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Weight Loss

IS THERE A MAGIC PILL FOR WEIGHT LOSS?

Without a doubt, weight loss is one of the greatest challenges faced by those working in the health industry. No matter how one tackles the issue, there will always be the allure of the quick fix in a society that is accustomed to seeking simple answers to complex questions. Weight loss supplements abound on the Internet. All promise to deliver results. **Do any of them work? The simple answer is yes and no! There are no supplements that will safely overcome lousy eating and lifestyle habits no matter how hard we want them to!** Having said that there are few key ingredients in some of these products that will assist in directing you towards a leaner profile. The following are those which have been shown to safely increase fat burning and metabolism.

Conjugated linoleic acid (CLA): CLA directs fats away from storage in fat cells while also increasing fat burning in the skeletal muscle. CLA is naturally present in dairy products and beef, (however the animals need to be grass fed to have any appreciable amount of CLA). The ideal candidate should have at least 3 inches of abdominal fat or 15lbs of excess weight, otherwise this may not be the right supplement for you. The dosage required is 1500 mg two times per day before meals for at least 3 months.

Hydroxycitric acid (HCA): HCA is derived from a fruit from India called Garcinia Cambogia. Research has found that it helps to prevent the conversion of carbohydrates into fat by inhibiting an enzyme. The hormone insulin is a signal for fat storage; HCA helps reduce the secretion of insulin in response to glucose. HCA may also help reduce appetite.



Citrus Auranticum: This is a natural stimulant derived from bitter orange. It acts as an effective fat-burner and metabolic stimulant without the negative consequences associated with ephedra-type products. It works by acting directly on fat receptors, increasing their breakdown. Auranticum may also suppress hunger. The dosage required is an extract of 4% synephrine in a 500 mg capsule, 30 minutes before each meal three times per day.

Green tea: Recent studies have found that the catechins (particularly EGCG), the antioxidants in green tea, help increase fat burning and reduce the risk of cancer, high cholesterol, and diabetes. Green tea may lower blood sugars by inhibiting enzymes that allow the absorption of starches and may decrease the absorption of fat from the intestine. Green tea also contains theanine which has a calming effect on the body while increasing energy. Typical dosage is three or four cups per day or a 300 to 400 mg capsule of green tea extract daily. Make sure that the product you are taking contains at least 390mg of the active EGCG component in your daily dosage.

There are many products that will combine some or all of these ingredients to provide a synergistic effect.

Make sure that the product you are using provides standardized amounts of the active components. Remember the key hormone driving the fat gaining process is insulin. Western diets are typically high insulin releasing ones. Controlling blood sugar becomes crucial for anyone trying to manage their weight. Making sure that your food choices are drawn mainly from those with a low glycemic index and/or a low glycemic load will go a long way towards making any weight loss strategy a success!!

Mario Alonzi, B.Sc. is a knowledgeable staff member at **Nature's Source**. He can most often be found at the Mississauga store.

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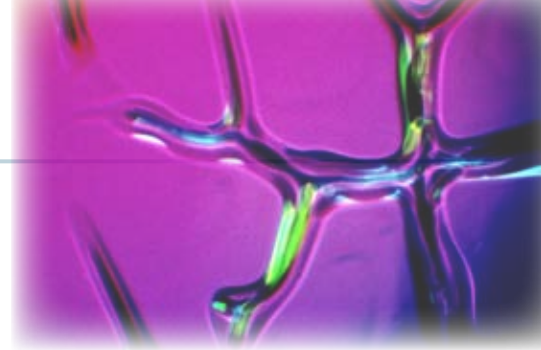
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NEW PRODUCTS



AOR THEAFLAVINS TEA IN A CAPSULE

When asked what is the most consumed beverage in the world, most people would say water. This is correct. However the second most consumed beverage in the world is tea. Many people would not believe it, but it is consumed more than coffee, beer or soda. People have been consuming tea for centuries, but only recently has there been research linking the consumption of tea and tea-like products with good health, in particular cardiovascular health.

The term tea actually describes the plant, leaf or beverage originating from a single species *Camelia sinensis*. There are three types: green, black and oolong. The differences in color and taste between the three is determined by the degree of fermentation that the leaves are allowed to undergo after harvesting. The degree of fermentation that the tea is subjected to during processing determines the type of flavonoids that will be present in the final product.

The principal polyphenols in green tea are catechins and in black tea are flavins, these are polymerized catechins known as theaflavins and thearugabins. Theaflavins are found in black tea, not green tea. Theaflavins have been shown to help with cardiovascular issues. Studies have shown tea may be beneficial at reducing one's chance of getting a Myocardial infarction or stroke. Studies also showed that by drinking 5 cups black tea/day for 3 weeks caused a 10% reduction in LDL cholesterol compared with the placebo. People have been drinking tea for thousands of years, but only recently researchers realized that tea may hold many more health benefits than previously thought. One capsule of Theaflavins is equivalent to "1 cup".

Nadeem Aslam, B.Sc. is constantly researching and recommending New Products at Nature's Source.

DIABETES

Recognizing the Signs and the Symptoms

According to a recent publication printed by the Canadian Diabetes Association, diabetes has now become one of the leading causes of death by disease. Did you also know that more than two million people have been diagnosed with either type I or type II diabetes directly caused by a significantly high dietary intake of refined carbohydrates, fats and sugars?

By definition diabetes is classified into two categories. The first one is "Type II" and the second one is "Type I". Type II is not only the most common, but Type II diabetes is also the easiest out of the two to correct quickly. A change in your dietary nutritional lifestyle choices of what you eat will dramatically reduce or even eliminate the symptoms of diabetes with better food choices. People who have been diagnosed with "Type II" need to recognize that their pancreas is tired and overworked but is still functioning; however it is not producing as much insulin as is needed to pick up glucose in the blood. Cells in the body may have become desensitized and need extra help in order to perform the job that the pancreas would normally do.

Type I, however, often called "Juvenile diabetes", is a more serious condition and if you have reached this stage you will already be injecting insulin into your blood to maintain a healthy glucose level. This is why it is important to consider making the necessary changes before it reaches this point because once the pancreas stops producing the hormone insulin, even with a dietary lifestyle change, the pancreas is still unable to produce insulin on its own.

To determine how you rate on the diabetic scale, visit your local doctor's office and get your fasting blood glucose score.

FASTING BLOOD GLUCOSE

From 70 to 99 mg/dL (3.9 to 5.5 mmol/L)	Normal glucose tolerance
From 100 to 125 mg/dL (5.6 to 6.9 mmol/L)	Impaired fasting glucose (pre-diabetes)
126 mg/dL (7.0 mmol/L) and above	Diabetes

If you think that you are diabetic and need help to change your blood sugar levels, there are nutritionists, as well as naturopaths and dieticians that are trained and qualified and available to provide you with a list of foods and supplements to begin eating for a healthier lifestyle.

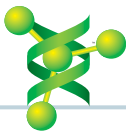
Diabetes is a serious condition and it should not be taken lightly. The effects of a diet high in sugar over a long period of time are often the underlying reason that produces actual symptoms of a disease that can be avoided. Watching and monitoring to control the amount of sugar ingested in the diet is a must for successful weight management and a key component in everyone's diet, not just for those who have been diagnosed as "a diabetic".

For example did you know that elevated blood sugar levels over an extended period of time can produce unusual thirst, frequent urination, weight change, extreme fatigue (lack of energy), blurred vision, frequent or recurring infections, cuts and bruises that are slow to heal, tingling or numbness in hands and feet, trouble maintaining an erection, kidney disease, eye disease, and nerve damage? How about heart disease, high blood pressure, circulatory problems, heartburn, burned out adrenal function, poor memory, premature aging, and acne?

Never ignore the warning signs or symptoms. Symptoms tell us that something is not right. Something needs correction. It is a natural defense mechanism produced by your body to get your attention before the next stage....when DISEASE begins.

Sugar Alternatives

Most people struggle with a diet without sugar as well as accepting a new lifestyle change. However, it is easier than you think. There are many sugar alternatives to choose from many on the market, however some are not considered healthy and are the topic of much controversy. Here is a summary of what is available on the market. The following is a list prepared by The Canadian Diabetic Association who suggests these sugars are



available for diabetics and are according to their studies deemed safe. These are Sugar Alcohols & polydextrose, including lactitol, maltitol, mannitol, sorbitol, and polydextrose. These are found in cough and cold medicines and antacids as well as soft drinks. These products are then labeled “sugar free” or “no added sugar”.

It should be noted the following sugars ARE NOT recommended for diabetes as they increase blood sugar levels and should be avoided all together or used in minimal quantities. They include brown sugar, icing sugar, white sugar, dextrose, fructose, glucose, lactose, maltose, sucrose, maltodextrin, brown rice syrup, corn syrup, maple syrup, fruit juice concentrates, honey, molasses, and barley malts.

Stevia and Xylitol

Lastly, there are two types of sweeteners that can be found on the shelf of your local health food for store. They are Stevia and Xylitol. Both are healthy, naturally occurring sugar alternatives and can be part of your diet without any side effects. You will love Xylitol. Just listen to the benefits this sweetener has. It is the only type of sugar available today that makes the claim that it will help you maintain healthy gums and teeth because it inhibits and reduces the production of acids and tooth decay in the mouth. Xylitol is a natural sugar alcohol molecule that comes from corn-cobs and birch trees. Xylitol has also been shown to help with reducing ear infections and infections of the nose and throat.



Stevia (Rebaudiana), is a sweet-tasting herb found in Paraguay and Brazil from an amazing little small shrub high in stevoisides. It is an excellent choice for those on calorie reduced diets and for diabetes because it does not affect insulin levels. A fraction of a teaspoon per serving is often quite enough to satisfy that taste for sugar. You'll be

glad you tried Stevia and Xylitol.

These are just some basics tips for diabetes prevention and management. Please check with a qualified professional if you are not sure how to get started with lowering your blood sugar and maintaining a stable and healthy insulin level. Find out how to do so and make 2006 your best year ever.

Yvonne Horvat is a registered Holistic Nutritionist who practices out of the clinic in our Mississauga store. She can be reached at 905-502-6789 to set up an appointment.

GLUT 4

Transporters and Diabetes

If you're over-fat you may be suffering from the impairment known as “insulin resistance”. Perhaps you were over-weight as a child and/or adolescent. Maybe you were stressed and ate yourself into weight gain after your twenties? Or perhaps you're a thin person that developed diabetes. Whatever the case, GLUT 4 transporters, which I will explain further in this article, are a crucial component of the metabolic defect.

In clinical practice diabetes mellitus is encountered more so than any other endocrine disorder. Diabetes is generally sub-classified into non-insulin-dependent diabetes mellitus (NIDDM) – Type II, and insulin dependent diabetes mellitus (IDDM) - Type I. Clinically speaking, these entities differ in pathophysiology and epidemiology, with IDDM accounting for approximately 15% of all diabetes patients, and NIDDM the remainder. Interestingly however, a growing number of patients that have or had NIDDM are developing IDDM.

Pathophysiology of Diabetes

Glucose can enter all cells, but in the muscle, fat and in other tissues, insulin increases glucose uptake in non-hepatic tissue by increasing the number of glucose transporters in the cell membrane. The lipid membrane of a cell is impermeable to glucose. Some glucose is transported into the cell; however glucose transporters drastically increase the rate of glucose transport. There are several glucose transporters, named in order of discovery. GLUT 1 is present in most tissues, GLUT 2 is found in liver and pancreatic β -cells,

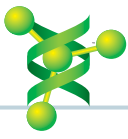
GLUT3 is in the brain and GLUT4 is found in heart, adipose tissue and skeletal muscle. Researchers Kawano et al (1997) looked at GLUT4 transporters in subjects with NIDDM. In Type 2 diabetic subjects, cell surface GLUT4 content and glucose transport were reduced in response to both insulin and hypoxia. Furthermore, defective GLUT4 translocation and insulin signaling defects impaired glucose transport in skeletal muscle in subjects with Type 2 diabetic NIDDM. Essentially this means that cells become less and less able to uptake glucose and the concentration of glucose rises in the blood. In response to this increase the pancreas keeps secreting insulin and a hyperinsulinemic state ensues. As a way of explaining the complex effects of insulin, I have listed some basics are listed in the following chart:

Effects of Insulin

Adipose (fat) tissue	Muscle
1. Increased glucose entry	1. Increased glucose entry
2. Increased fatty acid synthesis	2. Increased glycogen synthesis
3. Increased triglyceride deposition	3. Increased amino acid uptake
4. Activation of Lipoprotein Lipase	4. Increased protein synthesis in ribosomes
5. Inhibition of hormone sensitive Lipase	5. Decreased protein catabolism
6. Increased K ⁺ uptake	6. Decreased release of gluconeogenic amino acids
	7. Increased K ⁺ uptake

High insulin and obesity

Defective GLUT 4 can result in hyperinsulinemia and high blood glucose levels. More specifically, high insulin decreases the body's ability to burn fat and increases fat storage via inhibition of hormone sensitive lipase and activation of lipoprotein lipase. Keep in mind that there are many other possible reasons for high insulin or high blood glucose (Pheochromocytomas Pancreatic disease, Glucagonomas, Cushing syndrome etc...).



How to fix the GLUT 4 problem

Despite the complex biochemical chain reaction that involves insulin the answer to obesity and diabetes is deceptively simple – exercise, get enough sleep, don't eat crap food and don't sweat the little stuff. The truth is that stress does not just turn us into less productive, tired, irritable binge eaters, it puts our bodies in a heightened state, which our bodies interprets as a threat to survival and it begins to panic. Interestingly, I've observed an increase of Type II Diabetes in body builders, which may be related to their propensity to over-eat, over train/ abuse themselves in the gym, drink 3 + protein shakes a day, eat no vegetables, no fruit and get 4 hours of sleep a night. Clearly balance is key to health. So training alone may not do the trick, but eating a high vegetable diet, with moderate fruit, legumes, nuts/seeds, lean protein combined with resistance training and sleep is the magic solution (it's not David Blaine...but you get the point).

There are certain substances like Chromium (effecting insulin receptor signaling via phosphorylation of tyrosine kinases), American ginseng (*panax quinquefolium*), and Corosolic Acid that may be beneficial in treating diabetes. However, before you begin to use acupuncture, Chinese herbs, and Nutrition I suggest you sit down with a Naturopathic Doctor trained in these modalities.

George Tardik B.Sc., RHN, RNCP, (ND candidate) has been practicing nutrition for 8 years. George specializes in metabolism, weight-loss, diabetes and sports nutrition. He does consultations at Nature's Source. Call 905-257-1655 for an appointment.

WE APPRECIATE YOUR FEEDBACK

*Do you have questions? Suggestions?
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Sleep...Sleep...Sleep

You're healthy, lift weights, do some cardio, take fish oil and whey protein, and so why are you not getting the physique you want? It may be as simple as counting sheep instead of staying up late to watch your favorite bad TV. Is seeing the finalists duke it out on America's Next Top Model worth losing the body of your dreams?

Researchers Alexandros Vgontas et al, 2003, looked at IL-6 (Interleukin-6), TNF (Tumor Necrosis factor alpha), and Cortisol levels in men and women over a 4 day period. What's interesting about this particular study was the comparison of younger and older men and women.

The purpose of the study was to examine sleep quantity and quality with alterations in TNF-a, IL-6 and Cortisol. The researchers concluded that poor quantity and quality of sleep was associated with elevated levels of both IL-6 and Cortisol in both the young and old groups, but more pronounced in the older group. The elevated Cortisol levels were associated with a decline in REM sleep, but were worse in the young group than the old group. In certain individuals there was a 33 min decrease in REM sleep. Hmmm...33min x 7 days a week = a lot less REM sleep; resulting in increased food cravings, decreased testosterone, increased irritability, decreased muscle mass etc., etc.

If you put your sleep priorities low on the totem pole you may be purchasing some new clothes at the Big and Tall with an emphasis on the BIG!

George Tardik B.Sc. (Hon), RHN, RNCP, (ND candidate) has been counseling in sports nutrition for 8 years. He has been featured on CBC's Newsworld, Marketplace and Sports Journal. He practices out of Nature's Source.

LETTER FROM THE EDITOR

As we enter the New Year, we feel the potential of the months ahead. We dream of health and happiness, and often make plans on how to achieve our personal goals. One goal often set in the new year is weight loss – with the objective of looking better when we look in the mirror or when we walk down the street. However, maintaining a healthy weight has benefits that extend well beyond the way we look in the mirror.

This issue addresses diabetes and weight issues. The importance of maintaining a healthy weight is emphasized. The connection between sugar and diabetes are discussed. Information is presented on weight loss supplements. However, as more than one author notes – it takes more than just supplements to deal with the issues of weight loss and / or diabetes. To be healthy – whether weight is or is not a problem for you – takes a healthy lifestyle. Stop and ask yourself "Am I being the best 'me'? Am I following my dreams?" Don't forget to love and honour yourself, the way you would ideally love and honour others. Yes, each of us will make mistakes – but don't forget *The only person who does not make mistakes is one who is not doing anything!* Your mistakes are an indicator that you are moving ahead, willing to take risks and try new things in your life.

May the New Year be one of growth, successes, health, and joy!

*Heather Allsop,
Editor*



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