

LOW BLOOD SUGAR AND HYPERINSULINISM

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Many individuals have symptoms of low blood sugar. Many times both the patient and his doctor do not realize that sometimes these symptoms of low blood sugar are caused by a condition of hyperinsulinism which literally is an overactivity of the islands of Langerhans. The patient who complains of fatigue and who has a normal blood count and otherwise normal findings frequently will show a low blood sugar. The patient who has chronic allergy as manifested by sinusitis, eczema, asthma, is almost invariably found to have a low blood sugar as part and parcel of the problem. The patient who arises with a backache or who feels light-headed in mid-afternoon or who suffers an overwhelming sense of fatigue about three o'clock in the afternoon or who has lapses of mental acuity at definite intervals during the day, often is running a low blood sugar. Insomnia unrelated to emotional tensions and disturbances in the calcium and Vitamin B levels is often caused by a low blood sugar secondary to a hyperinsulinism. These patients who get tired and have slight headaches or sensations of light-headedness and who become moody, stubborn or irritable quite often comment that their stomach or intestines becomes unusually noisy at this particular time, they are hungry and want something sweet to serve as a pick-up. And so they will usually partake of the following: a cup of coffee, tea, chocolate, pie or pastry, cookies, candy bar, ice cream, soft drinks or the like. These sweet foods and beverages cause a rapid rise in the blood sugar level and temporarily relieve their symptoms to be followed by a repetition the next day. The low blood sugar is abnormal and should be prevented. However slight it is abnormal and is caused by eating sugar and starch at meals. Cigarette smoking can also serve as a temporary lifter of the level of the blood sugar by stimulating the adrenal-sympathetic system the rise occurring at the expense of liver glycogen. The pick-up which follows eating something sweet is accompanied by an elevation in the blood sugar level for about 30 or 60 minutes and

is soon followed by another fall in the blood sugar in a perpetual vicious cycle. People who smoke a great deal, drink much coffee and who have poor appetites have chronic malnutrition because they deplete the liver glycogen stores and fail to replenish the stores with proper food. Many people are irritable in the morning before breakfast because of low blood sugar. Many people are so irritable or depressed that they or anyone else need not attempt to say anything until they



Dr. Goodheart

have had a cup of coffee, then they become more agreeable. The blood sugar reaches its lower level in the morning before breakfast. Less sugar and starch at dinner the night before prevents low blood sugar in the morning. Mothers know that an irritable, cranky and crying infant is usually a hungry infant. The same is true of adults to a less degree and it is of great advantage for the doctor to know that the blood sugar level is fundamentally related to the behavior of all members of the human race. Errors in judgement are often due to making a decision when the blood sugar level is down. Brain function improves by improving the glucose-oxygen consumption, Dr. S. B. Wortis found that weight for weight the nervous tissue of the young in any species consumes and needs more oxygen than that of the adult. Generally speaking, nervous tissues consume oxygen in proportion as they utilize

glucose, therefore in the presence of a low blood sugar, tissues consume less oxygen and suffer an oxygen lack and during periods of reduced oxygen consumption there is increased susceptibility to infection. The rate and range of fluctuation of a blood sugar is controlled by several factors, especially diet and physical activity.

Levels of blood sugar are important in the detection of physical abnormality. Previously, calculation of the blood sugar level by the Folin-Wu method or other standards was time consuming and required the patient to have a painful venipunctures. Measurement of the blood sugar level especially measurements of the low sugar levels previously talked about has now become very simple and requires simply finger blood, the use of dextrostix produced by the Ames Company. This is a simple but standardized and now well recognized method of evaluating the level of the blood sugar and requires only one minute's time to read and can be readily performed in the office when the patient is examined and specimens taken for a general diagnostic work-up. In my opinion, any level below 80 mg. is a low blood sugar level and requires remedial treatment.

The dextrostix reagent strips are made by the Ames Company, their catalog No. 2888 and come packaged in units of 25 and generally sell at a very reasonable price. They can be obtained from your local source or thru the college of your choice. They give blood glucose concentration starting at 40 mg., 65 mg., 90 mg., 130 mg., 150 mg., 200 mg. and 250 mg, thus allowing a judgment to be made in only a minute's time without any additional equipment as to the level of the blood sugar. This is a color comparison test and has been well standardized and well accepted.

Not one symptom or symptom complex is indicative of hypoglycemia but it is best to be alert when there are negative signs yet the patient complains of utter exhaustion and nervousness. They frequently come in with a diagnosis of an anxiety neurosis or chronic nervous exhaustion. They are frequently so hungry all the time that they may be obese and this combination of obesity and the weakness caused by an overgenerous production of insulin which in turn causes hypoglycemia, produces in this obese patient a pattern sometimes called by the patient "rubber legs." Many patients find that candy or any form of sugar

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offer temporary relief but what does not seem to be understood or practiced is that sugar and all carbohydrates CAUSE this disfunction and that sugar and high carbohydrates MUST BE RESTRICTED. The hypothalamus center for carbohydrate metabolism is the control center for many important body functions. It directs thru the autonomic nervous system all cardiovascular rhythms. It also regulates osmotic pressures and many other functions. Any insulin sugar imbalance can so affect the physiology of the hypothalamus that controls various body functions that it may in turn trigger a vascular headache, an asthma or any number of conditions. There is a particular kind of headache known as a histamine cephalalgia that comes with excruciating pain when the blood sugar drops to a low level at night and the patient is generally awakened by this pain. With the new method of diagnosing blood sugar levels, it is now possible to pinpoint the diagnosis of many unusual conditions that have failed to respond in the past and it

TO HEAR DR. GOODHEART

Readers of this series of articles by Dr. George J. Goodheart will be pleased to know that arrangements have already been made for his appearance as a featured speaker on the official convention programs being held in Michigan, Iowa, North Dakota, Indiana and Arkansas. (Convention dates are shown in the Coming Events column, page 48 of this magazine).

Each convention program consists of a minimum of four hours of lecture and personal demonstrations by Dr. Goodheart.

Doctors attending convention lectures who have already purchased a copy of his book, "Muscle Balancing Technic" or who purchase a copy prior to the scheduled convention appearance will be entitled to a private consultation and personal demonstration without charge, Dr. Goodheart said.

can be done simply and quickly without extensive laboratory equipment. Many cases of low blood sugar are produced by smoking. Many cases of optic nerve disfunction associated with a blood sugar level that is low respond to a hyperinsulinism diet and cessation of smoking. The exhaustion syndrome is quickly improved when a hyperinsulinism diet is followed, so also are

the other symptom complexes improved when a hyperinsulinism diet along with careful structural adjusting is followed. Since generally speaking hypocalcemia coexists with hypoglycemia, the therapeutic use of calcium is of prime importance and in many patients attention to the hydrochloric acid level of the stomach is quite important. The object of the nutritional regime is to keep a trickle of usable sugars constantly going into the blood stream. Since the diet requires the patient eat more frequently the juice feeding is important to temper the appetite. Abrahamson, who with Pezet wrote "Body, Mind and Sugar" says, "The weakest most vulnerable cells suffer first. These will differ from person to person and from time to time in the same individual thus producing the almost infinite variety of hyperinsulinism manifestations in different persons at different times of his life. It is often these widely dissimilar manifestations of sugar starvation which explain why hyperinsulinism has remained unknown so long and why now that we know it, it is so often unrecognized. For it is like that fictional detective so adept at disguises that no one knew what the real man looked like."

Stimulation of the adrenal sympathetic response by vigorous lower dorsal adjusting along with selected adrenal, liver and occasionally pancreatic substance and the addition of Vitamin A, unsaturated fatty acids, and Betaine products measurably aid in the recovery of these blood sugar problems. Normally, spontaneous recovery from low blood sugar occurs in the healthy adult from the release of glycogen from the liver by adrenal response but when the liver or the adrenal function is poor a chronic state of hyperinsulinism exists, since poor nutrition quickly lowers liver glycogen stores, the importance of good nutrition is obvious. On experiments in rats it was found that only 3% of dietary glucose was converted to glycogen and since the average American who latest statistics show eats about 16.5 lbs. of candy annually in the belief that he is deriving an energy source or reserve, it is obvious that he is depleting and not adding to his energy reserve and disturbing his metabolic mechanism.

The weight loss that occurs in worry and anxiety states comes from the exhaustion of liver glycogen and the turning to muscle and fat for split products to be synthesized to glycogen by the liver and then used to bolster the falling glucose level. The

nervous system which we as DC's use must depend, regardless of school philosophy, upon an adequate supply of oxygen and this is inexorably tied to the level of sugar in the blood and this sugar level is adversely and paradoxically affected by sugar in the diet. Herein lies the cause and the treatment of hyperinsulinism.

Treatment consists of strict compliance with the hyperinsulinism diet and regular adjusting, using Gonstead analysis. It has been my experience that many times there is an anterior dorsal subluxation at the level of the 6th or 8th dorsal which should be adjusted. I am indebted for this information to Dr. De Jarnette and his method of adjustment is highly recommended here. Attention to the occipital and spinal nerve fibers following same De Jarnette approach is very valuable. Careful attention to details in treatment of the hyperinsulinism pattern produces a steady and gratifying response in this the most common cause of the two most common symptoms that cause patients to consult their doctor, namely exhaustion and anxiety. A single fasting blood sugar is of little value since it is always deceptive. Challenging the patient's insulin response by a high carbohydrate high sugar meal and checking the blood sugar level 4 hours afterwards invariably will show the low blood sugar so characteristic of hyperinsulinism. Correction of this condition by first detection, second treatment, is just another way that the chiropractic physician can be of service to his patient and to chiropractic.

Copies of Hyperinsulinism diet are available from the Author without charge. Please enclose a stamped, self-addressed envelope.

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