

What about . . . BLOOD SUGAR?

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Diabetes Type II. Hypoglycemia. Insulin Resistance. Just what do all these mean and how are they all related? Most importantly, what can we do about them? Generally speaking, they are all connected to carbohydrate metabolism/blood sugar and can, to a great extent, be controlled by diet and proper supplementation. They involve a complexity of organs including the adrenals, pancreas, pituitary, thyroid and kidneys (due to the excessive urination caused by diabetes) which all need support. In fact, the yen for carbs is even affecting our animals who are coming up with their own versions of the diseases.

The number of Americans with these health challenges is reaching epidemic proportions with over 17 million Americans diagnosed with Diabetes Type II. That is a 33% rise in numbers from 1990 to 1999 and an extraordinary 70% rise in those aged 30-39. Some researchers estimate there is that number again with undiagnosed diabetes. These numbers do not reflect Hypoglycemia or Insulin Resistance.

The Role of Insulin

This is the hormone produced by the pancreas and responsible for regulating the amount of sugar going to the brain after eating. It does this in two ways: a) the presence of insulin alerts the liver (which stores sugar/energy as *glycogen*, as do muscles) so it does not allow too much to go to the brain, and b) insulin stores excess sugar in cells thus balancing blood sugars and insulin levels. However, in Type II diabetics and those who are “insulin resistant,” the cells will not allow the insulin to offload the excess sugar from the bloodstream. This causes the pancreas to secrete even more insulin in an effort to unlock those closed cells but which actually causes the cells to lock down even further. Long term *hyperinsulinemia* leads to:

- Acne
- Addictions
- Asthma
- Cancer
- Carbohydrate and stimulant cravings
- Delayed puberty
- Depression and mood swings
- Eating disorders
- Excessive weight gain
- Heartburn and other gastro-intestinal disorders
- Heart disease (coronary artery plaques)
- High cholesterol and triglyceride levels
- Infertility
- Insomnia/fatigue
- Insulin resistance leading to Type II diabetes
- Irritable bowel syndrome
- Low estrogen
- Migraine headaches
- Osteoporosis

Other side effects of excess insulin according to Joseph Mercola, DO, [The No-Grain Diet](#), are that it:

- halts production of glycogen which promotes the burning of fat and sugar
- halts production of growth factor which is used for muscle development

- causes hunger and grain addiction

Some insulin resistance does happen as individuals age, and there seems to be a vague genetic predisposition to it, but mostly, according to Diana Schwarzbein, MD, [The Schwarzbein Principle](#), it is *acquired*: caused by a high carbohydrate/low fat diet. In fact she insists “*Long-term low-fat, high carbohydrate dieting leads to insulin resistance and, if continued, results in Type II diabetes. The same diet makes diabetics [Type I] sicker.*” She also makes the point that fat storage is not linked solely to diet but also to other **insulin stimulating factors** such as:

- Stress
- Caffeine
- Aspartame
- Tobacco
- Steroids
- Stimulants
- Recreational drugs
- Lack of exercise
- Excessive/unnecessary thyroid replacement therapy
- ...and all over-the-counter and prescription drugs

As an example, caffeine and its related substance *theobromine* (from tea and cocoa), have a similar effect on the body as sugar. They stimulate the adrenal glands to release an adrenaline-like substance which in turn causes the liver to release sugar into the blood stream. This is what gives you the ‘lift’ when you drink coffee, tea, Coke, Pepsi, etc. In fact, it has been shown that even sugar substitutes stimulate insulin production which is only one of many reasons why aspartame, and such, are highly discouraged in a healthful blood-sugar balancing diet.

If insulin resistance has increased to the diabetic stage, this means the pancreas has virtually shut down its production of insulin. Standard treatment consists of insulin injections, which can cause arterial plaques, but dietary and supplement treatment can actually restore a malfunctioning pancreas.

As for diet, Dr. Schwarzbein stresses eating only *real* food defining that as anything you could in theory pick, gather, milk, hunt or fish. Also vital is a great reduction in carbohydrate consumption. But of course not all carbohydrates are created equal.

Carbohydrates

While all carbohydrates turn into sugar for liver and cellular storage, the length of time it takes for them to do this is a critical factor in maintaining even blood sugar levels.

Complex

vegetable—all vegetables come under this heading although some vegetables like peas, most root vegetables, and dried legumes are considered “starchy” and should be used cautiously while all greens, etc. can, and should, be eaten in abundance, up to 80%, as they will help to alkalize the system

fruits—all fruits are also complex but it is wise to avoid *all* fruit juices and limit amounts of whole fruits especially the very sweet fruits, bananas and dried fruits

grains—while whole grains are considered complex carbohydrates, many individuals have trouble digesting them

(corn, wheat, oats, etc.—although generally some whole rice may be all right) leading to other illnesses such as IBS (Irritable Bowel Syndrome). It is wise to limit consumption to sprouted or fermented grains, always avoiding all processed grains. Also, all non-sprouted grains produce an acid pH in the blood leading to other health issues; balance always with appropriate amounts of non-starchy vegetables. Dr. Mercola suggests that the popular food pyramid stressing grains is based on *“theories already disavowed by such prominent nutritional scientists as Dr. Walter Willett, Chairman of the Department of Nutrition at Harvard.”*

Simple

sugars—the only acceptable sugars are the real sugars such as raw honey, Grade B maple syrup, stevia (an herb), organic blackstrap molasses and the like; quantities should be highly limited for someone with questionable blood sugar

processed—all the other sugars including white sugar, brown sugar, so-called “raw” sugar, corn syrup, etc., should always be avoided

Liquid

juices—fresh green vegetable juices can be an excellent source of nutrients and alkalinity and are quickly absorbed; however, limit root vegetable juices, including carrot, to smaller amounts due to their higher sugar content; fruit juices should be avoided entirely for most but especially for those with blood sugar challenges as they will act as a simple sugar to the pancreas (yes, that means orange juice!)

Maintaining blood sugar levels

With metabolic challenges, it is far better to have 5-6 smaller meals per day than the standard three and *always* including breakfast. Drs. Schwarzbein and Mercola both suggest eating fats and proteins with every meal as this helps to slow down digestion allowing the blood to maintain safe levels. Fats are discussed in detail in the article of that name, but one possibility would be to have Mercola’s fresh green vegetable drink with a raw egg yolk (organic, non-grain fed) whipped in for breakfast, a large greens and vegetable salad with free-range chicken/beef/bacon for lunch, and broiled chicken (skin on) with roast veggies and another salad for dinner plus olives, avocados, nuts/seeds, cheese, and some fruit for snacks. The before-bed snack is especially important as middle-of-the-night low blood sugar levels can cause insomnia. Remember to keep vegetable levels high in order to maintain appropriate acid/alkaline balance in your system.

Supplements

In addition to necessary dietary changes, following the **DYNAMITE®** Basics of **Elixir**, **Regular** or **Plus** and **TriMins** is very important to ensure proper nutrition. Their excellent balance and bio-availability of minerals seems to help control addictive carbohydrate and sugar cravings. Added supplements more specific for blood sugar balancing are:

DynaLite—the most important single nutrient for blood sugar balance is the mineral chromium; it is also found in such foods as meats, cheese, eggs, molasses, nuts and whole grains—many individuals find it helpful to take one capsule after lunch and one before bed to help maintain blood sugar during longer periods of no food. The chromium in **DynaLite** is an amino acid chelate rather than a picolinate. The picolinic acid breaks off and then attaches to other minerals in the body for excretion which actually removes necessary minerals from

the body. Additionally, it contains amino acid metabolic enhancers, thyroid and hypothalamus support, plus herbs.

PMS (Premium Magnesium Supplement)—right behind chromium in carbohydrate metabolism is magnesium which also helps with muscle relaxation, acid-alkaline balance maintenance, and serotonin production; also found in beans, broccoli, avocados and figs. Interestingly, chocolate cravings can indicate a magnesium deficiency which can be exacerbated by high *oxalic* intake (raw spinach and rhubarb) and the high *phytates* present in grains.

Additionally, **Herbal Green** acts as an alkalizer and seems to support the adrenals. Most prefer to take it in the afternoon along with **DynaLite** and a snack since it seems to help alleviate the typical mid-afternoon slump and subsequent food binge.

Also consider adding in **Hiscorbadyne** which supports all cellular structures.

Animals

Our pets also can suffer the results of excessive carbohydrates with the “easy keepers” being at most risk. They have similar symptoms as humans including lethargy, excessive weight gain (or loss if serious enough), infertility, depression/mood swings, digestive ailments, etc.

HORSES—all obese horses but especially the “cresty” ones prone to laminitis (ie: Equine Metabolic Syndrome formerly known as Peripheral Cushing’s) should have all grain removed from their diets (maybe a handful or so of **PGR** for some), have only free-choice grass hay (that intestine still requires matter flowing through it), have access to the four **DYNAMITE®** Free Choicers (**NTM Salt, 1:1, 2:1, IZmine**), **Dynamite Regular** and **HES**. Most also do better with added **Breeder Pac** to feed their hormone systems and **Easy Boy** for even more magnesium than the **IZmine** offers. Some owners of insulin-resistant horses find the **DYNAMITE® TNT** easier to feed requiring fewer additions since **TNT** pellets already contain **Regular, Easy Boy, Free & Easy, Excel, IZmine** and **HES**. Less active animals may not need the full serving of 1½ cup, but may do fine with only ¾ cup per day. Horses who have full Cushing’s disease also seem to do very well on this program. For those requiring extra chromium, **GTF** (Glucose Tolerance Factor) Chromium tablets (a high chromium yeast) from the health food store works very well; simply hand feed or smash into feed. Generally it is suggested to start with 200 mcg. or so building up to approximately 1000+ mcg. before heading back down again; amounts will depend on the individual horse/pony. Some will need it their entire lives and be able to eat free choice grass hay as they should; if the chromium levels fall below their particular needs, they will immediately gain weight just “looking” at the hay! Every horse is an individual so it may take a bit of adjusting to find the exact program for each one.

DOGS/CATS—feed chemical-free kibble such as the **DYNAMITE® Dog Food**, supplement with **Showdown for Dogs** (⅓-½ rate if on the dog food) or **Purrrformance for Cats**. Add human **PMS** and **DynaLite**; in fact, essentially follow the human program using the **DYNAMITE®** human capsules at about half dose for dogs and pinches for cats. Adding steamed green beans and other good veggies to their diets seems to help quite a bit in weight control for obese pets. ■