

INTRODUCTION

The number one reason for this booklet is to distribute timely knowledge, that the food processing industry is destroying the bounding health of you and in time, entire humanity. As much as fully processed food becomes devitalized so do our lives and the lives of millions of human beings. The foundation of ‘you are what you eat’ paints a gruesome picture if you take the time to understand food processing procedures, de-vitalization, homogenization, fractionalization, hydrogenation, gelatinization, and at times converting industrial waste into food (see chapter fourteen).

In this treatise there is no question of a diet, with one simple stroke of knowledge SAFE & UNSAFE Carbohydrates profoundly improves both your physical and mental well-being. We call it the ‘No Diet Diet’ program which is not restrictive, it is a genuine higher taste, eat SAFE carbohydrates in unlimited forms that agree with yourself. SAFE Carbohydrates are simply the foundation of past healthy civilizations. SAFE Carbohydrates are the foundation of your health, simply because they give health a good chance to blossom!

We attempt to understand how the liver balances glucose metabolism by conversion and re-conversion. And if the liver is constantly stressed by an over supply of glucose then the entire body, every organ and cell are stressed, in return the liver is more stressed and the cycle repeats itself again and again until a nasty condition manifests.

Certainly there are many causes behind the pandemic of degenerative diseases in the world. However because food is the basis of life and health, and carbohydrates are the basis of food it is logical to conclude that UNSAFE Carbohydrates are a major cause of these multi-dimensional and multi-factorial causes of illness. Charaka Muni, an Ayurvedic herbalist wrote a health treatise 2,400 ago, an entire chapter he dedicated to, ‘Food as the Source of Disease!’ People knew the basic principle of health over 2000 years ago, wholesome food is what maintains the body in health, and improper food, unsafe food is the source of disease.,

For the purpose of this booklet UNSAFE processed foods will be called **artifacts** as explained artifacts are foods which have many of the characteristics of food like colour, taste, texture, smell but thoroughly lacking wholesomeness,

nutritious and health giving properties. Whole-foods will retain the word food or whole-foods.

When so-called food (artifacts) no longer behave with the characteristics of food then a health disaster ensues. How does natural food behave? How do our bodies react to natural food? It is called health! Ayurveda describes food or diet as LIFE supporting! The macro world reflects the micro world and visa versa. On the micro level the cells of the GIT (gastro-intestinal tract) can no longer metabolize nor identify the entire ingredients of many processed food - artifacts.

When the food processing industry goes too far and deviates from nature then digestion and metabolism are negatively affected. In Australia alone, laxatives, digestives and anti-acids both herbal and chemical (funded by the PBS) are a billion dollar a year concern. Food allergies and sensitivities, bowel and digestive, auto-immune and metabolic complaints which are the root of degenerative disease are far too common place. Health and happiness are inseparable; have you ever spent time deathly sick? Then you will agree how health and happiness appear to duck and weave around each other.

Our Western culture has become completely ungrounded, governments want to pledge millions of dollars to the diabetes pandemic and childhood obesity without targeting the cause, the FOOD PROCESSING INDUSTRY! They want to create studies, form committees, finance professional teams, subsidise surgical removal of fat stomachs, regulate food advertising and basically throw millions of dollars at these serious social diseases. The result is like blowing on the boil, the boil is inflamed and extremely painful the boil core is holding strong and the only relief is to blow on the boil, the moving air cools down the inflammation, this of course is no great improvement. The boil core must be ripened and removed. The politicians headed by a brilliant prime minister who shines like a glow worm in the dark and a few dull citizens seem to think the large amount of money will fix the problem. However without addressing the root cause of the diabetes and obesity pandemic, the FOOD we eat, and the INDUSTRY that produces it, the only achievement will be more words, papers, committees, institutions, bylaws, tri-laws and regulations that miss the point. But the food laws and food processing industry requires careful consideration by a diligent government actually interested in the health of their populations. After all is not the government suppose to be interested in the health of the people? One only needs to know the source of health!

This is possibly a first in history on such a large scale, the over processing of foods which cause disease to blossom over a decade, but then each successive generation begin to be born with metabolic disorders, examples are cancer, diabetes, obesity, heart disease, familial hypercholesterolemia, ADHD and many more. These diseases are being bred into the DNA, you no longer have to be old as once thought, to be under attack from these serious diseases!

A 2007 report found 4.1 million Australians have at least one allergy. It also found allergies cost the Australian economy \$7.8 billion in 2007 and if trends continue there will be a 70 per cent increase in the number of Australians with allergy by 2050.

We all want **happiness** and we all must be **healthy** in order for that happiness to spread its roots and grow. The concept of SAFE & UNSAFE CARBOHYDRATES is sublime; according to time, place, circumstance, individual and variables enjoy whole-foods. The basic prohibition is avoid unwholesome processed food as much as possible. Who can not enjoy, ghee, coconut or olive oil, herbs and spices, whole grains like aromatic basmati rice, whole fresh vegetables, beans, whole fruits and pure dairy products? Food is sacred as it gives the gifts so our life can flourish. Pollution of food is the business of extremely **estranged beings** who have lost contact with the ground they walk on. We avoid the use of the word human because without fresh, safe and pure food our lives will become miserable and less than human.

Welcome to Ayurveda.

CONTENTS

SAFE AND UNSAFE CARBOHYDRATES

Chapter 1 - Can Humans adjust to processed carbohydrates?.....	4
Chapter 2 - Is Processed food a NEW problem?.....	7
Chapter 3 - How Important is the rate/extent of digestion of Carbs.....	9
Chapter 4 - GI Index or R.A.G Rapidly Available Glucose?.....	12
Chapter 5 - Is there a problem with whole-meal bread?.....	16
Chapter 6 - Carbohydrate Equilibrium & the Liver.....	21
Chapter 7- The Intelligence of the Universe and Carbohydrates.....	23
Chapter 8 - Understanding safe and unsafe carbohydrates?.....	25
Chapter 9 - Safe and unsafe carbohydrates in Perspective?.....	28
Chapter 10- Unsafe carbohydrates in Perspective?.....	30
Chapter 11- MSG! Another Reason to eat Safe Carbohydrates!.....	32
Chapter 12- Journey of a Cheeseburger. Free radicals with that?.....	36
Chapter 13- Poor Diet puts Teenagers at Risk?.....	38
Chapter 14- Safe carbohydrates, Fish SHauce?.....	39
Chapter 15- Gluten-Free, How Healthy?.....	40
Chapter 16- Safe carbohydrates, The Obesity Epidemic.....	41
Chapter 17- Counterfeit Cellular Signaling.....	42
Chapter 18- Safe carbohydrates, The Positive Alternative?.....	43
Chapter 19- Safe carbohydrates and a Complete protein?.....	44
Chapter 20- Safe carbohydrates, Sugar as a medicine!.....	46

SAFE & UNSAFE CARBOHYDRATES

Chapter 1

CAN HUMANS ADJUST TO PROCESSED CARBOHYDRATES?

This is not a new question;

You may drive out Nature with a pitchfork, but she will ever hurry back, to triumph in stealth over your foolish contempt.

-- Horace, 'Epistles', Book I, X, 24

As we observe, life is moving extremely fast, no place is the same in 20 years, progress marches on. Industrialization of the world and the economy is changing the cultural and eating habits of communities, states and nations. But can the individual genetic disposition (prakruti or nature), our hereditary body type adjust to this speeding tidal force? Indigenous Australians have the highest rate of dialysis (kidney failure) in the world per capita, while the average life span is 46 years compared to 72 years for European Australians.

Can an Eskimo adjust over a hundred years from the five types of blubber to a fast food diet? You know the answer! Reports from India in 1939 from Sir Robert McCarrison Phd insisted that hardly a single person could be found in the entire country over weight, now in December 5, 2006 The New Indian Express headline reads **“Obesity, Time to sit up and take note!”** Now 35% male and 50 % female of middle class Indians are not over weight but **OBESE**.

An Australian article Published November 14, 2006 follows;

*SYDNEY (AFP) - Indigenous peoples around the world face **extinction** this century unless an obesity-driven diabetes epidemic is curbed, experts have told an international conference in Australia.*

"We are dealing with the biggest epidemic in world history," said the director of the International Diabetes Institute, Professor Paul Zimmet.

"Without urgent action there certainly is a real risk of a major wipe-out of indigenous communities, if not total extinction, within this century," he told an International Diabetes Federation meeting in Melbourne.

The "diabesity" epidemic threatened the original inhabitants of Asia, Australia, the Pacific, and North and South America, he said.

Type 2 diabetes already affected 50 percent of adults on the Pacific Island of Nauru, up to 45 percent of Sioux and Pima Indians in the United States, and up to 30 percent of Torres Strait Islanders in northern Australia, he said.

Further.....

Australian News Media 2006!

Diabetes Hits 275 Australians Each Day As Pandemic Spreads!

"A new national health study funded by the NH&MRC, industry and state governments released today by the International Diabetes Institute in Melbourne shows diabetes is hitting up to 275 new victims each day throughout Australia.

The findings of the Australian Diabetes, Obesity and Lifestyle Study (AusDiab) were presented today to the Federal Minister for Health and Ageing, Mr Tony Abbott and provide the first definitive, clear picture of the rising tide of diabetes, obesity, hypertension (increased blood pressure) and chronic kidney disease.

The statistics reveal that in Australia each year:

-- Approximately 100,000 adults develop diabetes (275 people daily)

-- More than 200,000 people progress from being overweight to being obese (nearly 600 people daily)

-- 400,000 adults develop hypertension

-- 270,000 adults develop chronic kidney disease.

The Australia-wide study was conducted by the International Diabetes Institute over the last 15 months and is the first to have measured how many new cases of

these diseases occur in Australia annually.

The results are drawn from a follow-up investigation of more than 6,000 adults whose health was first assessed five years ago during the Institute's landmark AusDiab Study. IDI researchers established a world-first by identifying a national representative sample of Australia's adult population and carrying out individual blood tests for diabetes.

The Director of the International Diabetes Institute, Professor Paul Zimmet, said the research findings sent a "Red Alert" to ordinary Australians and to those charged with responsibility for public health."

Remember that diabetes, obesity and syndrome X do not kill anybody, but the degenerative diseases which are **secondary** to diabetes, obesity and syndrome X such as cancer, stroke, arteriosclerosis, kidney and liver failure and heart disease do!

Actually about 85% of the people of the Western world will die from cancer, stroke, arteriosclerosis, kidney and liver failure and heart disease. I wonder if anyone ever dies from that foreign noble thing they called old-age?

TAKEAWAYS 'ERODING ABORIGINAL CULTURE'

By Emma Gumbleton October 09, 2006 11:08am ABC Internet News

THE easy option of takeaway food has impacted on Aboriginal traditions and culture, the Galiwin'ku council president has said.

Charlie Yunupingu has lived in the community for 40 years and said people were much healthier under the old mission in the 1950s. "Back in those days things were pretty good - eating healthy, going out fishing with their family," he said.

"When the shop came in, people just go and buy bad food. The council wants to see people eating better foods and getting better health."

The community of almost 3000 is serviced by a store and two takeaways, which mostly display colourful lollies and fried food.

The community has relied solely on a weekly barge service for fresh food supplies, since the demise of Aboriginal Air Services.

Mr Yunupingu said the council has been talking with the shop managers to promote healthier options.

He said through the work of Menzies, YALU and community members, things are slowly turning around.

"Young people have lost interest and rely on takeaways," he said.

"Most of the elderly people have started following them and eating junk food. But the Yolongu people are very strong. The kids are slowly learning not to drink soft drink and they're now hunting with their family."

According to Ayurveda, food or Ahara is supposed to be a **life supporting** substance! According to Charaka Muni 400 B.C. wholesome is not a fixed quantum, **“That food which nurtures all the tissue of the body, and which puts the body into balance, is wholesome”**.

In conclusion, wholesome food is logically;

1. Life supporting
2. Balancing

CAN HUMANS ADJUST TO UNWHOLESOME PROCESSED
CARBOHYDRATES?

WHAT DO YOU THINK?

Chapter Two

IS PROCESSED FOOD A NEW PROBLEM?

This idea of food processing causing disease is nothing new, please read the following extract from the Lords and Ladies of the County of Chester.

The Medical Testament
Nutrition, Soil Fertility, and the National Health

County Palatine of Chester

Local Medical and Panel Committee

March 22, 1939

Published in full at the time in the *British Medical Journal BMJ*

“THE Cheshire Panel Committee on March 22 [1939] made public a "Medical Testament" signed by its thirty-one members on nutrition and its relation to agriculture. The occasion was a meeting at Crewe, which was attended by some 600 representatives of the county local health authorities, Farmers' Union, and the medical profession.

After the chairman, Dr. John Kerr, had submitted the document, Sir Robert McCarrison and Sir Albert Howard spoke in support of it.

Sir Robert McCarrison, in his address, said there were, in his estimation, four chief faults in the diets of the great mass of the people of this country: (1) the use of denatured wheat flour; (2) excessive use of carbohydrate foods; (3) insufficient use of fresh green vegetables; (4) insufficient use of safe milk and also the large consumption of meat and other animal foods -- a practice as unnecessary as it was uneconomic.”

Sir Albert Howard contended that soil fertility must be the basis of the public health system of the future, and that agriculture must be given its place as the foundation of preventive medicine. Medical men as well as nutrition experts, he said, were realizing that a fertile and productive soil was an asset, which should be developed in the nation's interest.

A resolution accepting the testament was moved by the Lord-Lieutenant, Sir W. Bromley Davenport, seconded by Dr. Boswell of Runcorn, and carried unanimously.

Our daily work brings us repeatedly to the same point: "This illness results from a lifetime of wrong nutrition!"

"This illness results from a lifetime of wrong nutrition!"

Sir Robert McCarrison Experiments in India

Two groups of young rats of the same age were confined in two large cages of the same size. Everything was the same for each group except food. One group was fed on a good diet, similar to that of a Northern Indian race whose physique and health were good. The other was fed on a diet in common use by many people in this country, a diet consisting of white bread and margarine, tinned meat, vegetables boiled with soda, cheap tinned jam, tea, sugar, and a little milk: a diet which does not contain enough milk, milk products, green leaf vegetables, and whole-meal bread for proper nutrition.

"This is what happened. The rats fed on the good diet grew well; there was little disease among them, and they lived happily together. Those fed on the bad diet did not grow well; many became ill and they lived unhappily together, so much so that by the sixtieth day of the experiment the stronger ones among them began to kill and eat the weaker, so that I had to separate them. The diseases from which they suffered were of three chief kinds: diseases of the lungs, diseases of the stomach and intestines, and diseases of the nerves -- diseases from which one in every three sick persons among the insured classes, in England and Wales, suffers." [12]

In conclusion;

IS PROCESSED FOOD A NEW PROBLEM?

The Ladies, Lords and health authorities of Cheshire County UK were aware of it, in 1939.

The Charaka Samhita written 400BC states;

“FOOD AS THE SOURCE OF HUMANS AND ALSO DISEASE!”

Basic Nutritional Truth

The prime fuel for the human body is glucose obtained from carbohydrates!

IS THE RATE AND EXTENT OF DIGESTION AND ABSORPTION OF CARBOHYDRATES IMPORTANT?

Understanding Carbohydrates

From the sunlight, plants receive energy to produce carbohydrates from carbon dioxide and water with the by-product of oxygen. The result is basically two main types of carbohydrates (sugars).

The first a poly-saccharide starch is water soluble and easily transported, permeating the tissue fluids and absorbed by the cell. Also known basically as starch and sugar.

The second is neither readily soluble in water nor absorbable and is collectively known as non-starch polysaccharide. (NSP) Also basically known as fiber.

“Plant foods contain two main, chemically distinct types of polysaccharide, the storage polysaccharide starch, a polymer of glucose linked by α-glucosidic linkages, and polysaccharides that do not contain α-glucosidic linkages, which are often referred to collectively as the non –starch polysaccharides (NSP).”

(Human Nutrition and Dietetics p61)

In Summary;

Carbohydrates basically consist of

1. Easily absorbed starches and sugars

Free Sugars – associated with elevated blood glucose and insulin levels

Starch – associated with elevated blood glucose and insulin levels

2. Not absorbed starch-sugar NSP (non-starch polysaccharide)(fiber)

NSP - Slows down the rate of digestion and absorption of glucose

Carbohydrates provide up to 85% of the energy needs of poor populations and as low as 40% of rich nations. An interesting observation is that diabetes is traditionally a disease of the affluent who eat fewer carbohydrates! The rich nations have a higher intake of non-carbohydrate foods, however the carbohydrates they do consume are highly processed and have far more rapidly available glucose per mouthful than whole carbohydrates. Whereas poorer nations before industrialization were accustomed to eating whole grains and whole carbohydrates in larger quantities. We assume the reason why diabetes was a relatively rare disease was that the carbohydrates were **whole and fresh**. Because of this the rapidly available glucose from the carbohydrates was much less for poorer people.

Carbohydrate are whole grains, fruits, vegetables and to a small extent available from lactose in dairy and glycogen in meat. So if you are thinking of a carbohydrate free diet, you may have to think again because that will be difficult to achieve. Carbohydrates or carbohydrate containing foods are identical with food and basically are the main staple of the planet! Glucose is the main energy currency for the body, also some proteins are converted into glucose in the body.

In Summary;

**Carbohydrate are-Whole grains, fruits and vegetables.
(Also Lactose in Dairy and Glycogen in Meat)**

Whole Carbohydrates and Processed Modified Carbohydrates

It is common to refer to many highly processed flour and precooked grains (cereals) as carbohydrates. Strictly speaking they are highly processed modified parts of carbohydrates. **A highly processed modified part of a carbohydrate will not behave the same as a whole carbohydrate**, you don't need a university degree to understand that!

'Starch and sugars are, to a large extent, broken down by digestive enzymes into monosaccharides and then absorbed in the small intestine. There are strong indications that consumption of readily available glucose from starch and sugars leads to elevated levels of plasma glucose and insulin, which are detrimental to health in many contexts, including diabetes, coronary heart disease, cancer and ageing.' (Human Nutrition and Dietetics)

The impact of processed carbohydrates on public health are determined by the processing!

“Carbohydrates are the world’s most prolific staple, the site and rate of digestion and absorption of these foods are highly dependent on the degree of processing. (Haber et al 1977) (Heaton et al 1988). Haber and Heaton showed that the rate and extent of increases in blood glucose (glycaemic response) and insulin levels were directly related to the amount of destruction of plant cells by processing.” (Human Nutrition and Dietetics)

Food processing which damages the cell wall of the fibre is directly related to increases in blood glucose and insulin.

And

Continued high blood sugars and insulin levels are linked to obesity, hormonal disturbances, acidity, diabetes, cancer, heart disease and arteriosclerosis!

‘Working the pancreas in overdrive risks cancer!’

For eight years 77,797 people were studied, researchers concluded that, Adding sugar to food and drinks increased pancreatic cancer risk by 69%, and for those who drank soft drinks twice per day the risk of cancer was increased by 93%.

(American Journal of Clinical Nutrition 2006;84:1171-1176 Larsson SC et al)

In Ayurveda, glucose and glycogen and central role of conversion and re-conversion by the liver were understood for the past 2400 years. High blood glucose and diabetes and the many diseases caused by continual high blood glucose and insulin levels were considered the property of the rich who could afford processed foods.

‘Complete Health from Complete Food!’

Researchers and nutritionists have long known that sugars as well as many starches are converted into glucose then **readily absorbed** in the small intestines. Nutritional and epidemiological surveys indicate that consumption of **rapidly**

available glucose (RAG) from sugars and starches creates elevated levels of plasma glucose and insulin, which is injurious to health leading to Diabetes, Insulin Resistance Syndrome, Coronary Heart Disease, Cancer and premature aging.

Let us use the gross example of a car, if the rate and absorption of fuel (glucose) for your motor car (body) increased 400% (this is a moderation figure as you will see in later chapter), what would that mean,

Four times the combustion, heat increase, high acidity

Four times the wear and tear on the engine, accelerated aging, increased oil use

The car would explode into a million pieces of metal and plastic, degenerative disease!

The liver and kidney are especially stressed with continued elevated blood glucose and insulin levels, the hormones are grossly altered. The bottom line is that if our liver is stressed we are stressed: The Chinese talk of a cycle, the liver gets stressed, we get stressed that stresses the liver. It is a negative expanding cycle! If our kidneys are being dissolved over time we are distressed, with kidney trouble the heart is affected, Hypertension, it makes life hyper-tense! The hormones (chemical messengers) are altered, things are not going the way they are supposed too, tissue grows where it is not meant to be (poly cystic, PCOS) do you think it is easy to be happy under such conditions? Life becomes a hard working job.

So the answer, prescribe anti-depressants. Now that is advancement of civilization!

Back to the car, you are driving along and the oil light comes on, there is a problem. OK a specialist mechanic fully trained cuts the wires, Hey, the oil light is off! All fixed! Right!

Rather by a whole-some diet that relaxes the vital organs, by regulating blood glucose and therefore insulin levels, and therefore glucagons and adrenaline levels, then the owner of the body, you can relax! Digestion is an incredible complex biochemical process, nutritional biochemistry appears endless when describing molecular pathways of metabolism. However as presented, Dieticians and Nutritionists have long known that is detrimental to health to

increase food processing, or cell wall damage thus increasing the blood glucose levels.

In Summary;

According to Nutritionists and Dieticians,

The rate and extent of digestion and absorption of carbohydrates has PARAMOUNT importance to human health?

Because;

The rate and extent of digestion and absorption of carbohydrate are directly related to elevated blood glucose and insulin levels!

And;

Continued high blood sugars and insulin levels are linked to obesity, hormonal disturbances, acidity, diabetes, cancer, heart disease and arteriosclerosis !

(The concept of the delicate balance of blood glucose and the liver from the Ayurvedic perspective is further elaborated in chapter six and a food additive now in sugarless jams which hits the liver three times more ferociously than white table sugar is dealt with in chapter 15)

GI INDEX OR R.A.G, RAPIDLY AVAILABLE GLUCOSE?

The GI Glycaemic Index is a popular measurement based on the RATE of absorption and digestion of carbohydrate containing foods. (Frost et al 1993).

The GI index does NOT measure the total amount of carbohydrates in a food. In other words a food with low carbohydrates present will have a high GI because the **rate** of absorption is high. This is also true in reverse where a food has a low rate of absorption but a high carbohydrate content, that food has a low GI. This is **confusing** because it does not take into consideration the **total amount** of free sugars present in the food. This becomes even **more confusing** when trying to make wholesome choices using the GI Index. Further to measure the likely Glycaemic response from a mixed meal you need to become a mathematician! In general the GI calculations are illogical because only the **rate** of glucose absorption has been considered and not the total quantity!

***For example;** Bran cereals and Potato chips are considered to have a low GI (because only the rate of absorption is measured!)*

However with the RAG system they are considered not wise choices! (RAG over page)

RAG (Rapidly Available Glucose) is the **total amount of available glucose**, the glucose from starch and sucrose. RAG (Rapidly Available Glucose) reflects the amount of glucose likely to be rapidly absorbed, and thus to influence blood glucose and insulin levels. RAG (Rapidly Available Glucose) measures the **rate** and **amount** of glucose thus accurately calculating the TGR (True Glycaemic Response).

This correlation between RAG and the Glycaemic response has been confirmed with a small number of carbohydrate rich foods over a range of RAG intakes. (Englyst et al 1999). Available is the paper by H.N. Englyst & others entitled '**Measurement of RAG (Rapidly Available Glucose) in plant foods: a potential *in vitro* predictor of the glycaemic response**'. (British Journal of Nutrition 1996, 75, 327-337)

In Summary;

R.A.G (Rapidly Available Glucose) is an accurate measurement of the rate and amount of total glucose likely to be absorbed into the blood. (True Glycaemic Response)

RAG Rapidly Available Glucose comparison approximate calculations

(the higher the RAG the more available glucose enters the blood!)

Bran cereals have 350% the RAG than that of a sweet potato

Wheat Bix have 650% the RAG than that of a sweet potato

Rice Crisps have 800% the RAG than that of a sweet potato

Potato chips have 300% the RAG than that of a potato

White bread has 370% the RAG than that of oat porridge

Wholemeal bread has 330% the RAG than that of oat porridge

Wholemeal bread has 230% the RAG than that of pasta

Ryvita biscuits have 600% the RAG than that of oat porridge

Water biscuits have 800% the RAG than that of pearly barley

Puffed wheat has 330% the RAG than that of white long grain rice

Why eat a potato chip instead of a potato? The GI index would encourage you to do so. Why eat the great Western cereal like puffs and Bix, eat a potato and get 800% less glucose. Of course this is not recommending to over eat potato, only!

The GI index does not encourage sensible choices for example Corn Flakes are more than double the GI of a Chocolate mousse, so eat chocolate mousse for breakfast. The G.I Index may be a lucrative invention which has little value in calculating a True Glycaemic Response!

Looking at several RAG comparisons above, the highly processed unsafe foods (artifacts) are on the left; on the right are whole carbohydrates and a few traditional carbohydrates such as white rice and processed pasta. Other non-starchy green vegetables and whole grains like basmati rice or home milled pancake mix and dahl have a much lower RAG value. We have chosen the most starchy and traditional carbohydrates but still the RAG comparisons paint a picture, which is self-evident. RAG values have massive repercussions to human health because of the continued insult to the blood glucose levels and insulin production.

The RAG figures encourage wholesome choices because in whole foods the undamaged parts of foods such as fiber and other particles slow down and regulate blood glucose levels. Modern processed food has raised the levels of RAG so high it is not surprising that the liver, blood, kidneys and therefore the heart (emotions) cannot cope!

BECAUSE R.A.G (RAPIDLY AVAILABLE GLUCOSE)
MEASURES THE RATE & AMOUNT OF AVAILABLE GLUCOSE,
THE MEASUREMENT IS A TRUE GLYCAEMIC RESPONSE!
TGR!

The Over-Consumption Hypothesis of Dr T. L. Cleave;

Remember that the RAG figures above do not reflect the over-consumption hypothesis of Dr T. L. Cleave Captain Surgeon (rtd) British Navy.

For example, person A consumes 100 grams of whole grains which have 70% starches with 30% fiber and whole phyto-nutrients, the other person B consumes the **same 100 grams** but of approximately 100% starches. The amount of starch and glucose (RAG) per mouthful per meal has increased by at least 30% for person B because the 30% fiber has been replaced with 30% of extra processed starch.

There is a continued insult every day, every mouthful and every meal to blood glucose levels. But there is more! Because the starches lack body one is bound to eat more, the food is less satisfying. The food is less sustainable, it digests quicker, one feels hungry again, sooner! So we have to add more to the equation, to tip the delicate balance of homeostasis. One may be taking 140 grams (140%) of RAG or UNSAFE carbohydrates rather than the normal 100 grams (100%) of SAFE Carbohydrates with NSP (fiber). Over-consumption of foods high in available glucose has been listed for 2000 years as the prime cause of madhumehi or diabetes.

**FOODS WITH HIGH R.A.G ENCOURAGE OVER-
CONSUMPTION OF GLUCOSE AND STARCH**

INCREASING THE TGR (TRUE GLYCAEMIC RESPONSE) EVEN FURTHER, & STILL FURTHER AGAIN OVER TIME!

In Conclusion RAG calculations take into consideration the rate and amount of glucose or carbohydrates present in a food by measuring (in test tubes) glucose, starches and fiber in different units and divisions. (British Journal of Nutrition 1996, 75, 327-337)

An inverse correlation between GI and fiber in foods reflect the truth that the encapsulation of sugars and starches within plant cell walls (dietary fiber) can delay or prevent their digestion in the small intestine, resulting in lower RAG and TGR levels.

The result of whole foods is a moderate glyceamic response with lower plasma glucose. The striking realization with RAG values is that they climb higher as food processing increases. Whole grains, beans, fruits and vegetables are at the lower end, while all breads, biscuits, cereals, chips and crisp bread are at the high end. Rice Krispies or Puffs are at the high end at 73 gm/100gm. while some beans and chickpeas are at 4-5gm/100gm. By the way Rice Puffs taste so bad they need sugar as well!

A Traditional Ayurvedic breakfast could be vegetable dahl with chapatti or a rice preparation which would be 400% lower RAG than the processed Popped, Puffed or Stuffed part-grain. Whole fresh rolled oats are many times a better choice than UNSAFE processed oats and cereals!

Conclusion;

ARTIFACT-FOODS WITH HIGH R.A.G (RAPIDLY ABSORBED GLUCOSE) ARE GENERALLY ALL YOUR PROCESSED FOODS!

IS THERE A PROBLEM WITH MAINSTREAM WHOLEMEAL BREAD?

*“We don’t consider **WHOLEMEAL flour** to be a characterizing ingredient of **WHOLEMEAL bread**”.*

This is a statement to Australian Choice magazine 2006 by a leading Industrial Bakery when questioned concerning the flour content of wholemeal bread!

So you may thinking that it’s wholemeal bread you are eating and giving your children, but all that healthy bread is not so, because industry has a different concept of ‘WHOLE!’

Choice magazine 2006 goes on to say, “The **FACTS**, there is very good evidence that eating **whole grains** in cereals and breads, helps protect you against **heart disease, type 2 diabetes** and some forms of **cancer**”.

On one hand the health benefits of whole grains are being acknowledged and on the other hand industry appears to be more absorbed in bread processing production rather than health production! Yet industry is ready to claim amazing health benefits for their breads. On the Tip-Top Internet site, low GI and Health claims litter most pages.

Further Choice magazine continues, “**LOW (GI) Glycaemic Index** claims from Bakers! True or false! Healthy or Unhealthy!

Choice magazine continues, “The **FACTS**, most of these claims are little more than **marketing hype**.”

Conclusion; **Low G.I. claims appear to be simply hype!**

Some History of the Milling of Wheat!

Wheat was traditionally stone ground in one simple slow action rendering complete wholemeal flour. In the early 1900’s stone mills were replaced by roller mills and over time became developed into high-tech mills of today.

The grain is milled by a series of rollers which progressively decrease in size. Firstly the rollers shear and separate the branny layer as a flake. The next roller scrapes the endosperm (starches) from the bran. The output of each set of rollers is sieved and the fine flour removed. The larger fragments pass on to the next set of rollers where the grinding and sieving continue. The process concludes with a series of stages where the endosperm is reduced into fine flour. Roller mills produce different products at certain points called streams such as fine flour, different brans and germ. The process is called extraction and fractionation. Wholemeal flour is produced by adding particles back into the fine white starches, or white flour!

That is correct!

Adding wheat particles back into the fine white flour produces wholemeal flour!

Conclusion;

There is NO whole-meal flour in modern society!

However the word **Whole-meal** is still listed in the dictionary!

Actually I have wondered how the so-called wholemeal bread has become as fluffy and light as the white bread? So now I know for sure the meal is not actually whole!

Below are comparisons of the RAG for wholemeal and white bread to the most starchy vegetable the potato and white rice as well as polished pearl barley grain. (just imagine how much better, whole grains and the non-starchy vegetables are!

White bread..... is 250% higher RAG than a potato or white rice
In other words white bread has 2 ½ times the available glucose than a potato or white rice!

Wholemeal bread..... is 215% higher RAG than a potato or white rice

White bread..... is 460% higher RAG than a pearl barley

Wholemeal bread..... is 400% higher RAG than a pearl barley

Remember the “Over Consumption Theory” will add another 40% to these calculations!

Basically because processed bread and cereals are such a mainstay for the Aussie kids, consumed in such vast amounts for as many as three meals per day these figures are extremely significant. With the levels of RAG (Rapidly Available Glucose) listed it is not surprising that childhood and juvenile diabetes are soaring.

Conclusion;
Both white and wholemeal breads have a high RAG, there is little difference!

Conclusion; **Both white and wholemeal breads will cause un-natural levels of blood glucose over time because of the high RAG (rapidly available glucose)!**

Back to flour milling

There is also a series of a bleaching processes using chlorine dioxide, benzoyl peroxide or nitrous oxide. Also other 'bread improvers' such as chlorine (cake flour) can be added! They call it bleaching! For your health and longevity the flour is then fortified with some synthesized vitamins and minerals.

There is a Vedic word to describe these processing actions;

Mayapahrtajana means **'knowledge nullified by illusion!'**

A tale comparing food fortification; (*Dr A. Hoffer*)

'You are at the bus stop, a person puts a gun in your face and demands all your money and clothes (extraction-food processing). You are standing in the street naked and shivering, the robber feels great compassion for you. So they return your underwear and 50 cents to catch the bus home (food fortification).'

Who needs a Multi B? - If you eat true organic whole grains each day and also your digestion is good the last thing you need is a synthetic multi-vitamin tablet! Because the prime source of vitamins and minerals are whole grains!

Which Bread to eat? - Where the whole organic grain is freshly milled and totally incorporated into the bread! (see recipes for chapatti, pancakes and milling ideas in our Ayurvedic Simple Cookbook).

Did you know? - That Traditional double rise yeasting is no longer used in main-stream bread making! It is now considered too time consuming, now it is called ‘the **Chorleywood Bread Process**

The **Chorleywood Bread Process**, or CBP, was developed in 1961 by the Flour Milling and Baking Research Association at Chorleywood and is now used to make 80% of the world’s bread. CBP uses low protein wheats combined with **chemical improvers** and **intense mechanical working** of the dough using **high-speed mixers**. The process substantially reduces the long fermentation period by introducing high energy mixing for just a few minutes, dramatically reducing the time taken to produce a loaf. The CBP method of making bread cannot be reproduced in a normal kitchen because of the requirement for a high-speed mixer.

http://en.wikipedia.org/wiki/Chorleywood_Bread_Process

Conclusion

High speed-mixing may further damage the cell wall of the flour and starch therefore increasing the availability of glucose and gluten.

Ayurvedic wisdom; ‘**Anything done artificially is not good!**’

What about ORGANIC bread?

Organic Stone Ground Light Bread by Golden Health with the extra large words Organic Bread, on both sides.

A little side label tells ‘***This bread is made from 100% stone-ground light flour, that is, the flour does contain a percentage of bran which gives the bread a light off white colour, The term ‘light’ does not mean that there is any reduction in the nutrient or energy content of the bread’.***

If you are happy with that possibly I could interest you in some healthy organic cigarettes?

Every Nutritionist knows that the bulk of B vitamins and minerals are in the outer layer of the grain! So how can most of the outer grain be removed and the nutrient value remain the same, this is very mysterious, but if whole-meal flour is not a characterizing principle of whole-meal bread, Who Knows?

A brief subjective journey;

In 1955 I would rush out to see the horse that drew the bakers cart outside our terrace house in Melbourne. The horse would frequently pass manure which

was also fascinating for a five year-old. The bread I can remember was of only two kinds, uncut white or brown. The interesting thing about this delicious bread was on the second day it must be toasted, it could not be eaten otherwise, due to it being 'stale'. On the third day the remainder was donated to the ducks in the park at the Exhibition buildings. Now the question is what have they added or changed to the bread during production to increase the softness and freshness of the bread? Hey it is good for the bread! It is good for the bakery! But is it good for you?

News-Update 2001

Chemicals on top of the **sugars** add insult to injury!

A Darwin mother has just completed a clinical study involving 27 children. Sue Dengate found that children that were susceptible to ADD and behavioral problems had tremendous difficulty every September. Sue soon found after investigation that mould inhibitor 282 (because of the Darwin climate) was grossly increased in commercial breads at that time of year. Putting it together Sue found that the children were greatly improved when their diet was free of 282, and the children suffered relapses into gross behavioral problems when the commercial bread was re-introduced into their diets!

Artifacts according to Dr A. Hoffer

Dr Hoffer the author of many nutritional books has developed the concept of part foods are not foods but **artifacts**. Long term consumption of such highly processed **pieces of art** are injurious to human health because of the high RAG.

When you see a product with so much of it's wholeness and goodness removed, you may think of it as a work of art, an **ARTIFACT!**

**IT IS NOT FOOD, IT IS INDUSTRIAL
ART MADE FROM PART OF FOOD!**

Conclusion;

Modern bread is a highly processed, denatured product, full of chemicals, thus raising blood sugars and therefore cancer levels and is a wonderful piece of industrial art, an ARTIFACT!

Even though it may be labeled **ORGANIC!**

Daily Bread May Cause Cancer!

The Courier Mail October 21-22, 2006
(From the International Journal of Cancer)

“Those who eat five slices of white bread per day are TWICE as likely to develop kidney cancer than a person who eats one and a half slices.

Scientists put the cause down to refined cereals triggering a rise in blood sugars and insulin levels, which is thought to fuel cancer cells.”

Conclusion; The bread has changed dramatically in the last hundred years, due to advances in food processing technology from a SAFE to an UNSAFE carbohydrate.

*The ancients have said, “Bread is the staff of life”
In the 21st century – “Bread is the bludgeon of life”*

In Summary;

**MAIN STREAM BREAD RAISES
BLOOD SUGARS TO UNSAFE LEVEL
INCREASING THE RATE OF DISEASE!**

In Conclusion;

**MAIN-STREAM BREAD AND BAKED
GOODS MAY BE BEST TO LET FLOAT
DOWN-STREAM!**

Chapter Six

CARBOHYDRATE EQUILIBRIUM AND THE LIVER-AN AYURVEDIC PERSPECTIVE!

THE PATHWAY, CONTROL AND REGULATION OF CARBOHYDRATES

In Ayurveda this is called 'The Marga (pathway) and Samata (balance) of Madhurarasa Dravyas (sweet substances)'.

Taken from Dr C. Dwawakanath's 'Digestion and Metabolism in Ayurveda!'
Principle Govt. Ayurvedic & Unani College Mysore.

The liver has to be regarded as one side of the vast balance of nutrients - the other side of the balance being the remainder of the body. The circulating blood which, from the Ayurvedic point of view, corresponding to plasma, serves as the medium of transport, "signaling mechanism" and general connecting link between the liver (yakrit) on the one hand and, the remainder of the body, on the other. The potential tissue-nutrients (Upadhaua dhatvaharas) arriving from the intestinal cavity (koshtha) or not coming from this organ to the **yakrit** (liver), may tilt the balance one way and **dhatvaharas** or tissue-nutrients used up or not utilized by the **shariradhatus** or body-tissues, may shift the balance in the opposite direction. The balancing processes are shown to operate through "chemical equilibria" and they normally make adjustments in such a way that the original **samyata** or equilibrium is maintained or, if disturbed, re-attained.

This is further explained by Weiss;

"The adaptive advantage of an organ such as the liver is evident. No matter when or at what regular or irregular intervals the organism eats, the liver collects most of the food as it is absorbed from the gut and then releases it into the body at a pace adapted to the particular requirements of the moment."

"Hence, whereas the metabolism of other animals reaches peaks just after food has been eaten, the metabolism of animals with livers may remain at a continuously steady level," (Weiss, Science of Biology).

This invites attention to a major function of the liver. Through the storage of glycogen and the control of blood glucose and, when necessary, through inter-

conversion of the carbohydrate and fat, the liver ensures that all body tissues receive an adequate supply of glucose.

This is seen not to depend upon any particular pattern of meals time and it is geared, in normal conditions, to the changing needs of the body tissues.

In Summary;

‘THE LIVER CONTROLS GLUCOSE SUPPLY BY CONVERSION AND INTER-CONVERSION OF FAT and GLUCOSE!’

The Disposal of the Excess of Carbohydrates:

The question as to what happens in a normal subject when the liver and the body tissues are stocked to capacity with glycogen (converted glucose). When the immediate needs of fuel have been met and when, still more of carbohydrate is being transported from the small intestine, will arise. The situation referred to above is a case of an excess of intake of carbohydrates. It may now be recalled that, according to all the Ayurvedic authorities literature (samhita granthas), excessive indulgence in carbohydrates (madhurarasa dravya) contributes to the formation of lipids (medas).

‘It may now be recalled that, according to all the Ayurvedic literature, excessive indulgence in carbohydrates contributes to the formation of lipids.’

Confirmation and the rationale of this early Ayurvedic concept comes from modern researches in the field of biological sciences. Thus, according to these developments, internal carbohydrate concentration is reached rather rapidly, since even at optimum storage, the carbohydrate content of the body does not exceed 1% of the total weight. If sugar supplied by food sources exceed the internal capacity, then a small quantity of the excess is excreted in urine. This occurs immediately after a heavy meal rich in carbohydrates and proceeds to the liver and some of it from there to other tissues where, it is converted to lipids. This contribution explains why even a non-fatty diet produces increased layers of body fat, particularly when more food is consumed than what is necessary to meet the actual needs of the body.

In Summary;

‘EXCESSIVE CARBOHYDRATES IN THE BODY ARE CONVERTED
TO FAT BY THE LIVER’

In the reverse direction, if a subject subsists on a low food intake or in the alternative, goes through complete starvation then, the internal store of glycogen will soon be greatly depleted. Yet, up to a point, blood glucose level and the carbohydrate supply to tissues may still continue to remain normal. In such conditions, the **yakrit** (liver) draws upon the **medas** or fat of the body and transforms, as much of it as required, into glycogen and this into glucose.

In Summary;

‘THE LIVER IS THE CENTRAL ORGAN OF CRITICAL BALANCE
AND METABOLIC CONVERSION’.

Conclusion;

Because the liver is involved in over 200 metabolic processes, it is reasonable to assume that if the liver over years is taxed with un-natural levels of blood glucose, that this could certainly have adverse effect over every organ and system of the body!

High and low blood sugars are linked to endocrine disorders like PCOS, high estrogens, hypertension, fatigue, depression, diabetes. Who can say, precisely the long term results of the (plasma and blood) rasadhatu being over loaded with carbohydrates?

THE INTELLIGENCE OF THE UNIVERSE & CARBOHYDRATES!

An example of intelligent design is the fact that chromium a mineral known for the ability to control blood sugars is found in sufficient amounts in **whole** sugar. This whole sugar known in India as jaggery or gur was traditionally used as we use the white crystals today. The chromium is generally in the molasses, after being removed from whole sugar it is then fed to animals. With the complete variety of minerals and nutrients in molasses the farm animals shine with health. So the hilarious quirk of human folly is the chromium, which is given for sugar disease has been removed from the sugar. Now there is some deep wisdom in there somewhere!

A good example from Dr A Hoffer,

You are at the bus stop, and a man puts a gun in your face and demands all your money and clothes. Standing there in the street naked and shivering the robber feels great compassion for you. So they return your underwear and 50 cents to catch the bus home. So too the food processing industry remove or rob most or all of the goodness out of the processed foods and throw a few synthetic nutrients back in the de-natured product.

In other words if humans simply respected the universal design health would not be such an issue. Incidentally ‘design’ refers that there is intelligence.

Let us take a look at the intelligence of a whole grain, which consists of; (in brief)

1. Fresh protein which acts as an acid buffer.
2. High Fiber, which regulates the digestion and absorption of starch and glucose.
3. Anti-oxidants and Oils which lubricant the system, protect from ROS (reactive oxygen species, free radicals) and provide EFA’s. Essential fatty acids.
4. High Vitamins and Minerals, especially B Vitamins.
5. Starches and sugars (fuel) which are regulated by the above.
6. Phyto-nutrients such as immune sugars

7. Undiscovered attributes! Science is for ever moving forward!

And again!

***Our ignorance of the natural world
Is greater than our knowledge! (David Suzuki)***

Many baked and grain products are as low as 70% of the original grain. Yes, every Nutritionist and food scientist knows that the bulk of the B Vitamins and minerals are in the outside of the grain. And that the rapidly available starches and glucose are on the inside. So nature has a plan, and therefore an intelligence, not just you. The grain has a logical organization which is programmed for the regulated sustenance of humans and animals.

Let us take a look at this 'Intelligence of Nature'!

1. The protein is reduced and de-natured by oxygen electron exchange (stale), thus the ph changes to a more acidic level. Protein which is normally an acid buffer for the stomach thus loses its natural ability. This disrupts with continued use the acid-alkaline homeostasis of the body, causing acidosis, reflux and also attributing to peptic ulcers.

2. The fiber has been greatly reduced-fractionated, therefore the RAG has increased. The starches and sugars are no longer regulated naturally by the fibre, the result, a sugar spike and dip, raised blood sugars and high insulin. Causing constipation, diverticulitis, diabetes, cancer, heart disease.....

3. The grain product is now only 70% of the grain, that means that the amount of RAG has increased per mouthful. Not only is there no NSP (fiber) to regulate the RAG the RAG has increased because the NSP has been replaced by RAG. In other words a person will still eat the same amount of grain but is receiving vast quantities of RAG more than a person who eats (real) whole grain. This causes over eating of starches and sugars, with more sugars converted to fat.

4. When the grain has been milled for more than three days the oils become stale and rancid and the anti-oxidants such as Vitamin E and A become impotent.

5. The oxygen renders the starch rigid by electron transfer, the starches become dry and difficult to digest even after cooking. A fresh oat when crushed is soft and easy to digest.

6. A balanced food of high nutrition and fiber becomes a high calorie low vitamin and mineral, acidic, oxidative affair. A type of worthless unsafe glue, its only value is sugar and starch. Any wonder that constipation and diarrhea are at a pandemic!

Basically the fine human intelligence bathing in pride has committed a massive crime.

Destroying Intelligence of the grain by processing and removing 30% of the major nutrients

‘Our crimes against nature are the roots of our disease!’

Conclusion The universe is not a dumb blob, but Nature has an intelligent plan!

The important aspect of carbohydrates to remember is what determines a **healthy** or **unhealthy** carbohydrate is its WHOLENESS!

**Which after all, is sublimely
‘INTELLIGENT’!**

Chapter Eight

Understanding Safe & Unsafe carbohydrates!

We hear the word Carbohydrate which basically means all fruits, vegetables and grains, as well as part of dairy and meat products. Carbohydrate has become such a bandied about word especially by the media and now the public, that the words broad meaning and usage has attributed to the word merging into nothingness;

So we asked five people what carbohydrate meant to them,

1. "To me it means, potato and pasta, which are my favorites".
2. "Starch and wheat".
3. "Biology taught me it is a poly-saccharide and something about lipid".
4. "Are Bad".
5. "Fruits, veggies and bread are carbohydrates, which we need to watch".

We could write thousand of pages about carbohydrates, and actually there are millions of pages written about carbohydrates. However if there were just a few words that could give a practical guide to carbohydrate useage, which would serve your health justice, what would that be?

*"Carbohydrates should not be taken as a single group but as two very different groups; one being natural, **un-concentrated** carbohydrates, such as **unrefined** grains, potatoes, and fruits, and the other being **unnatural, concentrated** carbohydrates, notably **refined** flour and sugar. '*

'And that as the body was evolved to the consumption of natural carbohydrates, no harmful over-consumption of these would occur, no matter how much of them might be needed to satisfy the calorific requirements; whereas the opposite was true of the refined carbohydrates, which were only too likely to be over-consumed -- especially in the case of sugar, which is many times more refined than even the whitest flour. "

(Dr T. I. Cleave Surgeon-Captain Royal Navy (retd.)

Former Director of Medical Research, Institute of Naval Medicine (UK)

In Summary; Two types of carbohydrates!

1. **Safe** Natural Carbohydrates-Whole grains, fruits and vegetables
Regulated blood glucose and insulin levels.
2. **Unsafe** Refined Concentrated Carbohydrates-Processed foods
Unregulated blood glucose and insulin levels

It is a meaningless generality to discuss carbohydrates, because carbohydrates are the majority of food that supports the entire world (40-85%). In order to be sane and in light of Dr T. L. Cleaves presentation we shall in this treatise call one **safe carbohydrates** and the other **unsafe carbohydrates**.

Captain T. L. Cleave was the Chief Surgeon for the British Navy, in his book 'The Saccharine Disease' he details the accumulation of his vast experience. He scientifically and logically introduces the concepts, chapter by chapter how **UNSAFE** carbohydrates slowly but surely weaken the system allowing degenerative diseases to enter the body. He outlines that unsafe carbohydrates firstly disturb and create disease of the colon, then he outlines the following, varicose veins, deep venous thrombosis, varicocele and haemorrhoids, dental caries, periodontal disease, obesity, diabetes, coronary heart disease, peptic ulcer, and infections of Escherichia coli.

The book is freely available;

http://journeytoforever.org/farm_library/Cleave/cleave_tac.html

Conclusion, **Carbohydrates consist of;**

Safe Natural Whole Carbohydrates & Unsafe Refined Carbohydrates

Well, Can I eat fiber enriched products and add fiber to my unsafe carbohydrates to improve my health?

Fiber Enriched-But is it Fiber?

Just because they call it fiber does not mean that it is fiber or a NSP non-starch polysaccharide. A water soluble additive is being used by the food processing industry to increase the fiber in so-called ***fiber enriched products***. Remember fiber or NSP slows down the rate of digestion and absorption of glucose. In actual fact the so-called fiber being touted by industry is a RETROGRADE starch. (Johnson and Southgate 1993) found that there is no evidence to support the claim that retrograde starch is fiber. Because this so-called fiber does not contain plant cell walls, the ability to slow down the rate of digestion and absorption of glucose is extremely doubtful. Read the label carefully if you are concerned about your pancreas!

Adding Fiber-Is NOT recommended?

Excuse me could you say that again?

Yes! Adding Fiber, IS NOT recommended?

The National guidelines in the UK recommend to increase fiber in the diet **for the proven health benefits** such as protection from high blood sugars-diabetes, insulin resistance syndrome and CHD (Coronary Heart Disease).

The guidelines recommend a **natural high fiber** diet of food consisting of **whole grains, unprocessed fruits and vegetables** and suggests that adding fiber supplements to food **may be detrimental to health**.

(Jacobs 1983, Jacobs and Lupton 1986, Wasan and Goodlad 1996)

**Conclusion; Fiber must contain in-tact plant cell walls to act as fiber!
Adding fiber to food is NOT recommended by Nutritionists**

*“Our ignorance of the natural world
Is greater than our knowledge!” (David Suzuki)*

Ayurvedic commentators have long documented that use of isolated fiber by certain body types can cause congestion. (Dr V Ladd, Yoga of Herbs)

**Conclusion; FIBER is recommended to be consumed as whole grains,
whole fruits and vegetables!**

‘Anything done artificially is not good’

Final Summary; There are 2 types of carbohydrates!

1. Safe Natural Carbohydrates-Whole grains, fruits and vegetables
(That regulate blood glucose and insulin levels.)

2. Unsafe Refined Concentrated Carbohydrates-Processed foods (That de-regulate blood glucose and insulin levels.)

Clinical Example 2004; Mrs C, age 39, presented with breast cancer, grossly over-weight. After 30 weeks the weight dropped by 30 kg to her normal weight, without a diet, missing meals or harsh regiments. The sublime understanding of **SAFE & UNSAFE carbohydrates** was the key to such organic weight reduction. All snacks were fruit only (limit bananas), all sugar was from whole carbohydrates (limit dried fruit). Fresh chapattis (Eastern flat breads), pancakes (fresh whole flour from a mill) and basmati rice were recommended with unlimited vegetables (a limit on pumpkin and potato) and the use of moderate ghee introduced. Mrs C some days ate five or seven times and still lost weight. Mrs C did regular moderate exercise, after the No Diet Diet and her weight loss, with a specific herbal routine such as concentrated tumeric and herbs, the cancer became benign and the mastectomy cancelled.

Chapter Nine

Safe & Unsafe carbohydrates, In perspective!

Dear Reader, Thankyou for your participation. Now it is important to inform you that nothing is really 100% SAFE or UNSAFE according to Ayurveda;

“Nothing is entirely ‘GOOD’ in essence ,
Nothing is entirely ‘BAD’ in essence ,
Rather it is time, place, individuality, quality and variables
Which may determine SO!”

Certainly UNSAFE carbohydrates are to be avoided, NO DOUBT. That is the foundation of health! Health has a chance to blossom when our diet consists of SAFE foods. That is simple!

But there is more for us to know, do and choose.

Your CHOICES according to time, place, your individuality, different qualities and variables are paramount to your health! Because;

‘Even amrta (nectar) over the limit, becomes Poison!’

Because time, place, individuality, quality and variables can affect the result of our choice.

Here is an example, it is winter, you have been traveling, you arrive home late, the only quick thing to eat is a banana from the fridge. Now the Ayurvedic understanding is that banana is compared to gold for breakfast, silver around lunch and lead for dinner. This is intensified in the winter because the season is cold and wet. A sweet banana is generally accepted as being cold and wet and these qualities are intensified when the banana has been taken from the fridge. So together with all this one has a quick cup of cold milk. The result is mucus, coldness and a tough night. However with Ayurvedic knowledge the sweet banana is dipped in boiling water and taken hot with honey and pepper. The milk is taken warm with vanilla, cinnamon, ginger, cardamom and nutmeg.

If a person has an incredible digestion the cold banana and cold milk may not make them ill, their digestive fire is capable of consuming even inappropriate food choices. However many individuals would succumb to indigestion and congestion from cold milk and banana, late on a winters night. Along with the individual digestive fire the variety of banana and the quality of the milk are also important considerations.

A brief look at time, place, individuality, quality and variables;

Time: Never eat when not hungry, stressed or still digesting the previous meal. If too late drink a light meal like a chai or soup. Never eat excess yoghurt or banana after dark. Eat at regular times, eat according to the season. Do not eat a large meal late at night. Give yourself un-interrupted time to eat, phone calls can wait.

Place; Never eat while watching TV, standing or moving, enjoy your meals in a pleasant relaxed atmosphere.

Individuality; Eat for your body type and your digestive power. If you can not digest it, do not eat it! If your tongue has a thick white coating, drink hot water, avoid all heavy, raw, fried and sweet food. Do not destroy your digestion with cold drinks or ice with meals. Be moderate. Drink a small amount of warm water with meals and leave room for proper digestion to occur. Consider the you,

do not lose sight of yourself, and what is GOOD for the you at all times, places, with different qualities and variables!

Quality; Avoid inorganic food, highly processed artifacts and UNSAFE carbohydrates. Eat meals that make you feel light, happy and inspired, therefore eat light, happy and inspired whole foods. Find a large variety of foods whose qualities agree with you. Always mix your meals, do not eat a meal of just one or two things.

Variables; Do not over eat, or over indulge in any ONE taste, experience all six tastes which are sweet, sour, salty, bitter, pungent and astringent, every day, Try to have variety with your food, Do not eat the same thing day in day out. Do not over or under chew your food, Always read the label for example UHT milk which has been heated to 640 degree has burnt molecules, the fat particle size in homogenized milk is foreign to the gut, skim milk is useless for most purposes, also consider how happy was the cow the milk was obtained from! The Ayurvedic art of using dairy is discussed in the cookbook. Consider micro-waved food, GE food, UNSAFE carbohydrates as undesirable!

So please practice your SAFE & UNSAFE carbohydrate philosophy with full considerations!

**That is Ayurveda!
The Science of Life!**

And again;

“Nothing is entirely ‘GOOD’ in essence ,
Nothing is entirely ‘BAD’ in essence ,
Rather it is

**Time, place, individuality, quality and
variables**

Which may determine SO!”

Chapter Ten

Unsafe carbohydrates, In perspective!

The following article appeared in the Australia newspaper June 19 2004. The original information and research was carried out by Buffalo University, New York State

The Mc Muffin article; The Australian

'Fastfood Feasting a Swell Way to Inflict Damage'

McAttack used to mean a burger binge. But the McAttack is now spearheaded by American film star Morgan Spurlock who, with film Super Size Me showed the devastating health effects of fast food after living entirely on McDonald's for a month.

Spurlock was the guinea pig in his own science experiment with devastating consequences for his own health, vividly demonstrating the dangers that doctors have been warning of for some years in their own quieter Mc Attack.

Fast food is a fast way to get fat, but the story doesn't stop at ballooning weight. One of the processes unleashed when scoffing fast food, it seems, is inflammation. One of the weapons of the immune system inflammation is used to protect the body but if left unchecked it can inflict damage and cause disease.

When the body suffers injury or irritation. It rushes disease fighting white blood cells to the site by increasing the blood supply to the area. The engorged blood vessels cause redness, heat and swelling as the blood plasma leaks from the vessels in to the surrounding tissue.

The tissue becomes swollen, compressing the nerves and often causing pain. The white blood cells enter the tissue to destroy bacteria and cellular debris to prevent the spread of infection.

The tissue is also damaged in the body's attempt to rid itself of threatening particles. When the inflammation subsides, the damaged tissue is repaired but, some times, not necessarily as good as new. And extensive inflammation in blood vessels appears to exact some permanent damage.

Scientists have known for the past decade or so that inflammation is linked to heart disease, in particular atherosclerosis, in which blood vessels become narrow, increasing the risk for heart attack and stroke.

Studies have found inflammatory cells in the fatty plaque that builds up on artery walls while other research has determined that heart attack patient with inflammation, defined by a higher white blood cell count, have poorer blood flow into the heart muscle and more blood clots, In fact, a high white blood cell count conferred a greater risk of dying from a heart attack.

Now research has specifically linked high-fat, high –carbohydrate fast-food with inflammation.

*A recent study by scientists at the state University of New York at Buffalo found that eating a break-fast of *Egg Mc Muffin and hash browns temporarily flooded the bloodstream with inflammatory components.*

The body's mechanisms to control inflammation were overwhelmed, and the blood vessels remained in a chronic state of inflammation.

The study, Published in the April issue of the American Journal of Clinical Nutrition, says the level of inflammatory factors in the blood remained high for three to four hours after the 900-calorie breakfast was eaten. But a breakfast comprising mostly fruit and fibre that was also 900 calories did not have the same inflammatory effect.

Scientists believe that the fast-food meal could trigger genes to produce more powerful enzymes to deal with the high influx of macronutrients, but this process could end up causing more damage to the lining of the blood vessels.

By Justine Ferrai

Conclusion; After eating a Mc Muffin three biochemical markers of artherosclerosis were measured in the blood. There were significantly high amounts of the following three substances, such was not the case with the fruit and yoghurt breakfast,

1. NF Kappa alpha B (NF kB is associated with many aspects of oncogenesis)
2. R.O.S, (Reactive Oxygen Species, equals free radicals)
3. WBC (white blood cells) a marker for inflammation & immune Response

Question?

Is food supposed to increase free radicals which are related to aging, increase the known marker for cancer and arteriosclerosis namely NF Kappa alpha B and finally set off an immune response indicated by a high WBC (white blood cells). WBC's indicates some foreign substance in the blood with the immune system trying to mop up!

If that is what food is supposed to do when you eat it, my mother has dragged me into the wrong world! That is an alien concept, so far from health, that even Dr Who would be aghast.

Question, What does an immune response mean, What is the body saying?
Answer; There is a foreign invasion, what is this 'artifact' material flooding in the blood!

In Summary;

Unsafe Carbs. are very UNSAFE!

UNSAFE basically includes all your breads, biscuits, crackers, cereals and baked goods made from part grains (un-wholemeal)!

Chapter Eleven

MSG! Another Reason to avoid Unsafe Carbohydrates and to eat Safe Carbohydrates!

The following article was taken from
<http://www.spofamerica.com>

MSG - The Slow Poisoning Of America

MSG Hides Behind 25+ Names, Such As 'Natural Flavouring' MSG Is Also In Your Favourite Coffee Shops And Drive-Ups

I wondered if there could be an actual chemical causing the massive obesity epidemic, so did a friend of mine, John Erb. He was a research assistant at the University of Waterloo in Ontario, Canada, and spent years working for the government.

He made an amazing discovery while going through scientific journals for a book he was writing called "The Slow Poisoning of America".

In hundreds of studies around the world, scientists were creating obese mice and rats to use in diet or diabetes test studies. No strain of rat or mice is naturally obese, so the scientists have to create them. They make these morbidly obese creatures by injecting them with MSG when they are first born. The MSG triples the amount of insulin the pancreas creates; causing rats (and humans?) to become obese. They even have a title for the fat rodents they create: "MSG-Treated Rats".

I was shocked too. I went to my kitchen, checking the cupboards and the fridge. MSG was in everything: The Campbell's soups, the Hostess Doritos, the Lays flavoured potato chips, Top Ramen, Betty

Crocker Hamburger Helper, Heinz canned gravy, Swanson frozen prepared meals, Kraft salad dressings, especially the 'healthy low fat' ones.

The items that didn't have MSG marked on the product label had something called "Hydrolyzed Vegetable Protein", which is just another name for Monosodium Glutamate.

It was shocking to see just how many of the foods we feed our children everyday are filled with this stuff. They hide MSG under many different names in order to fool those who carefully read the ingredient list, so they don't catch on. (Other names for MSG: 'Accent' - 'Ajinomoto' - 'Natural Meat Tenderizer', etc) But it didn't stop there. When our family went out to eat, we started asking at the restaurants what menu items had MSG.

Many employees, even the managers, swore they didn't use MSG. But when we ask for the ingredient list, which they grudgingly provided, sure enough MSG and Hydrolyzed Vegetable Protein were everywhere:

Burger King, McDonalds, Wendy's, Taco Bell and every restaurant like: TGIF, Chilis', Applebees and Denny's use MSG in abundance.

Kentucky Fried Chicken seemed to be the WORST offender: MSG was in EVERY chicken dish, salad dressing and gravy. No wonder I loved to eat that coating on the skin, their secret spice was MSG.

So, why is MSG in so many of the foods we eat?

Is it a preservative or a vitamin?? Not according to my friend John. In the book he wrote, an expose of the food additive industry called "The Slow Poisoning of America" he said that MSG is added to food for the addictive effect it has on the human body. <http://www.spofamerica.com>

Even the propaganda website sponsored by the food manufacturers lobby group supporting MSG at:

<http://www.msgfacts.com/facts/msgfact12.html> explains that the reason they add it to food is to make people EAT MORE OF THEIR PRODUCTS.

A study of the elderly showed that people eat more of the foods it is added to. The Glutamate Association lobby group says eating more benefits the elderly, but what does it do to the rest of us? 'Betcha can't eat just one', takes on a whole new meaning where MSG is concerned! And we wonder why the nation is overweight?

The MSG manufacturers themselves admit that it addicts people to their products. It makes people choose their product over others, and makes people eat more of it than they would if MSG wasn't added.

Not only is MSG scientifically proven to cause obesity, it is an addictive substance! Since its introduction into the American food supply fifty years ago, MSG has been added in larger and larger doses to the pre-packaged meals, soups, snacks and fast foods we are tempted to eat everyday. The FDA has set no limits on how much of it can be added to food. They claim it's safe to eat in any amount. How can they claim it safe when there are hundreds of scientific studies with titles like these?

'The monosodium glutamate (MSG) obese rat as a model for the study of exercise in obesity'. GobattoCA, Mello MA, Souza CT, Ribeiro IA. Res Commun Mol Pathol Pharmacol. 2002.

'Adrenalectomy abolishes the food-induced hypothalamic serotonin release in both normal and monosodium glutamate-obese rats'. Guimaraes RB, Telles MM, Coelho VB, Mori C, Nascimento CM, Ribeiro Brain Res Bull. 2002 Aug.

'Obesity induced by neonatal monosodium glutamate treatment in spontaneously hypertensive rats: an animal model of multiple risk factors'. Iwase M, Yamamoto M, Iino K, IchikawaK, Shinohara N, Yoshinari Fujishima Hypertens Res. 1998 Mar.

'Hypothalamic lesion induced by injection of monosodium glutamate in suckling period and subsequent development of obesity'. Tanaka K, Shimada M, Nakao K, Kusunoki Exp Neurol. 1978 Oct.

Yes, that last study was not a typo, it WAS written in 1978. Both the "medical research community" and "food manufacturers" have known about MSG's side effects for decades! Many more studies mentioned in John Erb's book link MSG to Diabetes, Migraines and headaches, Autism, ADHD and even Alzheimer's. But what can we do to stop the food manufactures from dumping fattening and addictive MSG into our food supply and causing the obesity epidemic we now see?

Even as you read this, G. W. Bush and his corporate supporters are pushing a Bill through Congress called the "Personal Responsibility in Food Consumption Act" also known as the "Cheeseburger Bill", this sweeping law bans anyone from suing food manufacturers, sellers and distributors. Even if it comes out that they purposely added an addictive chemical to their foods. Read about it for yourself at:

<http://www.yahoo.com> . The Bill has already been rushed through the House of Representatives, and is due for the same rubber stamp at Senate level. It is important that Bush and his corporate supporters get it through before the media lets everyone know about 'MSG, the intentional Nicotine for food'.

Several months ago, John Erb took his book and his concerns to one of the highest government health officials in Canada. While sitting in the Government office, the official told him "Sure, I know how bad MSG is, I wouldn't touch the stuff." But this top level government official refused to tell the public what he knew.

The big media doesn't want to tell the public either, fearing legal issues with their advertisers. It seems that the fallout on fast food industry may hurt their profit margin. The food producers and restaurants have been addicting us to their products for years, and now we are paying the price for it. Our children should not be cursed with obesity caused by an addictive food additive. But what can I do about it?... I'm just one voice. What can I do to stop the poisoning of our children, while

our governments are insuring financial protection for the industry that is poisoning us.

This e-mail is going out to everyone I know in an attempt to tell you the truth that the corporate owned politicians and media won't tell you. The best way you can help to save yourself and your children from this drug-induced epidemic, is to forward this email to everyone. With any luck, it will circle the globe before politicians can pass the legislation protecting those who are poisoning us. The food industry learned a lot from the tobacco industry. Imagine if big tobacco had a bill like this in place before someone blew the whistle on Nicotine? If you are one of the few who can still believe that MSG is good for us, and you don't believe what John Erb has to say, see for yourself. Go to the National Library of Medicine, at <http://www.pubmed.com> Type in the words "MSG Obese" and read a few of the 115 medical studies that appear.

We the public, do not want to be rats in one giant experiment and we do not approve of food that makes us into a nation of obese, lethargic, addicted sheep, feeding the food industry's bottom line, while waiting for the heart transplant, diabetic induced amputation, blindness or other obesity induced, life threatening disorders. With your help we can put an end to this poison. Do your part in sending this message out by word of mouth, e-mail or by distribution of this print-out to all your friends all over the world and stop this 'Slow Poisoning of Mankind' by the packaged food industry. Blowing the whistle on MSG is our responsibility, get the word out.

MSG is UNSAFE & is hiding in many many foods !

SAFE Carbohydrates have no MSG!

Chapter Twelve

The Journey of a Cheeseburger! Would you like free radicals with that?

by [Peter Lavelle](#)

A meal of chips, burgers and cola can make you feel sick. US researchers explain how and why.

Published 07/02/2008 ABC Health & Wellbeing

Do you feel queasy after eating a cheeseburger and a carton of chips, washed down with a cola?

If so, it's not your imagination. These 'foods' are playing havoc with your metabolism, say US researchers. In the hours after a meal, they produce wild swings of blood sugar, blood fats, and hormones. And they cause the body to release dangerous inflammatory chemicals that damage the walls of arteries and predispose to heart disease and stroke.

Normally when you eat, enzymes in your stomach and intestine break food down into fats, protein and carbohydrates, and these are absorbed into the bloodstream. It's a slow, ordered, gradual process, say researchers from the Mid America Heart Institute in Kansas City, Missouri, writing in the *Journal of the American College of Cardiology* last month.

But not if the meal is a typical takeaway. They describe what happens to the body in the hours after consuming a cheeseburger/chips/cola combo, and it's enough to make you feel distinctly off-colour.

These 'foods' are highly processed, so they're quickly broken down and absorbed. They flood the bloodstream with large amounts of fats and sugars.

The sugar from the soft drinks and the flour in the burger bun cause 'post-prandial hyperglycaemia': a big spike in blood sugar levels. This in turn creates a surge of insulin (whose job normally is to keep blood sugar levels from getting too high). Too much insulin is produced and it forces blood sugar levels back

down again to well below normal levels (which is why you feel faint, and often hungry again, in the hours after a takeaway meal). Levels of the stress hormone cortisol are raised. The large amounts of saturated fats from the fries, the ground beef, bacon, and cheese flood the bloodstream with triglycerides and fatty acids that interfere with insulin and raise the blood sugar further.

Would you like free radicals with that?

The effect is like pouring petrol on a fire. The excess sugar and fats drive the body's metabolism into overdrive, producing too much of one of the normal by-products of cell metabolism – the free radicals. In normal amounts, these would be mopped up by the natural antioxidants in the body. But in excessive amounts, they constrict and inflame the arteries, make blood clots more likely, and raise blood pressure.

The more you consume the takeaway meal, the more likely it is that the damage from the lipids, the free radicals, and the high blood pressure etc, will be permanent. Regularly consuming junk food combos like burgers, fries and cola raises your risk of heart disease, stroke, and diabetes (and all the complications that come with it).

But you can get your body back to its normal balance – and quickly too – by cutting out the junk food combos and eating smaller portions of those foods that nature intended us to eat. Carbohydrates should come from high-fibre, plant-based foods like vegetables and fruits, whole grains, legumes, and nuts. Experts recommend green leafy vegetables such as broccoli and spinach, and fruits like grapefruits and cherries. These foods are high in fibre and water, and they are absorbed much more slowly. The body has time to break them down and they don't produce sugar spikes or overwhelm the body's metabolism.

Proteins should come from egg whites, fish, game meat and other very lean red meats, skinless poultry breast meat, legumes and whey protein (or other non-fat dairy protein). The diet should contain 'good' fats – that is unsaturated fats – found in fish, avocado, nuts seeds and vegetable oils like olive and canola oils.

Foods with high amounts of natural antioxidants in them are a plus – deeply pigmented plant-based foods and drinks such as berries, red wine, dark chocolate, tea, and pomegranates. Meal sizes should be modest. (One of the problems with the burger/fries/cola combo is that the portion sizes are usually large, contributing

to the overdose of sugars and fats). Two diets got the thumbs up: the Mediterranean diet (bread, grains, olive oil, fish, a little red wine and lots of fruit and vegetables) and the Okinawa diet (small portions, low calories, little or no meat and plenty of fish and green and yellow vegetables). These are the modern day equivalent of the ancestral hunter-gatherer eating patterns we've inherited and to which we're still adapted, the researchers say. They take longer to prepare and you can't really eat them in a car. But they won't make you wonder what you ate that made you feel so unwell.

Summary- **Eat a safe Cheesburger, made from wholesome ingredients with fresh organic salad which is packed with anti-oxidants and nutrients!**

Conclusion- **You will have to cook it yourself!**

Chapter Thirteen; Poor diet puts teenagers' health at risk- Deakin University

A quarter of Australian teenagers eat fast food everyday and more than a third hardly ever eat fruit, a Deakin University study has found. Researchers with Deakin's Centre for Physical Activity and Nutrition Research surveyed (11/04/07) more than 3800 secondary school students aged 12—15 years to evaluate their food intake patterns. They found that the diets of a significant number of adolescents fell short of the recommendations outlined in the Australian Guide to Healthy Eating.

“Teenagers need to be eating a variety of foods from the five food groups breads/cereals, lean meat and meat substitutes, vegetables, fruit and dairy—every day,”

“Our study found that most teenagers are far from having diets that will provide their growing bodies with the nutrients they need to ensure their long term health and wellbeing.” Professor David Crawford s.

Extra foods—such as fast foods, energy-dense snacks and sugar-sweetened drinks—were consumed by nearly 90 per cent of the teenagers on a daily basis. Professor Crawford said that this finding was of particular concern.

“The daily inclusion of fast foods coupled with the omission of a variety of healthy foods is setting many teenagers up for serious health problems such as obesity and the psychosocial and other health-related consequences associated with this condition such as diabetes,” he said.

The study found that only one third of teenagers ate at least one food from each of the five food groups everyday and just over half ate from each food group ‘most days’.

From the five food groups, bread and cereals were the most commonly consumed

food group. These were followed by vegetables, dairy foods, meat/eggs/nuts/legumes with fruit the least consumed.

Teenagers in regional areas tended to eat more vegetables and less fast foods than their metropolitan counterparts. Girls’ diets included more fruit and less fast food and sweetened drinks than boys, with boys consuming more meat and meat alternatives.

On the positive side, 87 per cent of the adolescents drank water (including low energy dense drinks) everyday. Professor Crawford said that the results of the study highlight the need for more public health initiatives targeted at adolescents.

“The next phase of the research, which is currently underway, will explore the key

influences on teenager’s eating habits, and will be crucial to inform efforts to promote healthy eating in this group,” he said.

The study was funded by the Australian Research Council and the William Backland

Foundation. The results will be published in the *Asia-Pacific Journal of Clinical Nutrition* later this year.

Could Breads and Cereals produced from Safe Carbohydrates be of assistance to the teenagers of today?

Chapter Fourteen

How to dispose of industrial waste? Make another food product!

Make Fish Shauce!

Maybe you think this is a spelling error? I can assure you, after you have finished this page you will understand the SH in shauce.

The Australian food industry was paying heavily to dispose of many tons of abalone guts, intestines and feces each year. Abalone is a shellfish, which is collected off the coast of Australia and sold worldwide as a delicacy. However the disposal of the guts of the abalone, which people do not eat was in the tons and was a costly problem.

Generally people over the ages avoid eating animal intestines which are generally full of what politician are full of? I know some things are dreadful, but making sh..! into a food, don't you think that is going too far.

Australia food science were contracted under oath of secrecy to never say the sh... word. They produced a wiz-bang new fish sauce from the fish sewerage by processing and flavouring into a shauce... A technician on the job said, her co-workers complained about the aromas emanating from the fish sewerage samples, during the procedure at Australia Food Science.

*Food Scientist Weerasinghe said, "I developed out of abalone **scraps** a very delicious sauce which was revolting when you worked with it," says Weerasinghe. "Everybody blamed me for making the whole building smell; ii was the most revolting thing also making a meal for feeding cultured fish was smelly and awful to handle. Nobody likes to work with me on those projects - they curse me."- But, whatever the dish, Weerasinghe will take her secrets to the grave. "We retain confidentiality" she says, "I suppose I'll have to die with those secrets."*

*Now that is one really smelly artifact, a work
of art!*

A UNSHAFE Carbohydrate!

Chapter Fifteen

How healthy are gluten free products?

Just how good for you are gluten free-products? Generally they are considered excellent because of lack of gluten, but unfortunately there is no shortage of glue. These grand health products, the gluten free species, are also nutrient free, fibre free and wholesome free, however they are not cost free. They are starchy part foods like fractionated corn starch and rice starch or far too heavy to digest like almond and nut meal. If you want to plug up your system with glagy goo, they are number one. Ayurvedic accepts nuts as very nutritious however their energies are very heavy, oily and kapha, therefore blocking. That does not mean we should not eat nuts or nut meals but again there is a science behind the use of nuts.

Firstly we will deal with how to eat nuts and secondly the faults of over indulgence in nuts and nut meals.

1. Nuts require to be eaten when digestion is powerful
2. As a meal, ideally no more than 8 per day
3. Soaked over-night in water
4. Result of proper use of nuts is strength, growth and well-being

Secondly, the down side of over indulgence in nuts and meals are,

1. Blocked channels, sluggish digestion, constipation, fatigue and dullness.
2. Nut meals are de-natured within a few days, oils and anti-oxidants are rancid and oxidized. Only eat nuts and meals that are fresh and ground fresh.

Of course some individuals require gluten free because of severe sensitivities so under the circumstances they require fresh, whole grain mixes which are suitable, like millet, buckwheat, brown rice and corn. But the concept of Safe and Unsafe Carbohydrates is that this special flour mix requires to be fresh and whole, Safe! At The Herb Shed we have available a stone flour mill and an oat roller so grains can be ground and milled whole and fresh in combinations that matches individual requirements. We have found that many persons who have been advised to avoid all gluten flourish on fresh rolled oats which have a very low gluten content. Once tasting these hand rolled oats the packaged shop oats have a strange undesirable odour and texture. Some individuals may thrive on a small amount of wheat with the above mentioned gluten free grains. Unfortunately health practitioners sometimes make a mono diagnosis and tell every one that

walks in their door to give up all gluten. Gluten in food needs to be reduced by wise choices but not necessarily totally in every person. Some interesting history is, a short soft wheat used in India by the ancients for chapattis is a low gluten variety. Gluten of course was increased in wheat by modern science for industrial purposes. So as usual;

The modern food processing is killing humanity!

Chapter Sixteen

The Obesity Epidemic!

- 1. Caused by a common substance food manufacturers are widely using.**
- 2. Connected to dietary processed carbohydrates being converted to fat.**

Dr Robert Lustig, Professor of Pediatric Endocrinology of the University of California, San Francisco has discovered the reason for wide spread obesity is a substance the food manufacturers add to food and drink products. That manufactured substance which is a fraction of a processed carbohydrate behaves in the body like a dietary fat. Please see the Health Report by Dr Norman Swan 3/12/07

High fructose corn syrup ‘the perfect sugar for diabetes’ (so it was said) was discovered in 1966 by Japanese food science. By 1980 food manufacturers had substituted corn fructose into many food and soft drinks thus increasing the consumption of fructose by more than 100% in 30 years. Results of high fructose corn syrup on the liver are intense because the only organ in your body that metabolizes fructose is your liver. Scientists have found fructose loads the liver three times heavier than glucose, causing liver stress. From the high liver load uric acid is increased by phosphate depletion of liver cells. A natural reaction to high uric acid is high blood pressure and gout. Hypertensive obese children have been found to have high uric acid levels when their diet has a high percentage of processed fructose.

A high processed fructose diet causes,

1. fatty liver as the sugars are converted to excess fats, no need to be an alcoholic!
2. high uric acid, hypertension and gout,
3. excess blood fats and excess LDL cholesterol,
4. inflamed liver with liver insulin receptors becoming insensitive that cease to function,
5. blood insulin rises to compensate, high blood insulin causes high fat storage,

6. high fat storage means low energy burning which equates to poor quality of life, poor quality of life develops into chronic depression.

The fact is clear a high fructose diet is able to cause alcoholic fatty liver in persons who are over indulging in high fructose foods. Sugarless jams with fructose are three times worse than glucose on your liver.

Also the fat free thing is not working, it is a myth. Never before has humanity consumed such a low fat, fat free high processed carbohydrate diet. Fat does not necessarily turn to fat in the body. Yet with such a low fat diet people have never been so obese. So the problem is metabolic. Metabolic damage from unsafe carbohydrates. After all fat is safer than sugar it does not raise insulin levels. Fat makes you feel satisfied and you stop eating. Sugars become body fat!

**Most processed foods are totally UNSAFE,
they disturb metabolic processes and make your life miserable.
They may taste great but make you feel ill over time.**

Chapter Seventeen

UNSAFE CARBOHYDRATES AS A SOURCE OF COUNTERFEIT CELLULAR SIGNALING!

Over the last 100 years science has observed the body on the cellular level, applying such terms as cellular adaption, cellular memory and cellular signaling. Cellular biology literature resembles the book of life in size and shape.

Explanations of cellular function and structure cover thousands of pages making cities like Brisbane and Sydney simple in contrast. Even though we are not fully conscious of the billions of cells in our bodies undergoing millions of processes every minute, we can comprehend that the cells in balance award a healthy life. When a number of cells are disturbed or imbalanced the result is the disease of an organ, system or the entire body. One cancer cell multiplying and growing brings imbalance and eventually death to the entire body. You could say that a tiny cell is the most sensitive part of who we are.

Chemical messengers regulate the body beginning with the cell. These messengers are called hormones and because scientific research is showing they are found in food, they are now called zenohormones. The ancient aphorism, ‘You are what you eat!’ has evolved to **‘You are what your cells receive from your food’**. Over the past 80 years modifications in food processing **has produced a changed molecular landscape**.

The metabolic consequences on cellular function are unknown.

These changes require cellular adaption, but can all cells change and modify to shift and thrive in changing and foreign conditions. We know that species can adapt, but can that adaption keep up with the speed of change? We are all unique individuals so some will continue to thrive while others will shrivel and die and the rest will roam in between thriving and disease. In such a society disease is more commonplace than health and aiding disease rather than health is considered a positive concept. Scientists are now discovering that many chronic diseases such as type 2 diabetes, obesity, chronic inflammation, CVD and hypertension are metabolic disorders which are a result of counterfeit signals at the cellular level. The significant observation of scientists is that substances or hormones that regulate cellular signaling are obtained from the food we eat! The

concept ‘**You are what your cells receive from your food**’ vibrates clear and true.

At the cellular level there is a sensory system to measure energy availability, then hormones obtained from food (Zen hormones) direct the management of energy acquisition followed by energy utilization. The food we eat contains thousands of bioactive substances, which exchange energy with every cell, tissue, and organ of the body. Therefore it is concluded from the pandemic nature of metabolic disorders in humanity that artifactual foods, namely unsafe carbohydrates fuel **counterfeit cellular signaling** . The reality is the foreign molecules in modern processed foods upset cellular signaling disturbing metabolic processes.

2400 years ago Charaka Muni gave a definition of Wholesome ‘SAFE’ foods;

‘ THAT FOOD WHICH NURTURES
ALL TISSUE AND BALANCES THE BODY WHEN OUT OF BALANCE
IS CALLED WHOLESOME’

Chapter Eighteen

THE POSITIVE ALTERNATIVE! SAFE CARBOHYDRATES.

In a nut-shell Safe carbohydrates are whole fruits, whole fresh grains and veggies. Basically many recipes can be incorporated. Instead of the unsafe artifacts the whole safe carbohydrates are employed, it is that easy!

Basmati rice is light and fluffy, relatively low RAG and also easy to digest. The vitamin and mineral content is high with a 10% protein level. This is certainly preferred over Arborio, jasmine or short grain white rice. Rice must be cooked fresh each meal! Organic brown rice also goes well in kitchari (recipe in next chapter) and of course has a lower glucose response.

Barley and bean mix veggie soups are highly nutritious with a very low RAG. With ghee and spice they can be very nurturing. Well cooked fresh beans and whole barley are used, all you have to do is turn the stove on and add some ghee, spice and veggies. Also stores reasonably well, and can be reheated.

Freshly rolled whole oats are an incredible food. After tasting them it is not possible to enjoy the one-minute partially steamed commercial artifact. The best way to have safe oats on a regular basis is to own a oat and flour mill which makes fresh safe carbohydrates on the spot. We guarantee that the shop oats although they may be organic cannot compare in texture, taste and nutrition.

Real pancake mix is quick and easy to make and very satisfying. Not like the artifact glue called pancake mix. Pancake batter can be stored in the fridge for 5 days. Just pour into the frypan and cook in a moment. If you have your own mill you can use non-gluten or low gluten blends like buckwheat, millet and spelt. Most gluten free products are artifact type glue with no fiber or whole grain. This is explained in a further chapter and in the Ayurvedic cookbook.

Vegetables Unlimited different ways, using ghee, spices and herbs which can make vegetables taste close to heaven. Many books describe in detail the fast and easy process of using ghee with steam to produce sumptuous food. Only the ginger and spices are fried quickly while the veggies are fried for a minute only then steamed for the bulk time. Favour greens, cauliflower over pumpkin and potato. That does not mean to not have starchy vegetables but to have a variety of non-starch vegies, more than 50%.

Fruits of the Season Enjoy fruits most any time as long as they are easy to digest, if digestion is slow, steam your apples, pears and dates with butter and cinnamon.

Other alternatives are endless; homemade muffins, chapatis, breads and baked products. Use your cookbooks and recipes to incorporate more safe foods.

Basmati rice is a natural white grain with less starch than any other white rice . Freshly rolled whole oats and whole pancake mix can be prepared with a stone grinding mill.

SAFE CARBOHYDRATE AND A COMPLETE PROTEIN?

You may be looking for the perfect protein, wholesome, easy to digest, tasty and inexpensive. You will be pleased to know that a mixture of two grains is a perfect or complete protein this is accepted by advanced nutritional science.

Below is your kitchari recipe, an Ayurvedic stew of organic brown rice and lentil or mung dahl, a great one pot wonder, it cooks with your eyes closed.

Kitchari

Complex carbohydrate-protein stew

Ingredients

Half cup organic brown rice (serves 4)

Half a cup yellow split pea or mung dahl or split chick pea

Ayurvedic rock Salt and tumeric powder

Bay leaf, fresh or dried

Mix the grain together. Wash 3 times, add 5-6 times the water, add a good pinch of turmeric and a few pinches of rock salt to taste, toss in a dried or fresh bay leaf, boil for an hour or so (if you want less cooking time soak overnight or use a pressure cooker). Best to simmer with a lid on or you will lose too much liquid, if that happens just add a little more.

You can substitute a little Basmati rice (which is a low GI rice) if you wish to lighten the Kitchari a little, but these days I think it is best to eat total complex grains when you can. If you boil for a little longer no one will know that it is brown rice. White basmati and yellow mung dahl cooks very quickly (30 minutes) in a cooker.

Ingredients stage two Kitchari

Cup of mixed Veggies (Cauliflower etc)

Ghee one level tablespoon or so

(Spice according to season and individuals eating)

Fresh grated Ginger is more friendly than chilli
Hing, cumin, fenugreek, cinnamon, coriander

The spices should be no more than a level teaspoon combined. **Slight changes in the spice combinations make a pleasant surprise each meal. But remember better too little than too much!** Add more spice as your experience allows.

Crush the whole spices in a mortar and pestle, or a coffee grinder. You can not beat fresh! At times I use whole spice. Simmer the ghee with a little grated ginger. You have captured the mild energy from those pungent substances. Add the seed spices into the simmering ghee for about 30 seconds and add the hing, then give a little stir. Now add the cauliflower and veggies, stir fry for five minutes. Add this to the main stock of **almost** cooked grains (You can tell that they are cooked when they begin to dissolve). If the grains are getting a little dry add whey or water.

Please note whey is great, but grains will not cook in whey, however for flavour and nutrition, you can add whey when the grains are soft and dissolving. Add the rock salt to taste and a quarter-half teaspoon of turmeric powder. Simmer away for 10-15 minutes. Put the lid on, but if you want the Kitchari to thicken a little, leave the lid off. This is the stage where the bottom of the pot may burn so give a regular scrap. I like Kitchari fairly liquid, close to a very thick soup. It is very tasty and easy to digest. Make sure the grain is well cooked.

Kitchari is an excellent food to aid recovery from illness, for strength and general health. I call a meal Kitchari when it borders a very thick soup “pre-digested complex carbohydrate and total protein power food”. Kitchari is a must. One original book on Ayurveda mentions 22 different ways to cook Kitchari, claiming that by eating nothing but Kitchari for 21 days you can turn disease around into health. By the way according to my university text Kitchari is a COMPLETE PROTEIN!

Yes! That is rice and dahl together supply you all the necessary amino acids you need for healthy bodies.

If you keep Kitchari over for a day, cover the top of the pot with water or whey so the particles do not dry out, but please remember fresh is best.

WHOLE SUGAR AS MEDICINE,
AS A SAFE CARBOHYDRATE,
THE OTHER SIDE OF THE COIN!

Jaggery (Whole Sugar) has 5 times more minerals than brown sugar & up to 50 times more minerals than white refined sugar.

Whole sugar or jaggery is prescribed for use in the Ayurvedic system of medicine. According to Ayurvedacharya Vipul Rao jaggery purifies the blood, prevents rheumatic afflictions and disorders of bile and possesses nutritive properties of the highest order. It is cooling, diuretic and refreshing properties, besides improving throat conditions, normalizing sperm count and serving to increase breast milk and cardiac tonic.

Rao's booklet, *Sugars* deals with more than 40 ailments including diabetes where jaggery can be added! The reason being is the high iron and mineral content of jaggery along with a substantial supply of vitamins, a **small amount of jaggery** is mixed with bitter melon which is the prime Ayurvedic bitter for sugar metabolism corrections.

The ancient text say; Sushruta Samhita, Sutrasthan 160-161 states-“Jaggery works as a lubricant, helps excrete urine, and regularizes bowel movements. It regulates *vata* (digestive), *pitta* (nervous) systems, increases *kapha* (phlegm), and improves vitality. It is a good aphrodisiac.”

Charakha Samhita , Sutrasthan 238-239 states-
“Jaggery is sweet. It aids to excrete urine, regularizes blood flow, and enriches the bone marrow, blood, fat, flesh, and phlegm.”

Ashtanga Hridayam, Sutrasthan 47-49 states-
“As jaggery has sweet properties, it controls the *vata* & *pitta* systems, regulates blood circulation, and increases the internal strength of the body.”

European and Chinese Research revealed that if small children use whole sugar (jaggery) then they are less prone to **dental decay and spinal problems**

Ref 1: Research paper by Dr. N.H. Beguin, Pronatec S.A. – Switzerland

Ref 2: Research at University of Neuchatel

Constipation (in babies), which is very frequent with white sugar, disappears. Prevention of nutritious **anemia**. and **ricketts**. Jaggery is a natural high-energy food source, quickly replaces lost vigor. Children are more alive & full of vitality. Ref: Research paper by Dr. N.H. Beguin, Pronatec S.A. – Switzerland. Translation into

Nutrients	Jaggery	Refined Sugar	Honey
Calories	312	384	312
Water	12.3	0.5	19.3
Protein	0.5	0	0.6
Fat	0.1	0	0.2
Carbohydrates	86	99.3	79.8

Source: "Composition of Colombian Foods" – José Gongora y López

Healing of both internal and external **wounds** and closure of contaminated wounds and **ulcers**. Ref: Healing of ulcers. Dr. Gonzalo R. G- Universidad de Bogota & Dr. Luis J. Giraldo- Universidad de Antioquia
Prevention of **wound infection** in perforated appendicitis.
Ref: Dr. Am Surg 2000 Sept;616(9):827-40.

Works to help counter **ill effects of pollution**

Ref: A paper presented by scientists of Industrial Toxicology Research Center at a Workshop held in Lyon, France emphasized on "the preventive action of Jaggery on smoke-induced lung lesions suggest the potential of Jaggery as protective agent for workers in dusty and smoky environments."

[Source: Environ Health Perspect, 102(Suppl 6): 211-214 (1994)]

Fibre	0.0 g
Ash	1.1 g
Calcium	80 mg
Phosphorous	60 mg
Iron	2.4 mg
Thiamine	0.02 mg
Riboflavin	0.07 mg
Niacin	0.3 mg
Ascorbic Acid	3 mg

	100g of White and granulated sugar	100g of Whole Sugar Jaggery
Mineral salts	30 - 50 mg	2850 mg
Phosphorus (P)	0.25 mg	116 mg
Calcium(Ca)	14.0 mg	118 mg
Magnesium (Mg)	0 mg	136 mg
Potassium (K)	4.6 mg	1056 mg
Iron (Fe)	0.1 mg	3 mg

Whole sugar jaggery is relatively SAFER than refined sugars due to its Protein, fat, vitamin and high mineral content!

Balanced Ph a plus; Potassium in jaggery is vital to conserve the acid balance in the cells and combats acids and acetone. Iron, a composite of hemoglobin prevents anemia and is especially recommended for expecting and lactating mothers.

Chromium has been found to be an excellent mineral aiding digestion of sugar and protecting from diabetes and strangely enough is extracted from whole sugar in the manufacturing process. So yes, Chromium a mineral EXTRACTED from sugar is a supplement sold in Health shops for sugar disorders!

Just to confirm,

**THE FOOD,
OR SHOULD I SAY ARTIFACT PROCESSING INDUSTRY
IS KILLING YOU!**

And always remember the South India saying;

EVEN NECTAR IN EXCESS BECOMES THE POISON!

Knowledge fosters health and happiness, not knowing is the path of suffering!