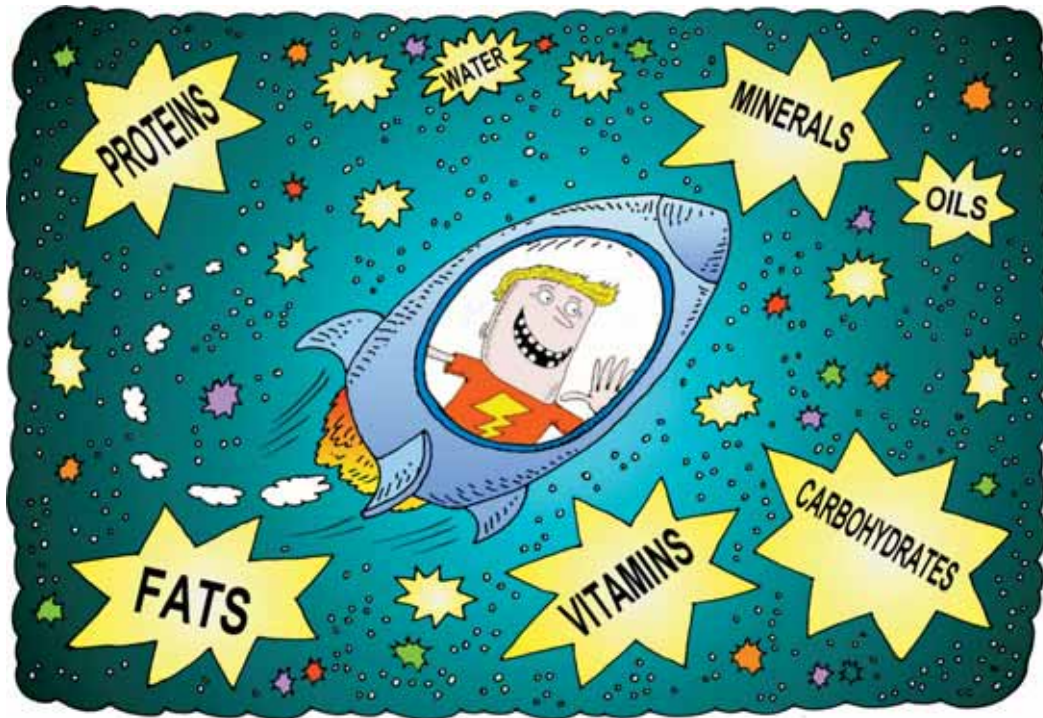


FEED ME RIGHT

Nutritional Know-How and Body Science



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FOREWORD

I was diagnosed with Chronic Fatigue Syndrome in 1993. That pronouncement set me on a quest to seek the truth about food and eating in an effort to restore my health. My search led me to research current eating habits and their effect on our well being. I studied to become a naturopath and have continued to examine the field of nutrition, through reading and professional seminars, for the past 12 years. My most profound realisation came when I finally recognised the importance of fresh food - it simply can't be bad for you!

The second profound understanding was that the body can use whatever is introduced to it, via its many portals, to derive better health. The importance and definition of "food" is broad in this concept - there's brain food, emotional sustenance, and even tactile nutrition, to say nothing of edibles we consume. As a result of these realisations, I became passionately interested in the promotion of wholesome foods and lifestyles, as well as the education of all of us who prepare and consume it. My hope is that healthier New Zealanders will produce incredible performers who can lead the world and reshape the future of health everywhere.

Unfortunately, our track record in this country has not been good. Since 1910, New Zealanders have been encouraged to follow a system of food selection that was inadequately researched and poorly thought out. In the last century, the evidence of food research and epidemiology failed to change this thinking with respect to nutrient recommendations or to produce healthier eating guidelines. The concept of common sense and wise food choices seemed to have flown out the window, along with the smell of grandma's fresh pudding.

Certainly, there were trends towards food awareness: the 1970s saw the rise of vegetarianism, a development that was often linked to a general humanitarianism and the promotion of an alternative lifestyle; the 1980s featured low fat diets; and the 1990s saw the popularisation of low carb diets and similar crazes. Despite these changes, the fundamentals of proper eating remained unsung or were lost in interpretation. In fact, until early 2000, no nutritional study had ever been conducted that assessed the validity of the accepted food pyramid.

Today New Zealand is in dire straits. Our health-care system cannot cope with the relentless increase in illness and mortality that goes hand in hand with obesity and malnutrition. Advertising pays lip service to the most basic of food concepts - "five plus a day" - yet newspapers report that the average New Zealand household spends more money on sweets and confectionary than on fresh fruit and vegetables. We seem to be missing the message! Furthermore, the foundation set up to educate us about heart disease actually promotes the consumption of processed foods in greater

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quantities than fresh fruits and veggies. Similarly, the dieticians' association appears to be more concerned with food technology rather than encouraging the timeless adage "Fresh is best."

The media often fails to deliver the most crucial message to New Zealanders, that your health is directly related to the food that goes into your mouth.

This message would enable them to understand the true power of fresh produce in controlling weight and achieving better overall health. Unfortunately many people don't attempt any dietary solutions until it's too late.

Now I'm delighted to report that there's a new focus for this crucial message. *Feed Me Right* clearly presents the relationship between good food and good health in a charming format that both kids and adults will enjoy. The text is fun, educational and comprehensive while the illustrations captivate our attention. *Feed Me Right* presents the nuts and bolts of nutrition, leading the reader through a journey of discovery and an exploration of our body's relationship with food. In fact, I believe this book is the most comprehensive guide to health and wellness that has been developed for adolescents and their parents.

Hearty congratulations to Tamarin and Dee for creating such a marvellous contribution, one that may indeed reshape the health of an upcoming generation of New Zealanders. The authors' hard work, dedication and passion for the health of our country is to be applauded. Certainly, *Feed Me Right* deserves to be taught in schools throughout New Zealand.

Now, simply turn the page and begin your own journey on the path to superb health.

Damian Kristof N.D.
Downsize Me Presenter





ARE YOU READY TO BEGIN THE JOURNEY INTO YOUR AMAZING BODY AND FIND OUT HOW IT WORKS?

Do you know what fantastic foods fuel your body to give you energy and keep you healthy?

Come on a journey and explore the wonders of the human body - YOUR body! You will also discover the science of nutrition.



By learning this vital information you will be well equipped with the right tools to make good food and activity choices to keep you healthy and happy for the rest of your life.

Be rewarded with greater health and well being by putting your nutritional know-how into action.

Let the fun begin!

"Let food be your medicine and medicine be your food."

- Greek physician Hippocrates (450-357 BC)

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NUTRITION AND YOU

GLYCEMIC INDEX

What is the Glycemic Index?

The Glycemic Index (GI) was developed in 1981 when David Jenkins and Tom Wolever at the University of Toronto, Canada, discovered a way to measure how fast a carbohydrate in food raises blood glucose levels in your body.

High glycemic index carbohydrates are quickly broken down during digestion and absorbed rapidly into the blood. This sudden dump of large amounts of glucose into the bloodstream triggers the pancreas to make insulin, the hormone that allows glucose to enter the body's cells for metabolism or storage.

The pancreas over-reacts to this spike in glucose and makes lots of insulin. With so much insulin circulating in the blood the glucose is rapidly absorbed. Now the blood sugar levels plummet! This drop in blood sugar sends signals to the brain. The brain thinks the body is starving. It doesn't care about all your fat stores; it sends you to the fridge for a quick fix.

These daily glucose-insulin cycles are characteristic of the modern diet of refined sugars and starches, like highly processed white sugar and white flour products. Rapid absorption of glucose that follows eating foods with high glycemic index can trigger hormonal changes that lead to overeating and the roller coaster effect.

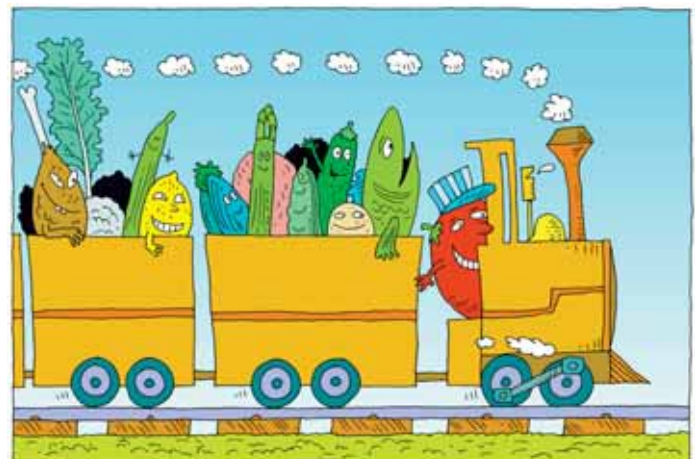
If your body is constantly buffeted by insulin surges over time it will develop what is called insulin resistance. The cells won't respond when insulin signals tell them to take in the glucose. With the cell doors shut the glucose must remain circulating in the bloodstream and then your pancreas has to make even more insulin. This can turn into Type II diabetes.



Sugar arrived in England in 1319. In 1674, King Charles' personal physician, Thomas Willis, identified and named diabetes after England's annual sugar consumption had gone from zero to 16 million pounds in the previous 200 years.

Why are Low Glycemic Carbohydrates Good for You?

Low and slow is the way the body likes it! The healthier a food is and the lower its glycemic index, the longer it takes for these carbohydrates to be digested and absorbed. And, the smaller the impact on blood glucose and insulin levels too.



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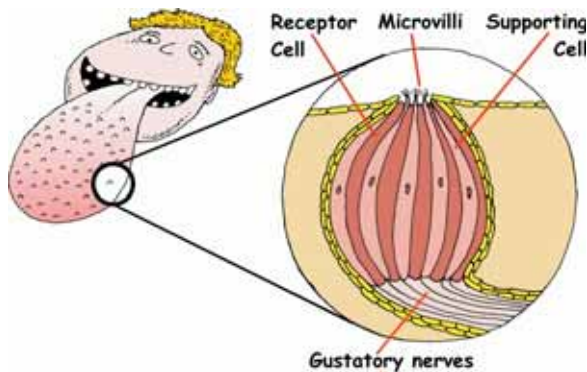
NUTRITION AND YOU

MORE ON SUGAR

What is a Sweet Tooth?



People say you have a sweet tooth when you have an appetite for, a craving for, or an addiction to sugar. All mammals have special cells on their tongues that send taste signals to the brain. These cells called “taste buds” are clustered together. Each human taste bud is comprised of receptor cells representing the five major taste sensations: salty, sour, sweet, bitter and savoury.



Sweetness receptors consist of two different proteins attached to each other on the cell surface. When you taste sugar the receptor sends a signal to the inside of the cell and then to the brain. The brain makes a decision depending on information sent by taste buds. Now your body knows you are eating something sweet.

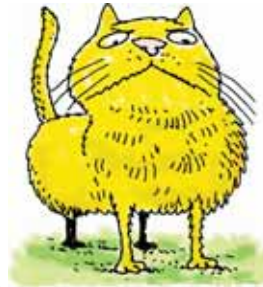


Is It Possible To Trick Taste Buds?

Did you know that the fruit of a plant from tropical Africa called the Miracle Plant (*Synsepalum dulcificum*) can trick taste buds? For up to four hours after eating the fruit you can even eat limes and they will taste sweet.

Do Cats Have A Sweet Tooth?

Ever wondered if your cat dreams of eating a piece of your chocolate cake? Researchers studying the DNA of cats have found a genetic mutation in their sugar receptors. Cats have only one of the proteins on their sugar receptors. Cats never develop a taste for sugar, so for now your piece of cake is safe!



How Do Bacteria Cause Tooth Decay?

There are 200-300 different species of bacteria in your mouth and they love sweet simple sugars. They love the warm, dark, acidic, sugar-rich spaces between the teeth and under the gums. So if you are constantly eating sweets, or food and drinks with added sugar, bacteria are constantly feasting and making waste called lactic acid. This bacteria poo or excrement forms a sticky water-resistant shield around the teeth called plaque. Plaque traps food for bacteria to grow in. Your teeth are now being bathed in the acidic waste from the bacteria. This acid dissolves your tooth enamel making cavities.



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DIGESTION AND YOU

YOUR MOUTH

After eating, this mist floats up and settles on the tongue. It is an indication of how well food is being broken down, absorbed and eliminated in your stomach and small and large intestines respectively. Once you have digested your food your tongue coating should become clear.

If you continually have a greasy, thick, furry coat on your tongue this means that you are not digesting your food well and it is just sitting in your intestines only partially digested. This can also make your breath smell too.

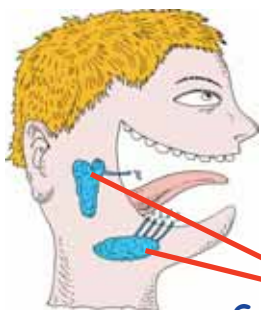
To avoid a furry coat and poor digestion:

- 🍎 Sit down to eat
- 🍎 Slow down when eating
- 🍎 Chew well
- 🍎 Eat lighter foods – eat more vegetables, fruit, rice, salads and soups.
- 🍎 Avoid rich, damp and greasy foods such as meat, dairy products, takeaways and fried foods.
- 🍎 Eat until you feel about 80% full
- 🍎 Eat dinner three hours before bed

What Is Spit?

That wet, slimy stuff in your mouth called saliva is made up of enzymes from the salivary glands. These special chemicals begin the digestion process. The enzyme amylase is made by the parotid glands in your cheeks and works on the break down of carbohydrates. Protease is secreted

by the submandibular glands and begins the process of protein digestion. Lipase comes from glands under the tongue and begins fat digestion and cellulase

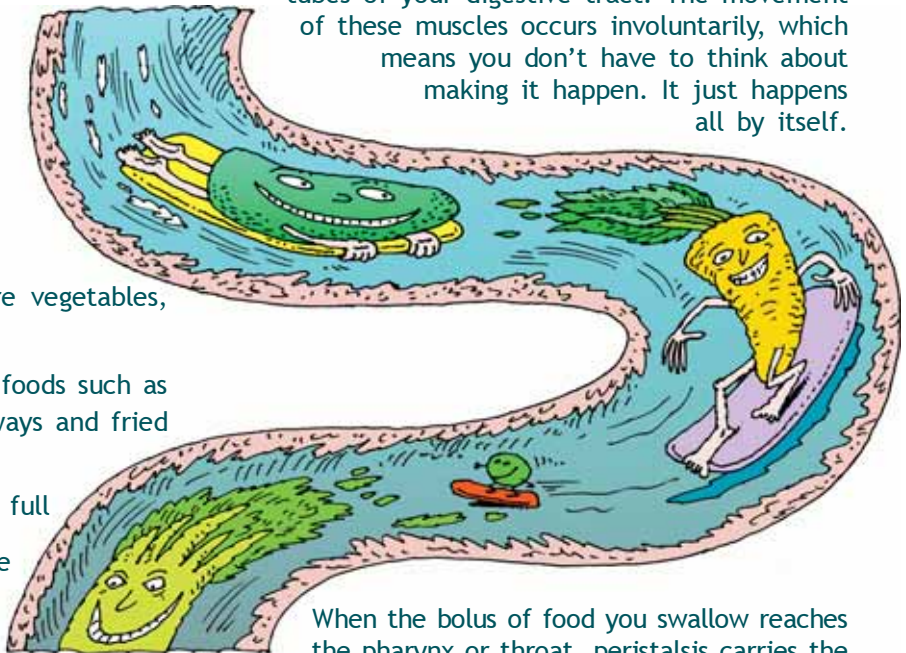


Salivary glands

digests any soluble fibre present. Your salivary glands make more than one litre of spit every day.

What is Peristalsis?

Peristalsis is the wave like movement of the smooth muscles surrounding your digestive tract. The rhythmic contraction and relaxation of your smooth muscles allows the food to surf the inner tubes of your digestive tract. The movement of these muscles occurs involuntarily, which means you don't have to think about making it happen. It just happens all by itself.



When the bolus of food you swallow reaches the pharynx or throat, peristalsis carries the food down the oesophagus into the stomach.



Saliva is 99.5% water, the other 0.5% are ions (such as sodium, potassium, and chloride), dissolved gasses and organic substances including digestive enzymes.

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