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Treating Diabetes: Practical Advice for Combatting a Modern Epidemic

FEBRUARY 18, 2004 BY TOM COWAN ([HTTPS://WWW.WESTONAPRICE.ORG/AUTHOR/TCOWAN/](https://www.westonaprice.org/author/tcowan/))

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Adapted from *The Fourfold Path to Healing* by Tom Cowan, MD, with Sally Fallon and Jaime McMillan, to be published Spring 2004, NewTrends Publishing.

Diabetes is so common in America and other western countries that its presence in any human group has become a marker for civilization. Ironically, in no other field of western medicine has the promise of scientific breakthrough failed so poignantly as in the treatment of diabetes.

Diabetes is characterized by abnormally high levels of sugar or glucose in the blood, which spills into the urine, causing it to be sweet. The disease was first described by the Greeks who called it *diabetes mellitus* or “honey passing through.” Today there are at least 20 million diabetics in America, six million of whom must take shots of insulin daily. Scientists hailed the discovery of insulin in the 1920s as one of medicine’s greatest achievements—as, in fact, it was. Insulin is a pancreatic hormone needed for the transfer of glucose from the

blood to the cells. When this system fails—when the pancreas does not produce enough insulin or the insulin cannot get the glucose into the cells—then the sugar level in the blood remains abnormally high. This is the disease we call diabetes.

Originally, doctors thought that diabetes was simply a disease of insulin deficiency, a disease in which the pancreas was unable to produce enough insulin to meet the body's demands, and that it could be successfully managed once the right knowledge and technology were in place. Over time, researchers have produced better delivery systems for insulin, and ways to produce more purified and effective types of insulin—from porcine insulin to human insulin produced through genetic engineering. The medical profession has learned that giving insulin orally was unsuccessful, that subcutaneous injections were better, and that delivering it through a pump was best. Yet with all the improvements that have been made since 1920, diabetes remains one of the leading causes of death and disability in the western world. Complications of diabetes include heart disease and circulation problems; kidney disease; degeneration of the retina leading to blindness; neuropathy resulting in numbness, tingling, pain and burning in the extremities; foot ulcers leading to gangrene; and high risk of infection.

TYPE I AND TYPE II

Today, doctors realize that diabetes is a much more complicated condition than one of simple insulin deficiency. They have also discovered that there are two types of diabetes. Type I diabetes, which is also called insulin-dependent or childhood diabetes, usually develops before the age of 30, and involves a malfunction of the pancreas. Type I diabetes is thought of as autoimmune disease in which some trigger causes the body's immune system to attack its own insulin-producing cells, the beta-cells in the islets of Langerhans in the pancreas. In time, the pancreas loses its ability to produce insulin, blood sugar rises, and serious adverse consequences, including death, can occur if the person is not supplied with insulin. As yet, there is no consensus as to what the autoimmune trigger for Type I diabetes might be. Some evidence points to early feeding of pasteurized cow's milk, soy products and grains, or the use of vaccines, as likely triggers. Type I diabetes is often very difficult to control and, if not successfully controlled, can lead to the early onset of many of the complications listed above.

Type II diabetes, which is much more common than Type I diabetes, has a different etiology. It is the form of diabetes that is literally crying out for a new perspective from the one currently offered by the medical profession.

HYPOGLYCEMIA

In order to understand the diabetes epidemic in the Western world, and why the conventional treatment for this scourge has made almost no dent in its long-term impact on those who suffer from it, we must understand some basic biochemistry. The control of the blood sugar is one of the most fundamental requirements for a healthy life. Blood sugar levels can become abnormal in one of two ways: they can become too low, which we define as a blood sugar less than 80 and call hypoglycemia; or they can become too high, defined as a blood sugar over 110, which is called hyperglycemia. While neither hypoglycemia, nor hyperglycemia is good for your health, they appear to call forth very different reactions in the human being. For example, if your blood sugar drops below 40, you will become disoriented, confused, and if the situation persists, slip into a coma and die. This situation is a true medical emergency. When blood sugar is between 40-60, you feel shaky, jittery, anxious, sweaty, confused and irritable. When blood sugar is between 60-80 these same symptoms occur, but they are less severe.

The body reacts to the emergency situation of low blood sugar in many ways. When blood sugar even begins to drop below 80, the body produces a number of hormones, principally adrenaline and glucagon. The main effect of adrenaline is to make more sugar available to the cells. It is the production of adrenaline that accounts for the familiar shaky, jittery feeling that many have experienced during these hypoglycemic episodes. Glucagon helps raise blood sugar levels by increasing fat breakdown and stimulates the conversion of fat into sugar.

There may be at least 10 more hormonal or biochemical reactions that occur during the early stages of hypoglycemia. One is the release of growth hormone, which has also been found to increase blood sugar in times of stress. As you can see, the body is well prepared to ward off this potential emergency. It has multiple overlapping mechanisms to prevent a

precipitous fall in blood sugar, and many of these reactions produce clear symptoms that provoke us into action. Severe hypoglycemia is clearly a situation our adaptive physiology has learned to avoid.

HYPERGLYCEMIA

The situation is very different with respect to hyperglycemia. Many times during my practice I have asked a new diabetic patient how they felt and heard them reply, "A little tired, but not bad." Yet routine screening blood tests tell me that some of these unsuspecting patients have blood sugar levels as high as 400, almost 4 times the normal level. These people are at strong risk for all the major complications of diabetes including coronary artery disease and neurological disease, yet they feel nothing, their bodies give them little warning. Why is this?

Some have conjectured that the body has a hard time dealing with hyperglycemia because the condition that causes it—namely overeating—is a relatively new phenomenon in human history. On the other hand, hypoglycemia induced by lack of food has been a frequent occurrence to which the body has adapted with a variety of mechanisms. Compared to dozens of hormones that are produced when our blood sugar drops too low, the body has only two mechanisms to deal with blood sugar that goes too high. One is exercise—any muscular activity drives the sugar from the blood into the muscle cells where it is used as fuel. The second is the production of insulin. Insulin production is the body's way of saying that the sugar level is too high, that the body is overfed with sugar. Insulin helps remove sugar from the blood into the cells where it is stored as fat. (It is interesting to note that the type of fat that is made by the body under the guidance of insulin is saturated fat.)

Understanding this basic physiology leads to some interesting conclusions. One is that controlling the level of insulin produced is the key to controlling obesity. For without insulin there can be no weight gain. People who lose the ability to make insulin (type I diabetics) will never gain weight no matter how much food they eat unless they are supplemented with insulin. In fact, without insulin they literally starve to death.

The second conclusion we can draw is that the cause of type II diabetes is actually quite simple. Type II diabetes occurs when for many years the consumption of foods that raise the blood sugar chronically exceeds the amount of sugar needed by the muscles for exercise. This forces the body to gradually make more and more insulin in order to bring

this sugar level down. Eventually, the body cannot make enough insulin to lower the sugar level, the sugar level remains chronically high and the patient is diagnosed with diabetes.

INSULIN RESISTANCE

Along the way a curious thing happens called insulin resistance. This means that as the blood sugars are chronically elevated, and the insulin levels are rising, the cells build a shield or wall around themselves to slow down this influx of excess sugar. Insulin resistance is a protective or adaptive response, it is the best the body can do to protect the cells from too much glucose. But as time goes on the sugar in the blood increases, more insulin is made by the pancreas to deal with this elevated sugar and the cells resist this sugar influx by becoming insulin resistant, in a sense by shutting the gates. This leads to the curious situation in which blood sugar levels are high but cellular sugar levels are low. The body perceives this as low blood sugar. The patient has low energy and feels hungry so he eats more, and the vicious cycle is under way.

Having a chronically elevated insulin level is detrimental for many other reasons. Not only do high insulin levels cause obesity (insulin tells your body to store fat), but they also signal that fluid should be retained, leading to edema and hypertension. Chronic high insulin provokes plaque development inside the arteries and also suppresses growth hormone needed for the regeneration of the tissues and many other physiological responses.

During the 1980s, researchers began to ask whether obesity, coronary artery disease, hypertension and other common medical problems that occur together are really separate diseases, or manifestations of one common physiological defect. The evidence now points to one defect and that is hyperinsulinemia, or excessive insulin levels in the blood. Hyperinsulinemia is the physiological event that links virtually all of our degenerative diseases. It is the biochemical corollary or marker of the events described in heart disease.

The question we need to answer, then, is what causes hyperinsulinemia? In basic biochemistry we learn about the three food groups: fats, proteins and carbohydrates. Under normal circumstances it is the carbohydrates that are transformed into the sugar that goes into the blood. Fats are broken down into fatty acids and become the building

blocks for hormones, prostaglandins and cell membranes. Proteins are broken down into amino acids which then are rebuilt into the various proteins in our bodies. Carbohydrates are used for one thing only and that is energy generation. This allows us to define a “balanced” diet, which is one where the energy used in movement and exercise equals the energy provided by the carbohydrates we consume.

For a person of a given size, protein and fat requirements are relatively fixed and can be controlled with the appetite. (It is actually difficult to overeat fats and proteins, as our bodies make us nauseous when we do.) However, carbohydrate intake should be intimately related to our level of activity. If we run a marathon every day, a balanced diet would probably include about 300 grams of carbohydrates per day, the amount contained in 20 potatoes or 6 brownies. If we sit on the couch all day, obviously our requirement for energy food will be less. In this case a balanced diet would include only about 65-70 grams of carbohydrate per day. Any more, and our bodies are forced to make more insulin and the whole vicious cycle begins.

The problem of diabetes can be summarized by saying that the western diet has us eating like marathon runners, when in fact most of us simply sit on the couch. When we regulate the carbohydrate intake to match our exercise level, type II diabetes cannot develop, and in fact, I have found that most cases of type II diabetes respond well to treatment when these basic principles are kept in mind. Type I diabetes responds equally well to a high-fat, low carbohydrate diet. In fact, before insulin was available, the only way to treat type I diabetes was a high-fat diet from which carbohydrate foods were completely excluded because the body does not need insulin to assimilate proteins and fats.

Unless eaten to great excess, fats do not contribute to diabetes—with one exception. Trans fatty acids in partially hydrogenated vegetable oils can cause insulin resistance. When these man-made fats get built into the cell membrane, they interfere with the insulin receptors. In theory, this means that one could develop insulin resistance without eating lots of

carbohydrates. But in practice, partially hydrogenated vegetable oils are always used in the very high-carbohydrate foods—french fries, cookies, crackers, donuts and margarine on bread or potatoes—that flood the bloodstream with sugar. Trans fatty acids in modern processed foods present a double whammy for which the human species has developed no

defenses.

DIET FOR DIABETICS

Studies of indigenous peoples by Weston Price and many others reveal the wisdom of native diets and life-style. For not only did so-called primitive peoples follow the “perfect” anti-diabetes life-style program, but their diets incorporated specific foods only recently discovered to play an important role in the prevention and treatment of this disease. In general, indigenous peoples had a low carbohydrate intake coupled with a lot of physical activity. In fact, those peoples especially prone to diabetes today, such as northern Native Americans and Inuits, consumed virtually no carbohydrate foods. In warmer climates, where tubers and fruits were more abundant, these foods were usually fermented and consumed with adequate protein and fat. It is only in the change to Western habits that their so-called “genetic” tendency to diabetes manifests.

There are three other nutritional factors in indigenous diets that are helpful for diabetics. First, the diets were rich in trace minerals. Modern science has shown us that trace mineral deficiencies—particularly deficiencies in zinc, vanadium and chromium—inhibit insulin production and absorption. Without vanadium, sugar in the blood cannot be driven into the cells and chromium is necessary for carbohydrate metabolism and the proper functioning of the insulin receptors. Zinc is a co-factor in the production of insulin. Traditional foods were grown in mineral-rich soil, contained mineral-rich bone broth and salt, and included mineral-rich water or beverages made with such water. In the modern diet, the best sources of zinc are red meats and shell fish, particularly oysters. Extra virgin unfiltered olive oil supplies vanadium, and chromium is found in nutritional yeast, molasses and organ meats like liver.

Second, indigenous peoples ate a portion of their animal foods, such as fish, milk or meat, uncooked—either raw or fermented. This strategy conserves vitamin B6, which is easily destroyed by heat. Vitamin B6 is essential for carbohydrate metabolism; it is often the rate-limiting vitamin of the B vitamin complex because it is one of the most difficult to obtain in

the diet. Indigenous peoples intuitively understood the need to eat a portion of their animal foods completely raw.

Third, traditional peoples consumed foods rich in fat-soluble vitamins, including butterfat from grass-fed animals, organ meats, shellfish, fish liver oils and the fats of certain animals like bear and pig. High levels of vitamin A are absolutely essential for the diabetic because diabetics are unable to convert the carotenes in plant foods into true vitamin A. Vitamin A and vitamin D also protect against the complications of diabetes, such as retina and kidney problems. And vitamin D is necessary for the production of insulin.

Putting all these rules together, we find that a nutrient-dense traditional diet fits all the requirements for the prevention and treatment of diabetes. The diet should include sufficient trace minerals from organic and biodynamic foods, Celtic sea salt, bone broths, shellfish, red meat, organ meats, unfiltered olive oil and nutritional yeast. High levels of vitamins A and D are essential, as are raw animal foods to provide vitamin B₆.

Most importantly, diabetics must strictly limit their daily carbohydrate intake. While the optimum amount of carbohydrate foods depends somewhat on activity levels, most diabetics need to start on a 60-gram-per-day carbohydrate regimen until their sugars normalize. I recommend *The Schwarzbein Principle* as a guide to carbohydrate consumption. The book contains easy-to-use charts that allow you to assess carbohydrate values. During the initial period of treatment, which can take up to a year, average blood sugar levels should be determined by a blood test that measures HgbA1c, a compound that indicates average blood sugar levels over a period of about 6 weeks. Carbohydrate restriction will also help with weight loss.

For Type II diabetics, this diet should help both blood sugar levels and weight to normalize, after which the daily carbohydrate intake can be liberalized to about 72 grams per day. This level should be maintained throughout the life of the diabetic. The same approach applies

to the Type I diabetic, although it may not allow him to get off insulin. However, strict carbohydrate restriction should reduce insulin requirements, help keep blood sugar stable and, most importantly, prevent the many side effects associated with diabetes.

Please note that in this approach there are no restrictions on total food intake, nor do we pay attention to the so-called glycemic index of various carbohydrate foods. Fats consumed with any carbohydrate food will lower the glycemic index. Worrying about glycemic indices adds nothing to the therapy and only increases time spent calculating food values rather than enjoying its goodness. One should eat abundantly from good fats and proteins—only carbohydrate foods need to be restricted.

With this approach, diabetics can expect greatly improved quality of life and even a complete cure.

Sidebars

INSULIN AND GLUCAGON

One of the most finely tuned mechanisms of the human body is the regulation of sugar levels in the bloodstream. While levels of cholesterol and triglycerides can vary widely, the levels of glucose in the blood must be maintained within a narrow range for the body to function at optimum levels—or even to function at all. The regulation of blood sugar levels is carried out by two hormones, insulin and glycogen. The principal role of insulin is to rapidly remove glucose from the blood and transport it into the muscles, liver and adipose tissue, thus lowering the blood sugar level and feeding the cells. (Note: the red blood cells and the cells in the brain, kidney and intestinal tract do not require insulin for glucose uptake.) Insulin promotes the storage of glucose as glycogen in the liver and adipose tissues. Glucagon has the opposite effect to insulin. In response to low levels of blood sugar, its task is to increase glucose concentration. Glucagon acts primarily on the liver and adipose tissue (but not on the skeletal muscle) to stimulate the production of glucose from glycogen and raise the blood sugar levels to normal.

Insulin is produced by the so-called beta-cells while glucagon is produced by the alpha-cells, both of which are found in the islets of Langerhans in the pancreas. The ratio of insulin to glucagon in the blood determines whether glucose is used for energy or stored. If insulin is high compared to glucagon, carbohydrates will be created and/or stored after a meal; if

insulin is low compared to glucagon, glucose will be added to the bloodstream rather than stored. Thus the type-II diabetic, who produces plenty of insulin that stays in the bloodstream rather than interacts with the cell membrane, will tend to gain weight easily, whereas the type-I diabetic, whose insulin production is low or non-existent, will not gain weight no matter how much he eats.

DIABETES AND STRESS

The main cause of diabetes is the western diet—based on refined carbohydrates that rush sugar into the bloodstream, trans fatty acids that interfere with insulin receptors in the cells, and difficult-to-digest foods like pasteurized milk and modern soy foods that put a strain on the pancreas—but another cause of chronic high blood sugar levels, one that is often overlooked, is stress. Under stress, the adrenal glands produce adrenaline, an important stimulus for the production of glucagon, which raises blood sugar levels and allows the body to react with a “fight or flight” response. Chronic stress—the stress on the adult in the workplace, the stress on the student under pressure to perform, the stress on the child expected to conform to rigid guidelines or who has been sexually or emotionally abused, even the stress of a spiritual or religious outlook that assumes a clockwork universe or a vengeful god—results in constant outpourings of adrenaline resulting in overstimulation of glucagon to keep blood sugar levels high. The body then responds with increased production of insulin to bring blood sugar levels down.

Polyneuronal Extopy (PNE), more commonly known as panic disorder, is a common symptom of a condition in which high levels of insulin accompany normal blood sugar levels. The condition derives from the vicious circle of constant stress causing increased release of sugar into the bloodstream, kept in check by increased outpourings of insulin, leading to chronic anxiety even under conditions that normally should not produce stress. Over time, especially when the diet is poor, the beta-cells of the pancreas become

exhausted and can no longer produce large amounts of insulin. The result is full blown diabetes, characterized by chronically high blood sugar levels—as though the body has balanced a kind of bitterness in the exterior world with excess sweetness in the blood.

Treatment of diabetes may thus entail a strong emotional or spiritual component; a good diet will go a long way to lower insulin requirements and heal the insulin-production mechanism, but removing the origins of stress is an important factor for long-term recovery. A change in job or life-style, therapy and a reassessment of any philosophical assumptions that breed fear rather than love may all be necessary to bring harmony to the body's finely tuned mechanism for keeping blood sugar levels in balance.

HERBS AND MEDICINES FOR DIABETES

Gymnema: Ayurvedic practitioners referred to gymnema as the "sugar-buster." If you chew some leaves of this inauspicious plant, you completely eliminate the ability of your taste buds to perceive the sweet taste. If you eat a piece of candy or even some honey ten minutes later, it will taste like chalk. One can almost hear a slight chuckle emanating from the plant as if to say, "I truly am the sugar buster." Gymnema also helps reduce blood sugar levels. It does this by lowering insulin resistance, much like conventional oral diabetic drugs, and also by increasing the secretion of insulin from the pancreas. Furthermore, gymnema actually helps regenerate destroyed pancreatic islet cells in type I diabetics. Use of gymnema may not completely reverse type I diabetes, but it always improves glucose control. Thus, gymnema addresses within itself the multifactorial etiology of diabetes in that it helps your body make more insulin, if that is needed, and it makes the insulin more effective. With gymnema there is no risk of provoking the dangerous hypoglycemic reactions so common with the conventional oral diabetic medication.

Bitter Melon: Bitter melon is a fruit that is widely used as food as well as medicine in Asia. Research suggests that bitter melon helps increase the number of beta cells in the pancreas, thereby improving the body's ability to produce insulin. Furthermore, at least three different groups of constituents provide blood-sugar-lowering effects—steroidal saponins known as charantin, insulin-like peptides and alkaloids.

Bilberry: Used by the British Royal Air Force during World War II to improve night vision, bilberry contains tannins that help shrink up swollen and leaky tissue. The theory of diabetic retinopathy is that it is caused by leaky blood vessels surrounding the eye. Bilberry also contains compounds called OPCs which are good for the eyesight and the blood

vessels.

Birch Leaf Tea: Birch leaf tea is excellent for the overweight Type II diabetic as it helps the body get rid of excess fluid and furthers weight loss.

Diaplex: Diaplex is the Standard Process diabetes preparation made from organically grown food containing abundant trace minerals as well as vitamin B₆ from raw animal extracts.

DRUGS FOR DIABETES

INSULIN: Insulin has saved the lives of millions of diabetics and studies show that it delays the onset of complications in type I diabetics—which is what motivates the patient to endure daily finger pricks to determine blood sugar levels, followed by self-administered insulin shots, often three times per day. However it is difficult to fine tune the dosage and many diabetics have experienced episodes of very low blood sugar with symptoms of trembling, hunger, weakness and irritability. If blood sugar drops too low, death from insulin shock may occur. Since 1982, so-called “human” insulin has been available, a form produced by genetic engineering. Writing for *Soil & Health*, July 1999, Jenny Hirst, Co-Chair of the UK Insulin Dependent Diabetes Trust, argues that the new GE insulin creates many problems compared to the earlier porcine insulin, including frequent low-blood-sugar reactions without the necessary safeguard of warning signs, extreme lethargy, behavioral changes (aggression and violence), memory loss, confusion, depression, joint pains, weight increase and changes in the menstrual cycle. Porcine insulin is still available but not in convenient insulin pens.

ORAL HYPOGLYCEMICS: Easier to take than insulin, the pharmaceutical industry has long sought a safe and effective anti-diabetes drug but the results so far have been disappointing. Unlike insulin, the oral hypoglycemics are only somewhat effective in lowering blood sugar, failing to control high levels in 20-40 percent of patients. Furthermore, studies indicate that they do not prevent long-term complications such as kidney disease and blindness. In fact, they may increase the risk from cardiovascular disease. Most disturbing have been the side effects, including breathing difficulties, drowsiness, muscle cramps, seizures, swelling, water retention and weakness that can be

life-threatening in some patients. One drug, called Rezulin, generated sales of over \$2 billion in the US after its release in March 1997, only to be withdrawn three years later after causing at least 90 cases of liver failure.

ONE CASE HISTORY

A recent patient of mine was a 67-year-old retired white male who gave a history of diabetes for about 4 years. He suffered from the typical symptoms including high blood pressure in the 160/95 range, diminishing eyesight and the recent onset of protein in his urine. This patient was about 35-40 pounds overweight, and he complained of increasing fatigue and lethargy.

This is the classic presentation of type II, or non-insulin-dependent diabetes. The typical story is onset in the 50s to 60s in a person who is significantly overweight. Diabetes often goes along with high blood pressure, both as a direct consequence of being overweight and as a result of the fact that excess insulin (the hallmark of type II diabetes) itself causes high blood pressure because it stimulates the retention of fluid in the body. The protein in the urine is a sign that the diabetes is affecting his kidneys and that they are starting to “leak” protein. This is usually a harbinger of advanced diabetes and if not corrected will eventually lead to compromised kidney function and the misery of regular dialysis treatment. The eyesight problem is also a direct consequence of the diabetes because diabetes leads to a deterioration of the small blood vessels everywhere in the body. This includes the retina, where one begins to see exudates or leaking of blood from the blood vessels of the eye into the retina. Eventually, this process will lead to further impairment of the vision, if it is not reversed. I have also found that many of my patients with this kind of advancing diabetes also complain of not feeling well in a non-specific sort of way. Often the complaint is fatigue, lethargy, or just a decreased joy in life.

As is usual in these cases, my patient was on a number of drugs to address his health concerns. He was on an oral hypoglycemic agent to lower his blood sugar, a beta-blocker to lower his blood pressure (which incidentally raises the blood sugar), and an ACE inhibitor to lower the blood pressure and protect the kidneys. He believed that these drugs were

contributing to his feeling unwell.

On his initial visit to me, in spite of these drugs, his blood pressure was 165/95, and his HgbA1c (a measure of the average blood sugar over the past 6 weeks) was 8.1 (normal is 5.5-6.5). He had been instructed in the American Diabetes Association diet which is calorie-restricted and fat-restricted—and also universally reviled by the patients. Clearly, in spite of the best that Western medicine had to offer, he was not doing well.

I suggested a strict 60-70 gram per day carbohydrate intake while implementing a nourishing traditional diet to guide his food choices and food preparation. He was to eat plentifully of all the good fats and non-starchy vegetables without overeating protein (e.g., eat egg yolks in preference to egg whites, fatty fish instead of lean fish, cream instead of milk, etc.). He was not to limit his total food intake, but rather to strictly limit his carbohydrate consumption to the amount listed above. The patient also began taking a number of medicines which are my staples for treating patients with his constellation of troubles stemming from diabetes, including diaplex, gymnema, bilberry, and birch leaf tea, along with cod liver oil to supply 20,000 IU vitamin A daily.

In 6 months of strictly following this program the results were nothing short of remarkable (though actually predictable). He had lost 35 pounds without increasing his exercise, he felt much more energetic, he loved his food again, and he was off all conventional medicines. When I saw him at 6 months his blood pressure was 135/80, and there was no protein in his urine. The HgbA1c was 6.7 (almost normal) and he could sense his eyesight improving. Confirmation came when he had his checkup with his eye doctor, who produced an after picture showing that his retinal hemorrhages had healed considerably over the previous six months. The doctor commented that he had never seen such a thing.

This story shows that there is hope with diabetes and that with sound thinking and sound intervention much of the ravages of this illness can be prevented and treated.

NUTRITION FOR DIABETICS

Vitamin A: Plentiful vitamin A is crucial to the successful treatment of diabetes. The diabetic pancreas is deficient not only in its ability to produce insulin, but also in the

production of a variety of key enzymes, including the enzymes the body needs to convert carotenes into vitamin A. Therefore, the diabetic must take in more pre-formed vitamin A than the non-diabetic. Vitamin A is key to the prevention of the side effects of diabetes, including retina problems, kidney problems, neuropathy, infection and slowness to heal. The diabetic should take cod liver oil to provide a minimum dose of 20,000 IU vitamin A per day, in addition to vitamin A-rich foods like liver, egg yolks, seafood and cream and butter from pasture-fed animals.

Vitamin D: Vitamin D is needed for the production of insulin. A dose of cod liver oil that provides 20,000 IU vitamin A will provide 2,000 IU vitamin D. Several recent studies have shown that babies who receive cod liver oil during infancy, and whose mothers take cod liver oil during pregnancy, have much lower rates of diabetes. Other sources include lard, shellfish (especially shrimp), organ meats, egg yolks and cream and butter from pasture-fed animals.

Fatty Acids: The diabetic lacks the enzymes needed to make special long-chain, super-unsaturated fatty acids from essential fatty acids. Cod liver oil provides EPA and DHA from the omega-3 family. Gamma-linolenic acid (GLA) from the omega-6 family is provided by evening primrose oil, black currant oil or borage oil. Four capsules per day providing about 200 mg GLA is recommended.

Vitamin B₁: A recent study found that diabetic rats given vitamin B₁ (thiamine) had a 70-80 percent reduction in the development of kidney damage. Good sources include nutritional yeast, nuts, vegetables, liver and pork.

Vitamin B₆: Plentiful supplies of vitamin B₆ are critical for the health of the diabetic. B₆ helps prevent carpal tunnel syndrome, to which the diabetic is prone. The best sources of B₆ are raw animal foods such as raw whole milk, raw cheeses, raw fish and raw meat. Use only dairy products that are raw and include an ethnic raw meat or raw fish dish in the diet several times per week.

Alpha-Lipoic Acid: Also known as thioctic acid, alpha-lipoic acid is a vitamin-like enzyme cofactor necessary for converting glucose into ATP (chemical energy). Produced naturally in the body, it is also found in potatoes, carrots, yams, sweet potatoes, beets and red meat. As the diabetic needs to limit consumption of starchy vegetables, the best sources would be

red meats and small amounts of pickled beets.

Chromium: A key mineral for diabetics, chromium is necessary for carbohydrate metabolism and proper functioning of the insulin receptors. Sources include nutritional yeast, molasses and organ meats like liver. Diabetics should eat liver at least once a week and take 1 tablespoon Frontier brand nutritional yeast mixed with water per day.

Vanadium: Without vanadium, sugar in the blood cannot be driven into the cells. An excellent source is unfiltered extra virgin olive oil.

Zinc: Zinc is a co-factor in the production of insulin. The best sources of zinc are red meats and shell fish, particularly oysters.

Thus, supplements for the diabetic should include cod liver oil; evening primrose, borage or black currant oil; and nutritional yeast.


The diet should be rich in animal foods including raw butter, cream, whole milk and cheese from pastured animals; raw meat and fish; beef and lamb; seafood, especially shellfish; unrefined salt for trace minerals; bone broths for minerals; unfiltered olive oil; molasses, egg yolks; and a variety of fresh and fermented vegetables, especially beets.

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About Tom Cowan

Dr. Tom Cowan has been one of the leading voices speaking out against the mainstream medical narrative and coordinated agenda of masking, social distancing and forced vaccinations. His messages of health freedom and personal autonomy have resonated with millions of people around the world. Dr. Cowan challenges conventional medicine to explore health and wellness in holistic terms, seeking to provide a collaborative forum for the exchange of knowledge, products and practices that enable us to forge a new world together, governed by truth. Explore this website for a wealth of free content (podcasts, blogs, videos, etc.), join Dr. Cowan’s subscriber community of like-minded individuals seeking to survive and thrive in our rapidly changing world, and check out his books and the products he has used personally and with his patients over 37 years of medical practice, including EMF mitigation products, water structuring, and supplements for detoxification, healing and support.

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