 1-2 servings of Soyamax.

More water can be added depending on the consistency you like.

Voila! A delicious breakfast, ready in 5 minutes, and with all the basics at one time! With the variety of combinations of fruit, yogurt flavors, and nutrimeal flavors, it never tastes the same twice! If you don't have yogurt, just add milk.

You can even drink it on the way to work if time is tight. Enjoy! --Unknown

I mix a scoop of fibergy along with the Soyamax, or the Nutrimeal when preparing (so for about 9 ounces of liquid, I would put about two scoops of nutrimeal or soyamax and 1 scoop Fibergy). When I prepare, I always use either soy milk, rice milk or skim milk as the liquid - you certainly can use water or juice. (I worked for a short time at a Health Food store in which cold juice was used, and it made great fruit smoothies). After putting in the Nutrimeal and Fibergy, I use one of those hand-held machine that can make shakes, etc., and mix for a minute to give a smooth consistency. You can mix in crushed ice and/or chunks of frozen bananas, strawberries, or any other frozen fruit for a delicious "frostie" dessert or sorbet. For fancy serving, put a strawberry, etc. on the glass. If you want to freeze bananas, just peel the banana and put in plastic baggie in freezer. Don't do too many at a time unless you're going to be using a lot in a short time, as they will turn brown. I usually freeze three or four at a time, and use within two weeks. When putting into drink; just break into three or four sections and mix in. --Gordana

I prefer the Strawberry and Vanilla nutrimeal to the chocolate. And I mix it with one scoop of Soyamax, two scoops of Peach Mango (R.S.)Fibergy and 2 tsp. of opt omega w/ one to two ounce of heavy cream and two cups of deionized and filtered water, I love it when I can drop 3-4 ripe strawberries and 1/2 of a banana into it , but a peach or nectarine will work well as a strbry. substitute w/banana; I then add a bit of ice and have a nice frosty breakfast shake!!

I have also "doctored" the Chocolate nutrimeal w/ almond Fibergy (and soyamax) by adding a Tbls. or two of natural peanut butter (I prefer Richard's Natural P.B. because of the low carbo. count, but I don't know if you can find it where you are located) and some banana too. I use the heavy cream and water and opt omega combo as my base solvent. I change around the solutes as my palate dictates --Billie

My favorite drink in the mornings is the following:

8 oz distilled water

1 Scoop of Soyamax

1 1/2 Scoops of F.Van Nutrimeal

1/2 Scoop of Peach Mango (reduced sugar) Fibergy

2 Tsp Opt Omega (about 2 big squirts - I use a water bottle cap on the bottle)

4 Frozen whole strawberries

1/2 Frozen banana (Cut banana in half like banana split style and pre-freeze)

(Sometimes I throw in about 4 to 5 frozen grapes...or

I'll add just a little extra different frozen fruits from time to time...

and I try to use all organic fruits). --Linda

1 scoop Choc Nutrimeal

1 scoop Van Nutrimeal
1 scoop Soyamax
2 tsp Opt omega
11 ice cubes
1 3/4 cup water
Options: add "cafe DeVita" (mocha cappuccino) --Unknown

Combine in blender, then mix **VERY well** in this order:

1 C skim milk
1 scoop Nutrimeal (or if omitting Soyamax, add 2 scoop Nutrimeal)
1 scoop Soyamax
1 scoop Fibergy
1 piece fruit
1 or 2 tsp Opt omega
Depending on flavors used above, options are:
1 teaspoon peanut butter
splash of honey

When blended well, add and mix slightly:

1 scoop low fat ice-cream
Drink right away. - -Michele B.

Using the Shakes in Foods!

chocolate pudding

non fat or low fat plain organic yogurt
2 scoops choc. nutrimeal
1 packet stevia

stir and enjoy

peanut butter balls

1 cup of (natural) peanut butter, such as Adams...
1 and 1/2 cups of powdered milk
about 12 drops of liquid stevia, (to taste)
no more than 1/4 cup of honey
tofu, (didn't measure, but I would guess it to be about 2/3 cup)

chopped nuts,
dried cranberries

This is was my attempt to make a healthy alternative to the Usana bars, so it took some experimenting....but we came up with a rather tasty treat..

Mix ingredients together (I do it in about that order) till smooth, and easily molded.

roll into balls about the size of a small plum, or whatever size you prefer

I refrigerate them and then bag them, and keep them in the fridge. They are quite tasty and satisfying..

Sugar Free Jell-O Salad with Nuts

1 large box of sugar free jello (orange is great but any flavor is good)
plain yogurt (get low carb, or the lowest sugar content)
1 can of lite fruit cocktail (drained and rinsed to remove all syrup)
chopped pecans

Mix jello with 2 cups boiling water.
Stir in 2 cups plain or vanilla yogurt
until smooth.
Add fruit cocktail and chopped pecans.

Turkey Chile

3 lb. ground turkey
1-2 large red onions, chopped
2-3 green bell peppers, chopped
2 lg cans French Style green beans, drained.
Tomato Juice. 1 96 oz. can, more if needed.
1 lg can diced tomatoes
1-2 tsp garlic powder
1 Tbsp. tobasco sauce
Chile powder to taste. Try 1/8-1/4 c.to start.
1-2 tsp cumin
2 pks sweetener, I use Splenda.

In large pot brown the turkey, add the onions and green peppers and cook for few minutes. Add the green beans, tomato juice and tomatoes. Add the seasonings and simmer for 30 or more minutes. Serve. Makes a lot but freezes well until another day. The flavor is excellent!

Chicken Spinach Stir-Fry

- 3 TBS olive oil
- 2 TBS water
- 2 TBS soy sauce
- ½ lb skinless chicken breast
- 1 package of fresh or frozen vegetables (containing green beans, mushrooms, bell peppers, and broccoli)
- 10 oz fresh spinach

Heat a large skillet or wok until water sizzles and then add 1 ½ tablespoons of oil to coat pan (be sure not to heat this so much that your oil smokes). Add chicken breasts and stir-fry for 2-3 minutes. Add the rest of the oil and then pour in the vegetable mix. Stir-fry for additional 4-5 minutes before adding the water and soy sauce. Continue to stir-fry for another 2 minutes and then add spinach. Cover the skillet or wok and steam for 2 minutes over medium heat. Gently turn the spinach and steam for another 2 minutes. Serve.

Low Glycemic Meal Plans

Day 1

Breakfast

- Vegetable omelet—1 whole egg (range feed chicken eggs), 2 egg whites, chopped vegetables of your choice (peppers, onions, avocado, mushrooms, etc.)
- Fruit bowl—fresh whole fruit (apples, pears, melon, grapes, etc.)

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Apple with some low-fat mozzarella cheese

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 2

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Chef's Salad—[3 to 4 oz of ham, turkey, or chicken], cut hard-boiled egg, and low-fat cheese on mixed greens with additional cut up vegetables covered with a reduced-fat or good fat salad dressing of your choice.

Midafternoon Snack

- One or two small handfuls of raw almonds with fresh whole fruit of your choice

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 3

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Cup of low-fat yogurt and whole fresh fruit of your choice

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Macro-Optimizer Nutritional Bar

Evening Meal

- Dinner salad with a low-fat or good fat dressing
- 6 oz petite fillet
- Steamed vegetables (broccoli, cauliflower, zucchini, etc.)
- Fruit bowl for dessert

Day 4

Breakfast

- Old-fashioned oat meal (slow cooked) covered with nuts (almonds, pecans, walnuts)—granulated fructose, 1% or skimmed milk
- Low-fat cottage cheese or yogurt on the side or mixed into the cereal

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Hard-boiled egg with whole fruit

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 5

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Naked chicken burrito [without tortilla or white rice] on a bed of lettuce with black or pinto beans, grilled vegetables, tomato salsa, and guacamole

Midafternoon Snack

- Fresh fruit and low-fat cottage cheese

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 6

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Tuna salad prepared with low-fat mayonnaise (or soybean oil mayonnaise) served with one whole fruit of your choice

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Macro-Optimizer Nutritional Bar

Evening Meal

- BBQ Chicken breast (skin removed)—grilled or baked
- Cabbage, grated with oil and vinegar dressing
- Green beans (fresh or frozen)
- Peaches (fresh) for desert

Day 7

Breakfast

- 2 whole eggs (range fed chicken eggs), 3 to 4 strips of turkey bacon, whole fruit or fruit cup

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Walnuts with whole fruit of your choice

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 8

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Chicken Salad [cubed skinless chicken breast, diced celery, sliced grapes, chopped walnuts, low-fat mayonnaise, lemon juice, and Romaine lettuce]

Midafternoon Snack

- Deli meat roll-ups (Chicken, turkey, ham, or beef) with a center of low-fat Swiss cheese
- Whole, fresh fruit

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 9

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Fruit with yogurt dip [cut up apples dipped in your favorite low-fat yogurt]

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Macro-Optimizer Nutritional Bar

Evening Meal

- Fresh green salad with cut up vegetables of your choice
- Vegetable Chili made of lean ground beef [also consider using a lean ground turkey or buffalo] with a variety of beans, tomato sauce, cut vegetables [celery, mushrooms, red and green peppers]

Day 10

Breakfast

- 2 or 3 scrambled eggs mixed with low-fat cheddar cheese, salsa, and sliced tomatoes
- Whole orange or grapefruit

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Deli meat slices [turkey, ham, or beef] with coleslaw

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 11

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Tuna stuffed tomato [Albacore tuna, water packed and drained, mixed with diced celery, pickle relish (sweet or dill), onion, black olives, sliced grapes, and sliced apples mixed with low-fat mayonnaise and covered with sunflower seeds]

Midafternoon Snack

- Whole fruit with raw almonds

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 12

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Low-fat cheese with whole fruit

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Macro-Optimizer Nutritional Bar

Evening Meal

- Fresh spinach salad with a low-fat dressing
- Grilled Salmon
- Fresh asparagus or broccoli
- Fresh strawberries, bananas, and low-fat yogurt

Day 13

Breakfast

- Steel cut oats [slow cooked mixed with Soyamax (added at the end)]
- Grapefruit or fruit cup

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Macro-Optimizer Nutritional Drink

Midafternoon Snack

- Low-fat cottage cheese mixed with nuts and served with whole fruit of your choice

Evening Meal

- Macro-Optimizer Nutritional Drink

Day 14

Breakfast

- Macro-Optimizer Nutritional Drink

Midmorning Snack

- Macro-Optimizer Nutritional Bar

Lunch

- Lean beef hamburger patty served with slice tomato, lettuce, fruit, and low-fat cottage cheese

Midafternoon Snack

- Low-fat or non-fat yogurt served with whole fruit of your choice

Evening Meal

- Macro-Optimizer Nutritional Drink

FAQ's about Glycemic Index

From The University of Sydney

What is the difference between glycemic index (GI) and glycemic load (GL)?

Your blood glucose rises and falls when you eat a meal containing carbs. How high it rises and how long it remains high depends on the quality of the carbs (the GI) and the quantity. Glycemic load or GL combines both the quality and quantity of carbohydrate in one 'number'. It's the best way to predict blood glucose values of different types and amounts of food. The formula is:

$GL = (GI \times \text{the amount of carbohydrate}) \text{ divided by } 100.$

Let's take a single apple as an example. It has a GI of 40 and it contains 15 grams of carbohydrate.

$GL = 40 \times 15/100 = 6 \text{ g}$

What about a small baked potato? Its GI is 80 and it contains 15 g of carbohydrate.

$GL = 80 \times 15/100 = 12 \text{ g}$

So we can predict that our potato will have twice the metabolic effect of an apple. You can think of GL as the amount of carbohydrate in a food 'adjusted' for its glycemic potency.

Should I use GI or GL and does it really matter?

Although the GL concept has been useful in scientific research, it's the GI that's proven most helpful to people with diabetes. That's because a diet with a low GL, unfortunately, can be a 'mixed bag', full of healthy low GI carbs in some cases, but low in carbs and full of the wrong sorts of fats such as meat and butter in others. If you choose healthy low GI foods—at least one at each meal—chances are you've eating a diet that not only keeps blood glucose 'on an even keel', but contains balanced amounts of carbohydrates, fats and proteins.

We suggest that you think of the GI as a tool allowing you to choose one food over another in the same food group—the best bread to choose, the best cereal etc.—and don't get bogged down with

slow release form. So what's the take-home message?

- Choose slow carbs, not low carbs
- Use the GI to identify your best carbohydrate choices.
- Take care with portion size with carb-rich foods such as rice or pasta or noodles to limit the overall GL of your diet.

Do I need to eat only low GI foods at every meal to see a benefit?

No you don't, because the effect of a low GI food carries over to the next meal, reducing its glycemic impact. This applies to breakfast eaten after a low GI dinner the previous evening or to a lunch eaten after a low GI breakfast. This unexpected beneficial effect is called the "second meal effect". But don't take this too far, however. We recommend that you aim for at least one low GI food per meal.

While you will benefit from eating low GI carbs at each meal, this doesn't have to be at the exclusion of all others. So enjoy baking your own bread or occasional treats. And if you combine high GI bakery products with protein foods and low GI carbs such as fruit or legumes, the overall GI value will be medium.

Why do many high-fibre foods still have a high GI value?

Dietary fibre is not one chemical constituent like fat and protein. It is composed of many different sorts of molecules and can be divided into soluble and insoluble types. Soluble fibre is often viscous (thick and jelly-like) in solution and remains viscous even in the small intestine. For this reason it makes it harder for enzymes to move around and digest the food. Foods with more soluble fibre, like apples, oats, and legumes, therefore have low GI values.

Insoluble fibre, on the other hand, is not viscous and doesn't slow digestion unless it's acting like a fence to inhibit access by enzymes (eg. the bran around intact kernels). When insoluble fibre is finely milled, the enzymes have free reign, allowing rapid digestion. Wholemeal bread and white bread have similar GI values. Brown pasta and brown rice have similar values to their white counterparts.

Can I download or can you email me a full list of all GI food values?

Sorry but we have no such list available for download or emailing purposes. Instead, we invite you to search out the foods you are interested in finding on our free GI Database (see the menu link on the left). There you will find a brief explanation on how best to conduct the search. Another option is to purchase our pocket book which is updated annually and contains the latest values at the time of publication: *The New Glucose Revolution: Shopper's Guide to GI Values*.

Does the GI increase with serving size? If I eat twice as much, does the GI double?

The GI always remains the same, even if you double the amount of carbohydrate in your meal. This is because the GI is a relative ranking of foods containing the "same amount" of carbohydrate.

But if you double the amount of food you eat, you should expect to see a higher blood glucose response - ie, your glucose levels will reach a higher peak and take longer to return to baseline compared with a normal serve.

If testing continued long enough, wouldn't you expect the areas under the curve to become equal, even for very high and very low GI foods?

Many people make the assumption that since the amount of carbohydrate in the foods is the same, then the areas under the curve will finally be the same. This is not the case because the body is not only absorbing glucose from the gut into the bloodstream, it is also extracting glucose from the blood. Just as a gentle rain can be utilised better by the garden than a sudden deluge, the body can metabolise slowly digested food better than quickly digested carbohydrate. Fast-release carbohydrate causes "flooding" of the system and the body cannot extract the glucose from the blood fast enough. Just as water levels rise quickly after torrential rain, so do glucose levels in the blood. But the same amount of rain falling over a long period can be absorbed into the ground and water levels do not rise.

Why doesn't the GI of beef, chicken, fish, tofu, eggs, nuts, seeds, avocados, many fruits (including berries) and vegetables, wine, beer and spirits appear on the GI database?

These foods contain no carbohydrate, or so little that their GI cannot be tested according to the standard methodology. Bear in mind that the GI is a measure of carbohydrate quality. Essentially, these types of foods, eaten alone, won't have much effect on your blood glucose levels.

Some vegetables like pumpkin and parsnips appear to have a high GI. Does this mean a person with diabetes should avoid eating them?

Definitely not, because, unlike potatoes and cereal products, these vegetables are very low in carbohydrate. So, despite their high GI, their glycemic load (GI x carb per serve divided by 100) is low. Vegetables contain only small amounts of carbohydrate but loads of micronutrients and should be considered as "free foods". Eat them all you like!

Can you tell me the GI of alcoholic beverages (beer, wine and spirits)?

Alcoholic beverages contain very little carbohydrate. In fact, most wines and spirits contain virtually none, although beer contains some (3 or 4 grams per 100 mL). A middy of beer (10 ounces) contains about 10 grams of carbohydrate compared with 36 grams in the same volume of soft drink. For this reason, a beer will raise glucose levels slightly. If you drink beer in large volumes (not a great idea) then you could expect it to have a more significant effect on blood glucose. As for enjoying an occasional drink, researchers from the University of Sydney found that a pre-dinner drink tends to produce a 'priming' effect, flicking the switch from internal to external sources of fuel and keeping blood-sugar levels low.

>>Please read the following [article](#) for more information regarding beer and carbohydrate content.

Why does some variability occur in the GI for the same food types? For example, Special K cereal shows values from 54 to 84.

The GI database confirms the reproducibility of GI results around the world. White and wholemeal bread, apples, cornflakes, breakfast cereals etc give the same results wherever/whoever tests them. Where there is variability, there are four possible explanations:

1. Some GI testing groups are not as experienced/accurate as ours. They use venous blood which gives more variability than capillary blood. If we test a product over and over again, we get the same result +/- 5%. That's as good as nutrient data such as protein, fat, fibre etc.
2. The variability among different types of potatoes, rices, and oats is REAL. They contain different types of starch (amylose, amylopectin) and that affects the degree of starch gelatinisation. When it comes to sugars like fructose, the concentration of the solution makes a difference to the rate of gastric emptying and therefore the glycemic response. A more dilute solution, say 25 g fructose in 500 mL water will have a higher GI than 25 g fructose in 250 mL. But fructose has a very low GI whichever way you consume it.
3. Sometimes the manufacturer may change the formulation of their product by reducing the fat content for example. Reducing the fat can increase the GI. Manufacturers may have their products retested if they make significant changes to the formulation, or source ingredients from different suppliers.
4. Some foods have been tested in people with type 2 diabetes. These values may be higher than that seen in the normal population. Follow the food links in the GI database to find more information on the testing conditions.

Why does pasta have a low GI?

Pasta has a low GI because of the physical entrapment of ungelatinised starch granules in a sponge-like network of protein (gluten) molecules in the pasta dough. Pasta is unique in this regard. As a result, pastas of any shape and size have a fairly low GI (30 to 60). Asian noodles such as hokkein, udon and rice vermicelli also have low to intermediate GI values.

Pasta should be cooked al dente ('firm to the bite'). And this is the best way to eat pasta - it's not meant to be soft. It should be slightly firm and offer some resistance when you are chewing it. Overcooking boosts the GI. Although most manufacturers specify a cooking time on the packet, don't take their word for it. Start testing about 2-3 minutes before the indicated cooking time is up. But watch that glucose load. While al dente pasta is a low GI choice, eating too much will have a marked effect on your blood glucose. A cup of al dente pasta combined with plenty of mixed vegetables and herbs can turn into three cups of a pasta-based meal and fits easily into any adult's daily diet.

Most breads and potatoes have a high GI. Does this mean I should never eat them?

Potatoes and bread, despite their high GI, can play a major role in a high carb/low fat diet, even if your goal is to reduce the overall GI. Only about half the carbohydrate needs to be exchanged from

high to low GI to derive health benefits. Of course, some types of bread and potatoes have a lower GI and these should be preferred in order to lower the GI as much as possible.

The good news for potato lovers is that a potato salad made the day before, tossed with a vinaigrette dressing and kept in the fridge will have a much lower GI than potatoes served steaming hot from the pot. There are a couple of simple reasons for this. The cold storage increases the potatoes' resistant starch content by more than a third and the acid in the vinaigrette whether you make it with lemon juice, lime juice or vinegar will slow stomach emptying.

What about flour? If I make my own bread (or dumplings, pancakes, muffins etc) which flours, if any, are low GI? What about sprouted grain breads?

To date there are no GI ratings for refined flour whether it's made from wheat, soy or other grains. This is because the GI rating of a food must be tested physiologically that is in real people. So far we haven't had volunteers willing to tuck into 50 gram portions of flour on three occasions! What we do know, however, is that bakery products such as scones, cakes, biscuits, donuts and pastries made from highly refined flour whether it's white or wholemeal are quickly digested and absorbed.

What should you do with your own baking? Try to increase the soluble fibre content by partially substituting flour with oat bran, rice bran or rolled oats and increase the bulkiness of the product with dried fruit, nuts, muesli, All-Bran or unprocessed bran. Don't think of it as a challenge. It's an opportunity for some creative cooking.

Bread made from sprouted grains might well have a lower blood-glucose raising ability than bread made from normal flour. When grains begin to sprout, carbohydrates stored in the grain are used as the fuel source for the new shoot. Chances are that the more readily available carbs stored in the wheat grain will be used up first, thereby reducing the amount of carbs in the final product. Furthermore, if the whole kernel form of the wheat grain is retained in the finished product, it will have the desired effect of lowering the blood glucose level.

Some high fat foods have a low GI. Doesn't this give a falsely favourable impression of that food?

Yes it does, especially if the fat is saturated fat. The GI value of potato chips or french fries is lower than baked potatoes. Large amounts of fat in foods tends to slow the rate of stomach emptying and therefore the rate at which foods are digested. Yet the saturated fat in these foods will contribute to a much increased risk of heart disease. It is important to look at the type of fat in foods rather than avoid it completely. Good fats are found in foods such as avocados, nuts and legumes while saturated fats are found in dairy products, cakes and biscuits. We'd all be better off if we left the cakes and biscuits for special occasions.

Why not just adopt a low carbohydrate diet (like the Atkins diet) to keep my blood glucose levels and weight down?

Recent studies show that low carb diets such as the Atkins diet produce faster rates of weight loss than conventional low fat diets. The probable mechanism is lower day-long insulin levels - allowing greater use of fat as the source of fuel - the same mechanism underlying the success of low GI diets. We believe that low carb diets are unnecessarily restrictive (bread, potato, rice, grains and

most fruits are restricted) and may spell trouble in the long term if saturated fat takes the place of carbohydrate. Low GI diets strike a happy medium between low fat and low carb diets - you can have your carbs, but must choose them carefully.

>>>See the following [article on GI News](#) which discusses low carb diets in detail.

Is there a GI plan for nursing mothers?

A low GI diet is ideal while you are breastfeeding. Breastfeeding requires a lot of energy and theoretically this additional energy comes from the body fat laid down during pregnancy. Of course in reality it doesn't all get used up and most have to make a concerted effort to work off the baby weight. To do this though it is important that you don't go on a low calorie diet or any sort of extreme measure such as the low carb diets popular in the press. Since breastfeeding tends to increase your appetite (the body's way of ensuring you have the energy required to produce milk) this is good news as staying on such a diet would be a nightmare! This is what makes the low GI approach so successful - forget about trying to count calories or even your portions of food.

First and foremost focus on the sorts of foods you are eating. Low GI foods are the wholegrains, fresh fruit and vegetables and legumes. By eating these foods as the mainstay of your meals you can trust your appetite and eat to satisfaction while you are breastfeeding. Also get back to some exercise - even if it's just a daily walk with the pram/carriage. You should then find that the weight slowly starts to shift - realistically give yourself at least that first six months to get back to your pre-pregnancy weight.

How relevant is the GI for athletes?

The GI can be a useful tool to help athletes select the right type of carbohydrates to consume both before and after exercise. Studies have consistently reported that a low GI pre-exercise meal results in a better maintenance of blood glucose concentrations during exercise and a higher rate of fat oxidation. This is likely to result in reduced muscle glycogen utilisation during prolonged exercise and possibly improve endurance performance. Eating high GI meals before exercise may result in plasma glucose concentrations peaking before the onset of exercise and then hypoglycemia occurring within the first 30 minutes of the exercise period. There is little data available on the effect of the GI of carbohydrates eaten before intermittent, power or strength related sports.

During recovery from exercise, muscle glycogen resynthesis is of high metabolic priority. The eating of high GI carbohydrates after exercise increases plasma glucose and insulin concentrations and this facilitates muscle glycogen resynthesis. If however, you are exercising for weight loss purposes or are involved in weight restricted sports, low GI carbohydrates after exercise may be more beneficial as the lower glucose and insulin concentrations will not suppress fat.

I have recently been diagnosed with celiac disease (gluten sensitivity). It's extremely hard to find both low GI and wheat-free foods. Any suggestions?

This is not as hard as you may think! There are low GI gluten-free foods in four of the five food groups.

Fruit and Vegetables

- Temperate climate fruits - apples, pears, citrus (oranges, grapefruit) and stone fruits (peaches, plums, apricots) - all have low GI values. Tropical fruits - pineapple, paw paw, papaya, rockmelon and watermelon tend to have higher GI values, but their glycemic load (GL) is low because they are low in carbohydrate.
- Leafy green and salad vegetables have so little carbohydrate that we can't test their GI. Even in generous serving sizes they will have no effect on your blood glucose levels. Higher carb starchy vegetables include sweet corn (which is actually a cereal grain), potato, sweet potato, taro and yam, so watch the portion sizes with these. Most potatoes tested to date have a high GI, so if you are a big potato eater, try to replace some with lower GI starchy alternatives such as sweet corn, yam or legumes. Pumpkin, carrots, peas, parsnips and beetroot contain some carbohydrate, but a normal serving size contains so little that it won't raise your blood glucose levels significantly.

Bread and Cereals

- Opt for breads made from chickpea or legume based flours. For example chapattis made with besan (chickpea flour) have a low GI. If you make your own bread, try adding buckwheat kernels, rice bran and psyllium husks to lower the GI. Most gluten-free breads seem to be better toasted than used to make sandwiches.
- Breakfast cereals containing psyllium husks are likely to have a lower GI - you could also add a teaspoon or two of psyllium to your usual cereal. To date there are just a few gluten-free breakfast cereals on our database that have a low GI. If you do have a higher GI gluten-free cereal, combine it with lots of fruit and low fat yoghurt or low fat milk, to lower the GI.
- Noodles are a great stand-by for quick meals, a good source of carbohydrate, provide some protein, B vitamins and minerals and will help to keep blood glucose levels on an even keel. There are several low GI gluten-free options available fresh and dried: buckwheat (soba) noodles; cellophane noodles, also known as Lungkow bean thread noodles or green bean vermicelli, are made from mung bean flour; rice noodles made from ground or pounded rice flour, are available fresh and dried.
- Gluten-free pastas based on rice and corn (maize) tend to have moderate to high GI values so opt for pastas made from legumes or soy. As for wholegrains, try buckwheat, quinoa, low GI varieties of rice such as basmati and sweet corn. Currently there are no published values for amaranth, sorghum, and tef. Millet has a high GI.
- Minimise refined flour products and starches irrespective of their fat and sugar content such as crispy puffed breakfast cereals, crackers, biscuits, rolls, most breads and cakes or snack foods. Limit high GI snacks such as corn and potato chips, rice cakes, corn thins and rice crackers.

Legumes (pulses) including beans, chickpeas and lentils

When you add legumes to meals and snacks, you reduce the overall GI of your diet because your body digests them slowly. So make the most of beans, chickpeas, lentils, and whole and split dried peas.

Nuts

Although nuts are high in fat (averaging around 50 per cent), it is largely unsaturated, so they make a healthy substitute for foods such as biscuits, cakes, pastries, potato chips and chocolate. They also contain relatively little carbohydrate, so most do not have a GI value. Peanuts (actually a legume) and cashews have very low GI values.

Low fat dairy foods and calcium-enriched soy products

Low fat milk, yoghurt and ice-cream or soy alternatives provide sustained energy, boosting your calcium intake but not your saturated fat intake. Check the labels of yoghurts, icecream and soymilks as many contain wheat-based thickeners. If lactose intolerance is a problem, reach for live cultured yoghurts and lactose-hydrolysed milks. Even ice-cream can be enjoyed if you ingest a few drops of lactase enzyme first.

Is a low GI diet suitable for vegetarians?

The low GI diet is just as easy for a vegetarian to follow - in fact, teaching vegetarians to follow the low GI diet can be easier because most are eating many of the best low GI foods already. For the vegetarian, the same principles apply: substitute your plant protein sources for the meat. Eat more beans, lentils and other legumes - all among the lowest GI foods we have tested. Quorn is also a great meat substitute with no GI as it has almost no carbohydrate (2 g/100 g).

Some additional points:

- The GI only applies to foods containing significant amounts of carbohydrate. Most vegetables have small amounts of carbohydrate and those that provide more usually have a low GI, with the exception of potatoes. You can therefore tuck into your veggies without considering the GI for every one - and benefit from antioxidants and all the micronutrients they supply!
- Legumes should be a daily part of any vegetarian diet for your protein - happily these are also a mainstay of a low GI diet.
- Almost every low GI food we talk about in the book is suitable as part of a vegetarian diet. Animal products are usually high in fat, protein or both and therefore do not have a GI.
- The range of protein and carb intake that is healthy is fairly broad - as a vegetarian you will inevitably have a higher carb intake and slightly lower protein intake. This makes the GI important for you but easy to adapt if you choose wholegrain cereal products and legumes as your carbohydrate base.
- Coffee has no carbohydrate (unless you add sugar and/or milk and the GI response comes from these foods) and hence it is not in the GI tables. Neither does it contain calories so has little impact on weight control.

Healthy for Life

**Learning Healthy Lifestyles
that have the side effect of fat loss.**

RECOMMENDED FOODS TO EAT

If you have not ascertained the fact by now, I do not believe that the USDA food pyramid is a healthy diet. In fact, I lay a major portion of the blame of health problems today to these unhealthy diet recommendations. It has been politically motivated and also lacks any medical scientific backing. Dr. Walter Willett, chairman of the Department of Nutrition at the Harvard School of Public Health, is quoted in his book *Eat, Drink, and be Healthy* (Simon and Schuster 2001) as stating, "The USDA Pyramid is wrong. It was built on shaky scientific ground.....it has been steadily eroded by new research from all parts of the globe." The base of the Food Guide Pyramid is 6 to 11 servings of bread, cereal, rice, and pasta—90% of which you have learned is now highly processed. All of these foods are very high glycemic and it is recommended to be the major aspect of your diet. These foods are worse than table sugar when it comes to spiking your blood sugar. The first concept you need to learn about is the consumption of what are known as "good" carbohydrates.

I discuss the concept of the glycemic index versus the old theory of sugar length as the determining factor of the rate of absorption of sugar or glucose on my web page under glycemic index. Since our primary concern is the rate our blood sugar rises following a meal, you can now appreciate the fact that a major aspect in determining the quality of carbohydrate you may choose to eat is largely determined by which theory you accept. This is where many physicians and patients alike become confused because the medical establishment (nutritionists, dietitians, physicians, weight loss experts) still base all of their decisions based on the concept of simple sugars and complex carbohydrates. However, the medical literature and the rest of the world (hopefully the US by the time this book is released) are realizing that the concept of glycemic index and glycemic load is the true way to evaluate the effect a certain carbohydrate will have on our blood sugar. It only makes common sense that if you measure the blood sugar rise following the ingestion of a certain carbohydrate you can clearly determine the effect that carbohydrate will have on your blood sugar.

Again, I want to review the practical aspects of the glycemic index and the glycemic load again. The glycemic index is defined as the rate blood sugar would actually rise following the ingestion of a particular test food relative to the ingestion of a standard food (either white

bread or glucose). Therefore, the glycemic index of a specific food or meal is determined primarily by the nature of the carbohydrate or carbohydrates consumed and by other factors that affect the digestion of that particular meal (primarily the fat and protein content of that meal). Glycemic load is defined as the weighted average glycemic index of individual foods multiplied by the percentage of dietary energy as carbohydrates (grams of carbohydrates or calories) that particular food contains. A simple calculation allows you to arrive at the glycemic load of any food. You can usually locate the grams of carbohydrate a particular food contains by looking at the food label or using a food composition table and then multiplying it by the glycemic index found at the back of this book. Then you divide this number by 100.

Glycemic load= (Glycemic Index x Grams of Carbohydrate) divided by 100

Spaghetti: 1 cup of cooked spaghetti has a GI value of 41 (average) and contains 52 grams of carbohydrate.

Glycemic Load: (41×52) divided by 100 = 21

Carrots: Glycemic index is 49 and the average serving contains an average of 5 carbohydrates per serving.

Glycemic Load: (49×5) divided by 100 = 2.4

This is an important example because it begins to illustrate the fact that the glycemic index is only one aspect in choosing quality carbohydrates. If you were to just look at the glycemic index, spaghetti beats out carrots fairly easy. However, when you look at the amount of carbohydrate you are consuming with one serving of spaghetti (52 grams of carbohydrate) compared with the amount of carbohydrate you are consuming with an averaging serving of carrots (5 grams of carbohydrate), it becomes apparent that the spaghetti is going to create a greater rise in our blood sugar and our insulin response. Especially, when you consider most of us do not eat just one cup of spaghetti for our average serving. Therefore, when you look at the quality of a particular carbohydrate one of the main factors to consider is the glycemic index and the glycemic load.

The next important consideration is the quality of nutrients a particular carbohydrate contains. In this present world of highly processed foods, the quality of nutrients a carbohydrate contains varies tremendously.

For example, all of our fruits, nuts, grains, and vegetables are classified as carbohydrates. These whole foods contain the vital vitamins, antioxidants, and minerals our bodies need to survive. However, processed white sugar, which is consumed in alarming amounts in the modern world only contains one molecule of glucose and one molecule of fructose. Glucose has a glycemic index of 100 and a glycemic load of 10 while fructose has a glycemic index of 19 and a glycemic load of 2. Combined together in your normal white table sugar it has a glycemic index of 61 and a glycemic load of 6. Now, I believe that you would agree with me that the nutritional value of sugar is not the greatest. However, when you just look at the glycemic index and the glycemic load of table sugar, it really is not that horrible. Therefore, any foods that are high in sugar can give this highly processed carbohydrate a fairly good glycemic index and glycemic load. The point that I am trying to make is the fact that more and more people are becoming knowledgeable about the glycemic index of foods and basing which carbohydrates they are going to eat solely just on this index. You have to understand that the glycemic index is important but was never intended to be the only consideration when choosing which carbohydrates you were going to eat.

Processed Carbohydrates—the Enemy

When you are trying to determine what a good carbohydrates and which are the bad carbohydrates in this world, you need to look at the glycemic index, the glycemic load, and the quality of nutrients contained within a particular carbohydrate. ***The main consideration for a healthy diet is for you to understand that the major reason we are in this health care crisis today of obesity, cardiovascular disease, and type 2 diabetes mellitus is because of the processed food industry and our fear of fat.*** That is correct; you must understand that highly processed carbohydrates are literally destroying your health. Everything that I have related and documented so far was so that you would hopefully be able to realize and understand why processed carbohydrates are so dangerous. They are all high glycemic and almost all have a high glycemic load. They are absorbed very quickly into the blood stream and therefore spike your blood sugar, which stimulates the release of insulin (your storage hormone) and suppress glucagon (your fat releasing hormone). Most of that sugar is driven into our fat cells where it is quickly changed to fat. The blood sugar is quickly driven down by the excessive release of insulin into the hypoglycemic range where counter regulatory hormones are then released to drive the blood sugar back up. You develop this overwhelming hunger (hyperphagia) and then you have to

eat again—usually craving these high glycemic foods that started the process in the first place. I have discussed this problem previously in week one of your training and want to review this again because I feel this is the primary underlying reason people have failed to lose weight permanently. They just don't appreciate how dangerous processed foods are to their overall health and weight control. How could they be so bad—after all they are low in fat? This fear of getting too much cholesterol and fat in our diet is the greatest fallacy that has ever been perpetuated on any society. The damage that this has caused to our health and our society is incalculable. You will learn more about this during the next week training when I discuss good fats and bad fats.

Whole Foods

As I have shared with you earlier, the concepts that I share in the Releasing Fat Program are quite simple to understand. You will not have to have a scale, weigh your food, or starve yourself to death in order to lose weight. You simply need to understand the fact that there are good carbohydrates, good protein, and good fat that needs to be combined together into every meal and snack that you consume. When you look at whole foods, which are defined as any food man has not messed with, you will find that with only a few exceptions they make up what I define as "Good Carbohydrates". These are foods like apples, oranges, pears, grapes, beans, Brussels sprouts, cauliflower, corn, nuts, carrots, and whole grains. These foods not only contain the vitamins, antioxidants, minerals, good fats, good proteins, and good carbohydrates our bodies require and need but they also have a low glycemic index and low glycemic load. Of course, there are exceptions to this basic rule like white potatoes (glycemic index of 88 and a glycemic load of 16) but in general if it has not been processed by man—it is a good carbohydrate.

In direct contrast, is the fact that if it has been processed in any way, it is generally not a good carbohydrate. For example if you take slow cooked oatmeal (glycemic index of 42 and a glycemic load of 9) and compare this to instant oatmeal (glycemic index of 66 and a glycemic load of 17). This is a major difference in this same food's ability to spike your blood sugar and your insulin response. I find it interesting that in one of the studies that looked at how much children would eat following a high glycemic versus a low glycemic breakfast that the high glycemic meal they used was instant oatmeal. It is critical that you understand that when man processes foods that not only are many of the important nutrients necessary for life removed but that they change the structure of the carbohydrate in such a way as that the

body is able to absorb it very easily. Also you must remember the fact that because the food loses much of its good taste during the processing procedure, food additives (sugar and high fructose corn syrup are some of the most widely used) must be added back to the food so that it is palatable. Are you starting to get the picture?

I have learned to use a simple guide for my patients which makes it easy for anyone to see very quickly which foods they can safely consume and the ones they absolutely need to avoid. I divide the main carbohydrates people consume into three categories:

1. Desirable Carbohydrates, Fats, and Proteins—should make up 70 to 80% of all the carbohydrates you consume.
2. Moderately Desirable Carbohydrates, Fats, and Proteins—should make up 20 to 25% of the carbohydrates you consume.
3. Least Desirable Carbohydrates, Fats, and Proteins—should make up only 5 to 10% of the carbohydrates you consume.

Please see the Recommended Food List for a detailed listing of the most common carbohydrates, fats, and proteins consumed in the United States and Canada. Now it is important to discuss the various categories of carbohydrates to give you even a better detailed understanding of the factors you must consider when you begin choosing to make changes to your eating habits.

Vegetables

Almost all whole vegetables are classified as highly recommended carbohydrates. They contain vital nutrients and are low glycemic and have a low glycemic load. They should make up a major aspect of your diet. Even those fruits and vegetables that have a higher glycemic index generally have a lower glycemic load and will not spike your blood sugar. Vegetables like carrots and beets that have a higher glycemic index (47 and 64) have a low glycemic load (3 and 5). Therefore, simply stated, eating any whole vegetables is recommended; however, I do not place potatoes in this category. I feel you need to look at potatoes as a separate category when you start to make changes to your own personal eating habits.

Potatoes

When you look at potatoes as a category, they are definitely a whole food but they are both very high glycemic and have a high glycemic load. It is the vegetable of choice of most Americans. They will eat them baked, boiled, fried, instant, mashed, and in any form they can get their hands on them. Other than breads, this may be the biggest adjustment you need to make in your thinking about your diet. The average baked potato has a glycemic index (GI) of 85 and a glycemic load of 26. French fried potatoes have a GI of 75 and a glycemic load of 22. They are also cooked in lard, beef tallow, or high temperature vegetable oil, which not only creates a high glycemic food that is loaded with either saturated fat or rancid fat (this will be discussed in detail during next week's training). New potatoes actually have the lowest GI (57) and lowest GL (12) and are the potatoes I recommend my patients consume. I also like the yams with a GI of 37 and a GL of 13 or sweet potatoes with an average GI of 61 and GL of 17. Now I recommend that even the new potatoes, yams, and sweet potatoes be eaten only occasionally.

Fruits

Again, almost all whole fruits are excellent carbohydrates to consume. They contain important antioxidants, minerals, and vitamins that are essential for our existence. Even though they are sweet, they contain fructose sugar which is both low glycemic (19) and has a low glycemic load (2). Now there is some negative concerns about high fructose corn syrup additives but I want to make it very clear that the amount of fructose that occurs naturally in our whole fruits is healthy and will not spike your blood sugar. When we consume too much fructose in foods, soda pops, sports drinks, and candy, it can overload our liver and cause definite concerns. Fruits like watermelon and cantaloupe which have a higher GI (72 and 65) have a low GL of 4. Even bananas that have a modest GI of 51 and a modest GL of 13 are still considered an excellent carbohydrate as well as are papaya, mango, and Kiwi fruit. There needs to be some caution using these higher glycemic fruits as stand alone snacks but they make great deserts following a wonderful, low glycemic meal.

Processed fruits can be dangerous just as can any processed carbohydrates. Fruit juice and canned fruit are the main culprits. It all is a matter of exactly how they have been processed. For example, an orange has a GI of 48 and a GL of 5 but orange juice reconstituted from frozen concentrate has a GI of 57 and a GL of 15. An apple has a GI of 40 and a GL of 6, while unsweetened apple juice has a GI of 40 but a GL of 12. However, most of the juices that are available are not

100% fresh squeezed or fresh frozen, but instead, are diluted and sweetened. This significantly increases both the GI and GL. A raw peach has a GI of 28 and a GL of 4. However, when it is canned in heavy syrup it has a GI of 58 and a GL 9. The basic principal you will hear me preaching is the more natural the food the lower the GI and GL and consequently the better it is for you.

Breakfast Cereals

It becomes apparent very quickly that most breakfast cereals are highly processed carbohydrates. Almost all of these boxed cereals are high glycemic and have a high glycemic load. This is not the way you need to start out your day. Especially, when you consider most people add two pieces of white or whole wheat toast and a glass of orange juice to their breakfast. Kellogg's All-Bran takes the prize when it comes to a highly processed cereal that is both low glycemic and has a low glycemic load. If you have ever eaten an All-Bran breakfast you can understand why, it tastes like your eating the box. In order for companies to make a cereal taste good, they usually need to add a ton of sugar. This may make the cereal have a moderate glycemic index and glycemic load but where is the nutritional value? The highly processed grains that have been used as the basis of the cereal have had most of the quality nutrients removed. This is the main reason that they must fortify most cereals.

The best cereals are the "old-fashioned" slow-cooked cereals like oatmeal and steel cut oats. Yes, they take a little longer to prepare but they are lower glycemic and have a lower glycemic load. The grain is intact and has had minimal processing. I am sure that if you love cereal for breakfast and go back to these fine foods that you will be simply amazed out how well they taste and how satisfying they are. You can also add some soy or whey protein to your cereal just as you are finishing cooking it. This will add some needed protein to your meal and add to the flavor and satisfaction of your breakfast.

Breads

I believe the most difficult change you will have to make is avoiding white bread, white flour, wheat flour, and almost every processed bread made in the US and Canada. White bread has a GI of 70 and a GL of 10 and has been used a standard in many of the studies involving the glycemic index. Whole wheat bread (made from wheat flour) has a GI of 77 and a GL of 9. Now this makes your choice of whole wheat bread over white bread a mistake when you consider the

glycemic index. Now brown bread may look healthier but it is a complete fake out. Now coarse wheat kernel bread (75% intact kernels—Canada) has a GI of 48 and a GL of 10. While white Wonder Bread (enriched) has a GI of 73 and a GL of 10. Bagels have a GI of 72 and a GL of 25. Highly processed whole wheat bread and white bread actually spikes our blood sugar and insulin faster than table sugar. Bread along with potatoes in all its processed forms is the major culprit and challenge when it comes to the Releasing Fat Program. Try to go out and avoid white bread, white flour, pasta, rice, and potatoes in the Western diet. It is nearly impossible unless you are willing to take back control of your health and not let your health and weight be at the mercy of the food industry. The choice is yours. However, this is why I want you to totally avoid all sugar, bread, potatoes, rice, and pasta during the first four weeks of the Releasing Fat Program. Now that you are nearing the end of Phase One, it is important to be looking for a very good whole-grain bread and learning which rice and pasta to re-introduce into your diet.

Obviously, you want to begin eating breads that are made the old-fashioned way. The way the peasants had to eat their breads over the past centuries. You want bread that is made with whole, intact grains. Not wheat or white flour. These grains should be stone-ground and not the result of high speed grinders. They are simply difficult to find. My research around the country has taught me that they are hard to find no matter where you live. Most brands that use whole wheat flour will also combine this with wheat or white flour. They just want to maintain the fluffy, light bread that tastes so good. Whole grains make the bread drier and coarser and frankly just don't sell as well.

Eating coarse rye kernel (pumpernickel) bread is a step in the right direction because it has a GI of 41 and a GL of 5. Whole oat bran bread has a GI of 44 and a GL of 8. Another trick is to eat sour dough bread because the lactic acid it contains causes a decrease in the rate of absorption and lowers the GI of wheat bread to 53 and GL of 10. If sprouted breads (contains no flour) like Silver Hills bread or Ezekiel Bread are available in your area, you may consider switching to these types of breads because they are lower glycemic. However, the greatest change we all need to be making is simply just eating less bread. Breads and grains have been the base of our USDA Food Pyramid for years and making this change is going to take time. I feel that even the lower GI and GL breads need to be eaten much less and the average white and wheat bread needs to be treated like candy and sugar. It should be avoided as much as possible and if eaten at all should be nibbled at like it was a piece of candy. After all, it is worse

than candy when it comes to the way it spikes your blood sugar and insulin.

Cookies, Cakes, Donuts, Crackers, Snack Foods, Candy

I can hear you now—you are not going to make me give up my favorite foods. My patients have told me over the years that it is simple to follow the eating habits I recommend—if it tastes good, then I can't have it. Well, they were not really too far off. We have a society that is simply hooked on sugar and sweets. I feel that it is as strong of addiction as drugs, alcohol, and nicotine. Well, you can just guess where I place of these carbohydrates and it is not on my highly recommended foods to eat. However, I know that you are going to not totally give up deserts and sweets. You need to have a great respect for these foods because it is so easy to get back into the carbohydrate addiction. By now, fruits should taste very sweet to you. Whole fruits offer you a tremendous way to satisfy that sweet tooth without spiking your blood sugar.

Good Fats and Good Proteins

It is important to realize that the best fats and proteins generally come from our vegetables. These contain the essential omega-3 fatty acids as well as the monosaturated fats. They are very low in saturated fats. The next best fats and therefore protein comes from cold-water fish like salmon, mackerel, trout, tuna, sardines, etc., since they contain high levels of the omega-3 fatty acids. The next best fat and protein comes from fowl because the fat of the bird is found just under the skin in the subcutaneous fat and not marbled into the meat. It is easy to skin your chicken or turkey and end up with a relatively lean serving of protein even though it is primarily saturated fat. The worst fat and protein comes from red meat and dairy products. You need to eat the leanest meat you can get your hands on and go for skim milk, low-fat cottage cheese and yogurt. Fatty red meat, cheese, milk, butter, and foods produced from these sources are your main enemy when it comes to getting too much saturated fat into your diet.

Hopefully, this Recommended Food List will help guide you into better eating habits and a healthier lifestyle.

DESIRABLE CARBOHYDRATES			
	Glycemic Index	Carbohydrates Per Serving	Glycemic Load

Fruits			
Apple	38	16	6
Apricots	57	9	5
Cherries	22	12	3
Grapefruit	25	11	3
Grapes	43	17	7
Kiwi Fruit	47	12	5
Mango	47	12	5
Orange	42	11	5
Peach	28	13	4
Peach (canned in natural juice)	38	11	4
Pear	38	11	4
Pear (canned in natural juice)	43	13	5
Pineapple	59	13	7
Plums	24	13	7
Watermelon	72	6	4
Vegetables			
Artichokes	[0]	0	0
Avocado	[0]	0	0
Beet	64	7	5
Broccoli	[0]	0	0
Cabbage	[0]	0	0
Carrots	47	6	3
Cauliflower	[0]	0	0
Celery	[0]	0	0
Cucumber	[0]	0	0
Peas	48	7	3

	Leafy Vegetables (spinach, lettuce)	[0]	0	0
	Squash	[0]	0	0
	Yam	37	36	13
Legumes				
	Beans, butter	31	20	7
	Beans, kidney	28	25	7
	Beans, black	20	25	5
	Chickpeas (garbanzo beans, Bengal gram)	28	30	8
	Lentils	29	18	5
	Lentils, green, dried	30	17	5
	Lentils, red	26	18	5
	Soy Beans	18	6	1
Breads				
	Coarse Barley Kernel Bread: 75% Kernels	27	20	7
	80% Kernels (20% white flour)	34	20	8
	Oat Bran Bread	47	18	9
	Rye Kernel Bread (pumpernickel)	41	12	5
	Sourdough Rye	53	12	6
	Healthy Choice Wheat Bread (Con Agra Inc., USA)	55	14	8
	Soy and Linseed Bread (packet mix in bread oven) (Con Agra Inc., USA)	50	10	5
	Silver Hills Sprouted Bread	Has not been tested		
	Ezekiel Sprouted Bread	Has not been tested		

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Breakfast Cereals

All-Bran (Kellogg's, USA)	38	23	9
Bran Buds (Kellogg's, Canada)	58	12	7
Bran Buds with Psyllium (Kellogg's, Canada)	47	12	6
Hot Cereal, Apple and Cinn. (Con Agra Inc., USA)	37	22	8
Hot Cereal, unflavored (Con Agra Inc., USA)	25	22	13
Oat Bran, raw	55	5	3

Cereal Grains

Barley, pearled	25	42	11
Rice, parboiled (Uncle Ben's)	38	36	14
Rice, parboiled, long grain (Canada)	38	36	14
Rye	34	38	13
Wheat, whole kernels	41	34	14
Wheat, cracked (bulgur)	48	26	12

Dairy Products

Yogurt, low fat	31	30	9
Soy Milk	44	17	8
Milk, skim	32	13	4

Nuts

Almonds	[0]	0	0
Cashew Nuts	22	13	3
Hazelnuts	[0]	0	0

Macadamia	[0]	0	0
Pecan	[0]	0	0
Peanuts	14	6	1
Walnuts	[0]	0	0
Sugars and Sweeteners			
Fructose (Granulated)	19	10	2
Splenda	Has not been tested		
Stevia	Has not been tested		

MODERATELY DESIRABLE CARBOHYDRATES			
	Glycemic Index	Carbohydrates Per Serving	Glycemic Load
Fruits			
Apple Juice, unsweetened	40	25	10
Apricots, canned in light syrup	64	19	12
Banana	52	25	12
Orange Juice	52	23	12
Peach, canned in heavy syrup	58	15	9
Prunes	29	33	10
Strawberries	40	20	10
Vegetables			
Corn, sweet	54	17	9
Pumpkin	75	4	3
Rutabaga	72	10	7
Potato			
New Potato	62	21	13

	Sweet Potato	61	28	17
Legumes				
	Beans, baked	48	15	7
	Beans, dried	29	30	9
	Beans, black-eyed	42	30	13
	Beans, navy	38	31	12
	Beans, lima	32	30	10
	Pinto Beans	39	26	10
Bread				
	Barley Flour Breads	67	13	9
	Whole-Wheat Barley Flour Bread with Sourdough (lactic acid)	53	20	10
	Whole-Wheat Rye Bread	58	14	8
	Coarse Wheat Kernel Bread, (80% intact kernels)	52	20	12
Breakfast Cereals				
	All-Bran (Kellogg's, Canada)	50	23	9
	Cream of Wheat	66	26	17
	Oatmeal, rolled oats	58	22	13
Cereal Grains				
	Barley, cracked	66	42	21
	Buckwheat (Canada)	54	30	16
	Cornmeal, boiled in salt water (Canada)	68	13	9
	Sweet Corn (USA)	60	33	20

Taco Shells, cornmeal-based	68	12	8
Couscous, boiled	65	35	23
Rice, long grain, wild (Uncle Ben's)	54	37	20
Rice, basmati, boiled	58	38	22
Rice, brown	55	33	18
Rice, par boiled (USA)	72	36	18

Bakery Goods

Banana Cake, made without sugar	55	29	16
Chocolate Cake (Betty Crocker)	38	52	20
Muffin, apple without sugar	48	19	9

Cookies

Digestives (Canada)	59	16	10
Oatmeal (Canada)	54	17	9

Pasta and Noodles

Fettuccine, egg	40	46	18
Linguine	52	45	23
Macaroni	47	48	23
Noodles, instant	47	40	19
Spaghetti, white	44	48	21
Spaghetti, whole wheat	37	42	16

Sugars and Sweeteners

Honey	55	18	10
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LEAST DESIRABLE CARBOHYDRATES

	Glycemic Index	Carbohydrates Per Serving	Glycemic Load
Bakery Goods			
Angel Food Cake	67	29	19
Croissant	67	26	17
Doughnut, cake	76	23	17
Muffin, oat, raisin	54	26	14
Muffin, banana	65	26	16
Muffin, bran	60	24	15
Pound Cake (Sara Lee)	54	28	15
Cookies			
Graham Wafers (Christie Brown, Canada)	74	18	14
Vanilla Wafers (Canada)	77	18	14
Dairy Products			
Ice Cream	61	13	8
Ice Cream, low fat	47	10	5
Ice Cream, premium	37	9	4
Milk	27	12	3
Pudding	47	16	7
Yogurt	36	9	3
Fruits			
Raisins	64	44	28
Cranberry Juice Cocktail	68	35	24

	Dates	50	40	12
	Figs	61	26	16
	Pineapple Juice	46	34	15
Vegetables				
	Parsnips	97	12	12
Potato				
	Baked, white	85	30	26
	Instant, mashed	85	20	17
	Mashed Potato	92	20	18
Breads				
	Bagel, white	72	35	25
	Coarse Oat Kernel Bread, 80%intact oat kernels	65	19	12
	Hamburger Bun	61	15	9
	Kaiser Rolls	73	16	12
	White Flour bread	70	14	10
	Whole-Wheat Flour Bread	71	16	8
Breakfast Cereals				
	Bran Chex	58	19	11
	Bran Flakes	74	20	15
	Cheerios	74	20	15
	Coco Pops	77	20	15
	Corn Chex	83	25	21
	Corn Flakes (Kellogg's, USA)	92	26	24

Cream of Wheat, instant	74	30	22
Golden Grahams	71	25	18
Grape nuts (Kraft, USA)	75	26	13
Grape nuts Flakes (Post, Canada)	80	22	17
Instant Oatmeal	66	26	17
Life (Quaker Oats Co., Canada)	66	25	16
Muesli (Canada)	66	24	16
Puffed Wheat	67	20	13
Raisin Bran (Kellogg's, USA)	61	19	12
Rice Chex (Nabisco, Canada)	89	26	21
Rice Krispies (Kellogg's, Canada)	82	26	21
Shredded Wheat (Nabisco, Canada)	83	20	17
Special K (Kellogg's, USA)	69	21	14
Total (General Mills, Canada)	76	22	17

Cereal Grains

Millet, boiled (Canada)	71	36	25
Noodles, rice (Australia)	76	49	37
Rice, white	72	42	30
Rice, long grain	56	41	23
Rice, long grain, quick-cooking	68	37	25

	variety			
	Rice, Jasmine (Thailand)	109	42	46
	Rice, instant white	87	42	36
Snacks and Candy				
	Corn Chips	42	25	11
	Fruit Roll Ups	99	25	24
	Jelly Beans	78	28	22
	Mars Bars	68	40	26
	Popcorn	72	35	24
	Potato Chips	54	21	11
	Pretzels	83	20	16
	Snickers Bar	68	34	23
	Twix	44	39	17
Sugars and Sweeteners				
	Glucose	100	10	10
	Lactose	46	10	5
	Maltose	105	10	11
	Sucrose (table sugar)	61	10	6
Alternative Sweeteners				
	Xylitol	8	10	1

Desirable Protein/Fat

- Salmon
- Mackerel
- Trout
- Tuna (once weekly at the most)
- Sardines
- Pumpkin seeds
- Eggs (range fed chickens)
- Peas
- Beans
- Lentils

- Almonds (raw)
- Walnuts (raw)
- Soybeans
- Flaxseed
- Flaxseed oil (cold pressed)
- Herring
- Olives
- Virgin olive oil
- Avocado
- Soymilk
- Tofu
- Soy Burgers
- Turkey (skinless)
- Turkey bacon
- Turkey burgers
- Hummus
- Buffalo meat
- Wild game meat (deer, elk, pheasant, quail)

Moderately Desirable Protein/Fat

- Cashews
- Pistachios
- Macadamias
- Mayonnaise (natural, made from olive, soy, or canola oils)
- Eggs (commercial)
- Peanuts
- Peanut oil
- Peanut butter (natural)
- Walnut butter
- Canola oil (expeller-pressed)
- Hazelnuts
- Skimmed milk
- Low-fat cottage cheese
- Low-fat yogurt
- Halibut
- Lean hamburger (90% plus)
- Beef (lean cuts)
- Chicken (skinless is better)
- Beef Tenderloin
- Top Sirloin
- Flounder
- Sole
- Cod
- Orange
- Duck
- Shrimp
- Crab

Least Desirable Protein/Fat

- Margarine
- Vegetable Shortening
- Fried Foods
- Deep Fat Fried Foods
- Safflower oil
- Sunflower oil
- Sesame oil
- Corn oil
- Soy oil
- Cottonseed oil
- Ice cream
- Cream
- Bacon
- Sausage
- Hot dogs
- Lunch meat
- Pork
- Pepperoni
- Salami
- Spareribs, pork

- Butter
- Coconut oil
- Palm Kernel oil
- Palm oil
- Any oil that is Partially Hydrogenated (read labels)
- Milk
- Cheese

- Ground beef
- Lamb
- Liver, chicken
- Brain
- Heart
- Beef roasts (chuck)
- Oysters
- Lobster