

## From Fat to Fit

### Introduction

Its not a mystery anymore. The steps are clear. The science is in. The way it works has been nailed down, all the way to the biochemical and genetic levels. And most important, the way it works is borne out consistently in practice.

What we have been told to do (and are doing) for weight management and for health is wrong. That's why overweight has increased from 25% to 65% (34% overweight, plus 31% obese) of the population over the past 20 years. That's why obesity has more than doubled over the same two decades. That's why Type II Diabetes is up 70%.

So what are we doing wrong? We were told 20 years ago to reduce our intake of fats. We were also told that carbohydrates are the best food and that we should be eating more of them. We listened. At that time, 42% of our calories came from fats. Today, our fat intake is down to less than 32% of calories. The reasons given for recommending that we reduce our fat intake included:

- Reduce cardiovascular risk
- Reduce cancer risk
- Reduce risk of diabetes
- Reduce body weight

What has been the outcome of following this advice given by governments and put into practice with the help of advertising campaigns from the industry? In addition to overweight and obesity more than doubling, cancer increased. Cardiovascular disease has not decreased. Diabetes increased. There's something wrong with this picture!

### Its What We Ate Instead

Given the results of this 20-year experiment on the entire population, we must conclude that fat has never been the problem in weight management. We ate less fat and got fatter. What, then, has been the problem? What happened?

When we reduced fat intake, we began to eat carbohydrates instead. Low fat and no fat foods. Junk foods in crinkly bags. Its not that we didn't eat them before. Its just that we ate a whole lot more of them. They replaced the fats we were not eating.

We also ate more bread, pastries, pasta, potatoes, fries, potato and corn chips, corn, bananas and other sweet fruit, breakfast cereals, popcorn, flour, muffins, crackers, pretzels and refined carbohydrate products of all kinds of different shapes and sizes, biscuits, pancakes, waffles, oatmeal, sugar, honey, syrups, rice, grains, oatmeal. You get the idea? This list includes most of the favorite foods of overweight people. It is the foods loved by the fat-phobic carbohydrate addicts the obese people.

What is wrong with eating carbs? Are they not the best fuels for energy? That's what we've been told, right?

### The Carbohydrate Scam

The carbohydrate craze is driven, not by health considerations, but by the fact that carbohydrates are cheap and easy to preserve. Sweets and starches have a long shelf life, which makes manufacturers happy. It gives them a large market, and little spoilage. In addition, if health claims can be made for consuming carbohydrates because they are low in fat, there is the probability that prices will increase as a result; and that increase will be passed along to the consumer even if the health claims are overstated. It does, however, raise profit margins.

More insidious than the profit motive is the fact that carbohydrates lead to a kind of addiction. Eating carbohydrates leads to high blood sugar. Then, in turn, the body's desperate self-defense mechanism (involving insulin) against the toxicity of high blood sugar (that can lead to a diabetic coma) leads to low blood sugar accompanied by tiredness, craving, and depression, which starts the next vicious high blood sugar-low blood sugar cycle. I'll explain that in more detail below.

For now, it is important to understand that low blood sugar can be depressing, and so eating carbohydrates becomes comforting, and carbohydrates become comfort foods. Low blood sugar also leads to hunger or food craving, and that leads

to eating more. A vicious cycle of high/low blood sugar ensues.

Low blood sugar can make people very tired and sleepy, and probably accounts for far more road accidents than we care to admit. Even violence has a strong connection to low blood sugar, estimated to be about 80% of non-premeditated violent crimes.

Overweight has many health consequences, including increased risk of cancer, cardiovascular disease, type II diabetes, gall bladder problems, and many more. The upsides of overweight are few. One is that bones become stronger from carrying the extra weight around. Dying with strong bones is small consolation for early death from the degenerative killer diseases of our time.

Overweight also has many psychological consequences. Self-esteem is the greatest casualty. People find overweight unpleasant, and treat fat people badly. And many fat people don't like themselves much either, because they often begin to see themselves as gluttonous victims, out of control of their appetites.

### The Carbohydrate-Fat Cycle

When a person eats carbohydrate foods (sweets and starches), digestion turns all these carbohydrates into glucose. Glucose is sugar, whose main function is to act as fuel. The glucose is absorbed rapidly into the blood stream, for delivery to the cells that need it. All of this is the normal course of events in the body.

However, if glucose is absorbed faster than the body burns it, high blood sugar results. Sweet foods are more likely to lead to high blood sugar than white flour products, which in turn are more likely to lead to high blood sugar than whole grains like brown rice. But any source of carbohydrates will result in high blood sugar if more is absorbed from the gut than is being burned by the body.

High blood sugar is a very toxic condition. It is the fundamental problem in diabetes.

High blood sugar can lead to coma and death. Because this condition is so toxic, the body has a protective mechanism for reducing high blood sugar. Insulin drives glucose into our cells, where it is supposed to be burned for energy.

But, if the cells already have enough fuel and don't need the extra glucose, then glucose acts like a hormone and turns on a gene, a copy of which is present in every one of everyone's 70 trillion body cells. The gene, called fatty acid synthase, has only one function. It turns excess glucose into fat.

Insulin, involved in this sequence of events, is over-ambitious in its action and overshoots its goal of normalising blood sugar. The result is increased body fat and blood sugar that is now too low. Hunger results. Carbohydrate craving leads to another round of eating, and the cycle repeats itself. This is the basis of carbohydrate addiction. Low blood sugar also leads to depression. This is the reason why carbohydrates are many people's comfort foods.

The summary on carbohydrates goes like this:

The body turns carbohydrates into glucose

While glucose is clean-burning fuel, it turns OFF fat burning and turns ON fat production

Glucose not needed for fuel turns into fat

Our slogan about carbohydrates: Burn them, or wear them - as fat.

The biochemistry and genetics of carbohydrates is completely different from what we've been told. 60% of the population (those who are overweight) practice that inaccurate advice.

The truth is the opposite from what we have been led to believe. Now doesn't that make you mad?

### Carbohydrates and Activity

Few people are equipped by nature to be able to eat as many carbohydrates and do so little physical activity as we do without getting fat. Most people were equipped by nature

to turn excess glucose into fat. Our ability to turn excess glucose into fat served an important survival function that evolved

during a time when rare times of feasting were followed by long famines. This survival mechanism, however, is disastrous in affluent cultures where people live in uninterrupted times of plenty.

Athletes can eat much more carbohydrate food than sedentary people can because they burn it up during intense activity. The more active a person, the bigger their muscles, and the more they exercise, the more carbohydrates they can burn. The less active, the smaller the muscles, and the more sedentary the lifestyle, the more important it becomes to limit carbohydrate intake to prevent overweight and its negative health consequences.

How much carbohydrate is too much? That's easy. It requires no counting of calories or measuring of portions. If you are overweight, you are eating more carbohydrates than you're burning. This means that you need to lower your carbohydrate intake.

How much do you need to lower your intake of sweet and starchy foods? That's easy too. Reduce them in your diet until your weight is normal.

NB: There are other reasons for overweight:

Drug side effects

Lack of iodine due to low salt diets

Water retention from inflammation that is usually due to allergic reactions, poor lymph drainage, lack of exercise, or heart failure

Carbohydrates: the LEAST Important Food

Let me make one more point about carbohydrates. They are fuels that the body burns for energy. They are good fuels if you burn them. They are bad for you if you don't.

But, and this is the key point to understand about carbohydrates, there are no nutrients in carbohydrates that you can't get elsewhere. The body can use proteins and fats for fuel, and small amounts of carbohydrates (too little to make you fat) are also present in green vegetables, which is where most of us should be getting them.

In other words, carbohydrates are the least important of all of the food groups. Essential fats are required in the diet because the body cannot make them, and therefore are more important than carbohydrates.

Proteins provide essential nutrients that the body cannot make but must have to live and be healthy, and therefore proteins are also more important than carbohydrates. Green foods are more important than carbohydrates because they make and supply us with most of the essential components of health.

We can live without carbohydrates, because the body can make them from scratch.

The Truth About Food Fats and Body Fat

The first truth about fats is that they do not make us fat. This is because they suppress appetite, and because eating fats does not produce the blood sugar swings, the fat production, the craving, and the bingeing cycles produced by carbohydrates.

The second truth about fats is that certain fats, especially those missing from most people's diets (called n-3 essential fats) will help us lose body fat. Did you read that right? Yes, you did. Good fats help to make and keep us slim.

How can they do that? After all, all fats, good or bad, contain 9 calories per gram, whereas carbohydrates contain only 4 calories per gram. That was the old argument against eating fats.

As with carbohydrates, the answer lies in our genes, in the way the human body works.

Slimming Fats

Research has established that n-3 and n-6 essential fatty acids, but not monounsaturated, saturated, or trans-fatty acids play

a major role in the body's ability to burn fat. N-3 does it better than n-6. N-3 is inadequately supplied in the diets of 95-99% of affluent populations worldwide. In fact, our intake of n-3 today is only 1/6th of that found in today's diets

N-6 intake, on the other hand, has doubled in the past 100 years for people who eat the diets common in affluent populations. People on low fat, no fat, fake fat, fat blocker, fat substitute, and fat remover diets are likely to get too little n-6 as well as too little n-3.

The ratio between n-3 and n-6 is far out of line with what it ought to be for good health and normal weight, and this has implications, both for health in general and for body fat and fat burning in particular. How do essential fats help burn body fat and make us slim? The answer has several parts.

All fats including essential fats suppress appetite.

Unlike carbohydrates, fats keep blood sugar and insulin levels stable, and prevent the high/low blood sugar cycle.

Essential fats improve thyroid function, and normalize metabolic rate and energy levels provided enough iodine is present in the diet.

N-3 essential fats decrease inflammation and water retention in tissues (which is a large part of some overweight) and speed the removal of water held in tissues by means of the kidneys.

N-3 essential fats improve kidney function, making excess water removal more efficient.

N-3 essential fats increase energy production, making it more likely that a person will be physically active. This, in turn, leads to more calories being burned, and increased muscle mass as a result of increased physical activity.

N-3 essential fats elevate mood and lift depression. Depressed people often sit around doing nothing. The better the mood, the less likely people are to eat more calories than they burn, and the more active they tend to be.

#### Genes, Fats, and Healthy Weight Management

N-3 essential fats affect the function of genes, turning up several genes that increase fat burning, turning down the gene that leads to fat production, and turning on a gene that increases heat production in the body. Specifically, n-3 essential fats:

1. Decrease fat production, by turning down the gene responsible for fat production
2. Increase fat burning, by turning up at least 9 genes required for burning fats
3. Shift the body from using carbohydrates as fuel to using fats as fuel instead
4. Turn on a gene that is responsible for thermogenesis (the process by which fats are burned off as heat, without work being done).

So you can see that n-3 fats, which are especially lacking in the fat-phobic, carbohydrate junkie diets eaten by overweight people, are a major key for reducing body fat, and many different weight normalization mechanisms in the body are turned up by n-3 fats.

Remember, however, that n-6 essential fats are also essential for building health and that the ratio between n-3 and n-6 must be right. Too much n-3 can lead to many health problems due to n-6 deficiency. Too much n-6 can lead to many health problems due to n-3 deficiency. Over the years, I have found that a ratio of 2:1 of n-3 to n-6 in the diet gives optimum benefits in weight management without producing deficiency of either of the essential fats.

#### Sue Government and Industry?

Some people want to sue governments for telling us that carbohydrates are the base of the food pyramid, mis-educating us to believe that carbohydrates are the most important food, and encouraging industries to make and falsely advertise foods high in carbohydrates as good for our health.

Others want to sue industry for listening to government, for not doing their own research, falsely advertising high carb foods as better for health, and profiting by making consumers sick or even killing them. Recent US estimates put the figure of overweight-related deaths at 300,000 per year.

Wrong carbohydrate advice, based on scant research, has misled hundreds of millions of people for 20 years and probably

has caused the deaths of millions from the consequences of overweight on health - increased cancer, increased cardiovascular disease, and increased diabetes. These are in addition to the addiction and depression caused by high carbohydrate diets. Even highway deaths due to sleepiness induced by low blood sugar may be an issue although that possibility has never been addressed.

Weight gain from eating more carbohydrates than we burn also has serious social consequences. Overweight is unpopular. If a person wants to avoid social contacts, getting fat is one of the easiest ways to ensure ones isolation.

To be fair, there are people who choose overweight as a way to avoid life, and this possibility must also be addressed by those who work with overweight and obese people claiming to want to normalize body weight and get healthy. But for most overweight people, the problem is just a matter of having been led to believe by industry and government something that simply is not true for the human body or for health.

Is the Epidemic of Overweight Genetic?

Assuming that a person does want to get to normal weight, and most do, how should we fix the problems of overweight, obesity, and their degenerative consequences?

First, we must establish that the recent epidemic of 60% of the population being overweight is nutritional in origin, and is not a genetic problem. We know that because 20 years ago only 25% of us were overweight. One hundred years ago, less than 10% were overweight.

Genes take much longer than that to take over a population, and they do so by improving survival (longer life), greater reproductive success (more children), and greater child survival. It takes at least 7 to 10 generations for a very strong and positive gene to take over a population. With regard to overweight, the epidemic started only 20 years (less than one generation) ago.

But the most critical factor why overweight is not a genetic issue is this. Overweight people live shorter lives. They do not have more children, but fewer children. And the health of the children of overweight parents is not better but worse than the children of healthy parents. In other words, this is not survival of the fittest. It is exactly the opposite. It is shortened survival of the fattest.

Right Eating, Lifelong

A new food pyramid supporting good health must be developed.

Greens. This new food pyramid must have greens as its base as the most important food for health and normal weight. Why green foods, you ask? The answer is that Earth is the green planet. Imagine a world without greens. There'd be no air, no water, no animals, no people, no life. Why?

We owe everything to greens. They make our oxygen. Researchers have calculated that green plants took 2.5 billion years to fill our atmosphere with the oxygen we need to breathe. Only after green plants had done this important job could air-breathing creatures like us begin to live here.

Greens absorb water and hold it in the soil. Without them, the Earth would be a desert.

Green plants absorb light energy from the sun, store it in bonds between atoms to make food molecules which, when we eat them, release that energy for us to live on.

Greens draw minerals from the soil, and make them available to us in a form that our bodies can use - we cant suck rocks to get our minerals, but plants do exactly that for us. Greens also manufacture the other components of health - molecules that we need to build and maintain a healthy body but cannot make ourselves.

Greens make the vitamins, essential amino acids (proteins), and essential fatty acids (good fats) that we need.

Greens make fibre (important for bowel regularity, detoxification, and blood sugar stabilization), anti oxidants (that slow down

the processes that lead to ageing), phytonutrients (potent healing molecules which are the basis of herbal medicine), and fuel (to burn for energy).

Raw, greens also provide enzymes (for digestion and against viral infection), and probiotics (friendly microorganisms/flora that protect our digestive tract from being ravaged by nasty, toxic bacteria like Salmonella, E. coli, fungus, and yeasts like Candida). Cooking destroys enzymes and probiotics.

In short, greens provide all of the building blocks that our genetic programme - our built-in programme for building a healthy body - needs to build, maintain, repair, and replace cells, tissues, glands, and organs.

In addition, greens inhibit infections and cancer. Greens provide magnesium, which improves cardiovascular and insulin function and has anti-cancer benefits.

Further, greens are great tonics for our digestive system. Their alkalinity protects us from diseases due to acidity. Chlorophyll cleanses and detoxifies. Phytonutrients and anti-oxidants in greens help us in many ways - some inhibit tumors; some regulate hormones; some are anti-inflammatory; and some prevent damage caused by free radicals.

Greens and their seeds are so rich in nutrients that we could live for years on them.

Greens are nature's basis of primary health care and primary medicine. They maintain healthy cardiovascular, immune, and digestive systems; strong bones; and optimally functioning glands and organs.

**Good Fats.** In addition to greens, good fats are the second most important food group. The good fats are essential for health, but the body cannot make them. They must therefore be provided by foods. Too little leads to deterioration of the health of every cell, tissue, gland, and organ, accompanied by many symptoms of degeneration that resemble the degenerative diseases that we suffer and die from. Complete absence will kill anyone who avoids fats long enough.

Good fats, made up of n-3 and n-6 essential fats are the most neglected, confusing, misrepresented part of the pyramid.

Good fats are easily damaged by the destructive influences of light, air (oxygen), and heat, and must therefore be made, stored, and used with care. Most commercial food fats are made with shelf life rather than health in mind, and the processes used to improve shelf life of good fats damages them, producing toxic molecules that increase cancer, cardiovascular disease, insulin resistance, inflammation, and other diseases.

Of the good fats, n-3 is inadequately present in the diets of almost the entire population. Lack of adequate n-3 is the greatest single nutrient deficiency in modern diet.

As a result, n-3 holds the most powerful key to improving health for most of the population. To do so, however, n-3 must be made with great care, taken in adequate amounts, taken in the right ratio with the other essential fat (n-6) accompanied by adequate antioxidants and phytosterols, and used as part of a program for good health.

**Protein.** The third, equally important food group, is protein. Protein is adequately supplied in the diets of most affluent people. We are protein-conscious, and too much rather than too little protein is more prevalent in industrialized nations. Our sources of protein include red meat (pork, beef, lamb), eggs, fish, white meat (chicken, turkey), and dairy (milk, cheese).

Protein is also present in all whole foods, including greens, grains, beans, seeds, and nuts. If one eats whole foods in the form in which God/Nature provides them, protein malnutrition is inconceivable unless one does not have enough of them to eat. Protein under-nutrition is a problem during famines in underdeveloped countries, especially during times of war. In developed nations, protein deficiency is found only among very poor, aged, and infirm people incapable of looking after themselves.

**Carbohydrates.** Fourth are the carbohydrates. It bears repeating that carbohydrates do not supply any nutrients that one cannot get from other foods. Contrary to food pyramid advice, they are therefore the least important of all the major foods.

Whole grains cause fewer blood sugar and weight problems than polished grains such difference is the rate of absorption.

The faster the absorption, the quicker blood sugar goes high. The more digestion is required, the more time it takes to turn starch into glucose. Slower digestion slows down the absorption of glucose into the body. Slower absorption makes it less likely for blood sugar to get so high that insulin spikes and drives the sugar into our cells as self-protection against the damage that high sugar does to cells, tissues, and organs.

It is vitally important for health that sugar is absorbed no faster than the rate at which the body burns it for energy.

Excess sugar (the amount not needed for the production of energy) from excess carbohydrate intake causes the following problems:

- Leaches minerals from bone
- Cross-links proteins, leading to wrinkles and aging
- Leads to blood sugar fluctuations, which lead to:
  - Hyperglycemia (high blood sugar)
  - Hypoglycemia (low blood sugar)
- Insulin resistance
- Depression
- Food cravings (addiction)
- Tiredness and the inability to stay awake  
(accidents; poor behaviour in children; violence)
- Promotes weight gain
- Increased cancer risk
- Increased cardiovascular risk
- Increased risk for diabetes (Type II)
- Increased inflammation

Sugar also rots teeth, increases risk of bacterial infections, and speeds the growth of cancer.

#### Good and Bad Carbohydrates

We can speak of good carbohydrates and bad carbohydrates. Good ones are all the carbohydrates we burn. Bad ones are all the ones we don't burn. The ones we don't burn are bad because they cause all of the problems listed earlier.

As stated before, athletes bodies can burn far more carbohydrates than sedentary people's bodies. Muscles burn more glucose than any other tissue. The bigger the muscles, the more carbohydrates the body can eat and burn without problems. An athlete may be able to eat 70% of his foods in the form of starchy carbohydrates and burn them all (produce no body fat). A sedentary person may be unable to burn even 40% of foods in carbohydrate form, and must severely limit carbohydrate intake in order to prevent body fat gain.

#### Fiber Slows Down Glucose Absorption

Sugar absorption can be slowed down with certain kinds of fiber. The best kind of fiber to do this is water-soluble mucilage fibre. Such fibre is found in flax, slippery elm, dulse and kelp seaweed, and okra.

The way these kinds of fibre slow down sugar absorption is that glucose in the gut is caught up in the mucilage. As the mucilage churns its way down the digestive tract, the glucose is released slowly to be absorbed into the body slowly, at about the same rate at which it is burned. When that happens, blood sugar remains stable. In other words, mucilage fibre can turn bad carbohydrates into good carbohydrates, because if they are burned at the same rate at which they are absorbed, no excess carbohydrates will be flooding the blood stream to cause the usual carbohydrate problems.

#### Practical Confirmation from Practical Experience

The effect of n-3 essential fats on fat burning and heat production in weight management has been established by research on the most basic genetic and biochemical levels. Do the research findings prove out in practice? The answer is: Yes, they do.

My son, Tai, is an outstanding fitness coach who works with a wide range of clients, from movie stars to elite athletes to overweight businessmen, civilians, and professionals. He proves the research in practice every day. Here is his approach.

Anyone wanting to get rid of body fat and get into shape is encouraged to take the following steps:

1. Increase intake of essential fats in a 2:1 ratio, sometimes up to 10 tablespoons per day, but usually between 3 and 6 tablespoons/day.
2. Reduce intake of carbohydrates, sometimes way down, to almost zero
3. Increase green vegetable intake, as sources of slowly released carbohydrates and essential nutrients.
4. Get into a serious exercise program.
5. Increase protein intake, because they are going to be put on a muscle-building, fat- burning exercise program.