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Iridology Level II, Summer 2000 - THESIS

Subject: **HYPOGLYCEMIA**

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**INTRODUCTION:**

This thesis will provide a profile of the condition known as *Hypoglycemia*, describing the pathology, chemistry, the causes, and the symptoms. It will also describe how the science of *Iridology* is applied to gain information about the state, the functioning and the capacity levels of the organs and tissues of the body relative to Hypoglycemia. Recommendations for preventative action will also be made, as well as recommendations to alleviate existing causes of symptoms.

**WHAT IS HYPOGLYCEMIA:**

Dr. Seale Harris officially "discovered" hypoglycemia in 1924. The condition was first called *Hyperinsulinism* but later changed. Hypoglycemia is the name for low blood sugar. *Hypo* is the Greek word for low and *glycemia* means sugar or glucose. Hypoglycemia in and of itself is not a disease. It is a biochemical condition caused by an underlying problem or disease that prevents the body from maintaining normal levels of glucose in the bloodstream. In other words, it is a symptom of abnormal blood sugar regulation occurring when the body is unable to adequately regulate the amount of sugar in the blood, resulting in unpleasant symptoms.

**Mechanics of Blood Sugar and Hypoglycemia:**

Ingested complex carbohydrates are slowly broken down into *glucose* (sugar) and ultimately absorbed through the wall of the small intestine. This sugar is transported to the liver where it is

converted to *glycogen* and stored. As sugar is needed (for all muscle actions, brain and nerve functions) the stored glycogen is reconverted to glucose and carried by the blood to the areas needed. It is constantly released by the liver, in proper amounts, to ensure healthy functioning.

The mechanism to control the level of blood sugar is *insulin.* The pancreas secretes insulin into the bloodstream. The insulin travels to the liver and the muscle cells, telling them to take glucose from the bloodstream and store it, which they do. As insulin levels rise, blood-glucose levels begin to fall. When the blood-glucose falls below a critical level, the brain calls for more glucose. This glucose shortage is what is known as *Hypoglycemia.*

Why can't the liver just simply replenish the glucose from its stores before there is a critical shortage? The answer is high levels of insulin, which acts to decrease blood-glucose levels.

**Pathology:**

I will start with the energy source, *Glucose*, a very important carbohydrate -~~. It is~~ the most important one~~carbohydrate~~ for body metabolism. Glucose is the fuel the cells of our bodies use for energy/heat and is essential to normal bodily function. Glucose is used by every cell of our bodies. Nerve tissues are especially dependent on glucose as their source of energy. And, it is the principal fuel for the retina of the eyes and the brain, which run almost entirely on glucose. In fact, the brain cannot use protein or fat directly for its energy. Other cells are able to use fats or amino acids (proteins) if necessary. The brain responds to low blood sugar levels by calling for more glucose and, via the nervous system and pituitary gland, stimulates the adrenal glands to release *adrenaline (epinephrine*). This, in turn, stimulates the liver to release sugar (glucose) to

adjust the level in the blood. If the brain doesn't get the glucose it wants and needs, it starts tuning out.

The glucose level is determined by how fast glucose enters and leaves the bloodstream. Glucose is formed during digestion and absorbed from the intestines into the blood of the portal vein. As is passes through the liver, excess glucose is converted into glycogen. Carbohydrate is stored in the body in the form of glycogen for future conversion into sugar and for subsequent use in muscular work or for liberating heat. Glycogen can be easily mobilized for metabolic processes. and It is converted into glucose when needed by the tissues. Glucose can provide energy very quickly. The body releases a flood of glucose for immediate use in "fight or flight" emergencies.

The endocrine function of the P*ancreas* is to control the amount of sugar in the blood by producing insulin (pancreas also produces another hormone) and secreting it into the blood stream. The concentration of glucose in the blood is maintained through the action of *Insulin* produced by specific cells in the pancreas, called the Islets of Langerhans. Without insulin, the glucose level rises in the bloodstream, but the body is unable to effectively use it for energy production. Insulin enables the body to transport glucose inside cells where it can be used for energy metabolism. Insulin, therefore, is a hormone essential for the proper metabolism of blood sugar and for maintenance of the proper blood sugar level. If the sugar level is too high or rises too fast, insulin is produced into the bloodstream. Insulin promotes glucose utilization and protein synthesis, among other things. Insulin actually decreases the blood glucose levels (in contrast to adrenaline). As the blood glucose level rises after a meal, insulin is released by the pancreas to lower the glucose level. As the blood glucose falls, the insulin released from the

pancreas decreases. Overproduction of insulin by the pancreas burns up too much sugar (reduces the blood sugar below normal) in the blood and leaves the individual with a malfunction of sugar metabolism and an array of unpleasant symptoms.

If the pancreas is not functioning properly (inadequate secretion of insulin) the result is improper metabolism of carbohydrates and fats, which can eventually lead to diabetes. As such, abnormal protein and carbohydrate *metabolism* and poor *adrenal* function are also a part of hypoglycemia.

The *liver* plays a role in that when the blood sugar level is low, the liver is signaled to release sugar to adjust the level in the blood. The liver also stores energy in the form of glycogen. During fasting, glycogen is broken down and converted into glucose, important in maintaining the blood glucose level. In severe liver disease, such as cirrhosis, viral hepatitis, or cancer, this mechanism can be disrupted leading to hypoglycemia.

The *Central Nervous System* is usually one of the first areas to be affected by low blood sugar because it uses glucose for energy. That is why it is common for hypoglycemics to experience symptoms related to the nervous system such as irritability, anxiety, etc. (see symptoms).

**Types of Hypoglycemia:**

*Reactive Hypoglycemia* results from food intake, especially carbohydrates and/or sugary foods in sensitive people. This type usually develops within two to four hours after a meal.

*Fasting Hypoglycemia* occurs after fasting. *Fasting hypoglycemia* is rare and usually results from other serious conditions such as diabetes, a tumor on the pancreas, liver damage, starvation or cancer.

*Organic Hypoglycemia* with symptoms developing eight hours or more after a meal.

> ***Note:*** While there are different types of hypoglycemia, few people diagnosed are actually told what type they have. They are simply told they have hypoglycemia.

**Causes:**

The causes of hypoglycemia (over-secretion of insulin) can be organic such as liver disease, surgical absence of the stomach, tumors on the pancreas, thyroid or pituitary gland abnormalities, under or overactive adrenal glands, kidney disease, and other endocrine diseases, or an insulin overdose.

Causes of *Reactive Hypoglycemia*, can include drugs, smoking, pre-diabetes, consumption of large amounts of caffeine found in colas, chocolate, coffee and tea, and consumption of refined simple carbohydrates. High stress levels are also a contributing factor to hypoglycemia. The reactive form of hypoglycemia is the result of general nutritional and life-style imbalances, which when coupled with genetics, can lead to towards the onset of diabetes. Hypoglycemia can also be inherited (*Functional Hypoglycemia)* but that inherent condition is hastened by a poor diet.

With reactive hypoglycemia, the symptoms would occur anywhere from 2 – 5 hours after meals.

Disorders of the pituitary, thyroid, kidneys and adrenals can also cause hypoglycemia. If the adrenals are overstressed and exhausted they cannot function properly and an overabundance of insulin may result, causing the blood sugar to sink.

> ***Note:*** When we eat food with refined sugar it can be almost instantly absorbed through the membranes of the mouth and stomach, causing a flood of glucose into the bloodstream. This causes tremendous strain on the pancreas, the liver, adrenals and other endocrine glands involved in regulating blood sugar. Continual huge amounts of sugar abuses the metabolism and puts too much strain on the sugar-regulating organs.

**Symptoms:**

Low blood sugar causes the body to first respond by releasing adrenaline from the adrenals and certain nerve endings. This restores and maintains blood glucose levels by mobilizing stored glycogen and fat and converting them into glucose (energy). The released adrenaline causes symptoms of nervous system stimulation (similar to an anxiety attack) such as anxiety, sweating, tremors, palpitations, nausea, faintness, pallor and sometimes hunger. Lack of glucose to the brain, in more severe cases, can cause symptoms such as dizziness, headache, mild confusion, inability to concentrate, temporary incoordination, general shakiness, vision abnormalities, inappropriate behaviour that can be mistaken for drunkenness, abnormal behaviour, mental disturbances, delirium, weakness, loss of consciousness, seizure and coma.

Other symptoms may include some or all of the following: acute fatigue, depression, marked irritability, cravings for sweets, night sweats, weakness in the legs, swollen feet, tightness in the

chest, constant hunger, pain in various parts of the body (especially the eyes), nervous habits, insomnia, restlessness, malaise, marked irritability and weakness. As mentioned earlier, with reactive hypoglycemia, the symptoms would occur anywhere from two - four hours after meals. Ultimately ~~it~~low blood sugar can lead to other diseases such as collapse of the adrenal glands.

**Diagnosis:**

If you suspect you have hypoglycemia, see your doctor for a diagnosis. Many other conditions can mimic hypoglycemia, therefore, a medical diagnosis is recommended.

**Proactive Support:**

Those wishing to take a proactive approach to their health may want to consider an *Iris Analysis* by a trained professional. From the valuable health information gained from the iris analysis, one can support and strengthen their system and organs to deal with the causes of the symptoms of hypoglycemia, or to avoid onset.

**Iris Analysis:**

Iris Analysis does not reveal specific medical diseases but reflects the conditions of the tissues and the functioning and capacity levels of every organ in the body. Careful and thorough analysis of the iris can identify the underlying causes of medical conditions, thereby revealing the beginning of health problems. So it can be used for prevention through early detection. While early detection is

important for all health problems, it is particularly important with hypoglycemia as it has been proven to be a factor in the onset of diabetes. In addition, elevated insulin levels are a very powerful risk factor for cardiovascular disease.

Hypoglycemia is not a disease but a symptom of metabolic effect. Through Iris Analysis we *cannot* determine a person's blood sugar levels, but the analysis *can* reveal the condition of the organs and tissues that may be affected. By knowing about the condition of the organs and tissues, and the presence of inherent weaknesses, preventative measures can be taken.
After the iris analysis has been completed, the practitioner will then make specific recommendations, within the scope of the practitioner's qualifications, using nutrition, herbal and homeopathic remedies.

**CASE STUDIES:**

***Client A*** was diagnosed with hypoglycemia 20 years ago by her physician using a GTT. Client A says she has low stress in her life and, to her knowledge, is healthy with no other health conditions. Client A 's symptoms exist relative to lack of food and not eating within specific time periods as opposed to after eating. Her symptoms from not eating are "shaking violently" leading to dry heaves if she doesn't get food in time. If she eats too much sugar, she gets a headache so bad that nothing takes it away. Other symptoms are inability to concentrate, poor memory, fatigue, and restlessness.
In the pancreas area of the irises, the iris analysis reveals an inherited weakness coupled with a poor nerve supply from the nervous system. This means that a weakened organ is made weaker by

lack of nerve supply. Next link in the chain is the liver. The liver area reveals some under-functioning and the nervous system shows some irritation in this area. Now in addition to a weakened pancreas, there is under-functioning of the liver. The pituitary gland influences a number of metabolic processes, one of which is glucose homeostasis. The pituitary gland area is affected by lack of nerve supply and congestion in the nervous system. Next I looked at the area in the iris for the adrenals and found irritation was indicated as well as poor nerve supply.
Client A controls the symptoms of hypoglycemia by eating every couple of hours and by ensuring she has sufficient protein with each meal. While she has awareness of a proper diet, she is somewhat lax in following it and would likely benefit from the dietary suggestions at the end of this paper. By following a good diet, the whole system, as well as the organs mentioned above, is supported and strengthened. The liver also needs to be cleansed and supported using herbal preparations. Attention should also be given to cleansing the adrenal glands and to the poor nerve supply to the adrenals (and other organs) by nourishing and strengthening the autonomic nervous system.

***Client B***, reports symptoms of headaches when she has not eaten for hours, sleepiness & wooziness after eating heavy sweets, palpitations, nausea, mild confusion, strong "fight or flight" adrenal rushes, and a ghostly greenish/gray pallor at times. Client B has been diagnosed as Hypoglycemic using a GTT (Glucose Tolerance Test).
The iris analysis indicates an inherited weakness in the pancreas, a weak organ overstressed to the point of under-functioning. The liver area of the iris is affected by accumulated stress and congestion from the nerve supply feeding this organ. Overall, the irises show significant presence

of congestion of a specific colour indicative of ~~revealingthe sub-acute stage of tissue congestion, the origin of which is~~ pancreatic insufficiency. A look at the adrenal gland area of irises reveals under-functioning and congestion. Exhausted adrenals cannot function properly and an overabundance of insulin may result, causing the blood sugar to sink. Stress can be a significant factor in hypoglycemia. It causes many physical and psychological responses. One of those physical responses is the release of sugar into the blood, along with an increase in insulin levels to metabolize it. Glycogen is released from the muscles and from the liver and converted into glucose (energy) for immediate use ("fight or flight"). The iris analysis ~~also~~ reveals a significant accumulation of stress in the body as evidenced by several "tension rings", an indicator of stress. ~~Stress can be a factor in hypoglycemia~~ In addition, the autonomic nervous system (responsible for controlling all bodily functions which can be carried out without conscious control such as digestion, breathing, etc.) indicates a lack of nerve supply to the pancreas, adrenals and pituitary gland.

All this information from the iris provides the profile of the causes as well as the map to wellness. In addition to the dietary suggestions given at the end of the case studies, this client would also benefit from recommendations on how to support the autonomic nervous system by nourishing and strengthening it, as well as cleansing the lymphatic system. The adrenal glands would also require cleansing and strengthening.

***Client C*** has complained of symptoms associated with hypoglycemia for years but didn't go to the doctor until about 8 years ago. The symptoms are either experienced shortly after eating or

sometimes not until the next day. Those symptoms reported include debilitating headaches, voracious cravings for baked goods and sweets, fatigue, depression, confusion and others.

Client C's Iris Analysis reveals an inherited weakness in the pancreas. Her father had diabetes, her brother has diabetes and her sister has hypoglycemia. The liver area of the iris is affected by the presence of tension in the body (see more detailed comments on stress described for Client B). The pituitary gland area of this iris is affected by lack of nerve supply. Under-functioning of the adrenals is also indicated. Accumulation of stress in the body is also indicated by "tension rings". The Medulla area of the brain, where many of our automatic activities originate including those of the pancreas, shows some under-functioning.

Client C reports a significant improvement in hypoglycemic symptoms after leaving a high stress job. Client C controls the hypoglycemic symptoms with a diet containing protein and high fibre, and by avoidance of high-sugar, refined carbohydrate foods. This client would also benefit from supporting the autonomic nervous system (see comments made for Client A), and the dietary recommendations at the end of the case studies, as well as cleansing/strengthening the other affected organs.

***Client D*** was diagnosed by her doctor, following the results of a GTT, 35 years ago at age 33, as suffering from hypoglycemia. Client D clearly remembers the debilitating dizziness she suffered prior to diagnosis as well as the symptoms of anxiety, faintness, fatigue, tightness in the chest, insomnia and restlessness. Client D has few symptoms now, managing them with a diet sponsored by the Canadian Diabetes Association that involves avoiding refined sugars and starches and counting carbohydrates. In addition, it was recommended that she eat six small

meals a day rather than the standard three. The stress level in Client D's life is low now and overall her health is good.

Client D's iris analysis revealed a small inherited weakness in the pancreas area as well as some congestion and lack of nerve supply to the pancreas. Client D's Mother developed diabetes at the age of 80. Client D's twin brother was diagnosed 5 years ago with full blown diabetes and her sister, age 65, was diagnosed 5 years ago with hypoglycemia. The liver area in the iris indicated some slight under-functioning. The area for the adrenal glands revealed some weakness from under-functioning of the glands. The adrenals are also weakened by poor nerve supply from the nervous system and are affected by the reflex action of a bowel pocket, known as a *diverticula*. *Diverticulae* are pockets that have formed in the bowel wall containing old fecal matter. When there are persistent sluggish bowel movements, the toxic waste, fermentation and gas will push out the weak area of the colon wall creating pockets. These pockets retain toxicity, creating a favourable environment, a breeding ground, for unwanted microorganisms. Their presence and waste will react on the wall of the pocket (diverticula) and produce a characteristic reflex action in the organ situated next to the diverticulae in the colon, in this case the adrenals. The recommendation for this condition would be to eliminate any virus or bacteria that may exist (done by the client's physician), cleanse the bowel, strengthen the tissues of the colon wall, the latter two being done with homeopathic and herbal preparations. The area of the irises for the pituitary gland is affected by the reflex action of diverticulae and by small inherited weaknesses that break the nerve supply to this area. Client D's iris also showed a hypo-acidic stomach. While this does not directly relate to hypoglycemia, the lack of stomach acid affects digestion and, therefore, peristalsis. By enhancing digestion, in this case with a digestive enzyme containing

hydrochloric acid, together with the above-mentioned recommendations for the bowel, weaknesses in the bowel are further supported, relieving the reflex action on the adrenals and the pituitary. In addition to the recommendations for the bowel and the dietary recommendations at the end of these case studies, another recommendation Client D may wish to consider is to nourish and strengthen the Autonomic Nervous System. The under-functioning liver and adrenals would need to be strengthened, again with herbal &/or homeopathic preparations.

**Recommendations:**

Proper diet is a key factor for the hypoglycemic to maintain proper blood sugar levels. By making some diet changes, taking some herbs and homeopathic preparations (specific to each individual), exercising and reducing stress, the organs and tissues will be supported and strengthened and the symptoms can~~may~~ be~~-~~ alleviated. Hypoglycemic people report feeling fewer symptoms when they avoid high-sugar foods, which strain the pancreas. T~~hat t~~hey should consider avoiding these foods, especially those containing refined sugar and refined starches.~~ and that~~ An under-functioning and/or congested pancreas is strained by high protein foods, therefore, consideration should be given to avoiding them (all meats and hard cheeses) at least until the pancreas is clear and functioning well. Plenty of fresh vegetables and fruits including Jerusalem artichokes, adzuki beans, garlic and onions have been shown to have a beneficial effect on the pancreas and blood sugar levels.

Non-diabetic hypoglycemics often can avoid episodes by eating frequent small meals rather than the usual three meals a day.

A diet high in whole grains and complex carbs has been widely promoted in the past to balance the blood sugar. More recent research, however, starting in 1981 by scientists Thomas Wolever of the University of Toronto and Dr. Jennie Brand-Miller at the University of Sydney, now suggests that the complex carb theory is a myth. Volunteers were given foods with equal amounts of carbohydrate in them and the amount of glucose released into the bloodstream was measured. Whether the subjects were healthy, diabetic, athletes or heart disease patients, all had essentially the same results: **the simplicity or complexity of the carbohydrate bore almost no relationship to the glycemic response.** There are *real* differences between the rates at which different foods release their sugars into the blood - that is, the **GI (glycemic index).** Dr. Barry Sears brought the *glycemic index* into public attention in 1995 with his "The Zone" nutrition program. To look at the differences between foods take, for example, wheat, rice, rice cakes and potatoes which are about the *fastest* sugar-releasers yet tested; by contrast, many foods we think of as "sugary" because of their sugar content such as black cherries and grapefruits are extremely low-GI foods. The GI of a meal plays a major role in controlling our blood sugar which, in turn, affects many parameters from insulin sensitivity and glucose tolerance to how much food we'll eat at our next meal to our capacity for sports endurance. With this in mind, complete and accurate GI lists are available such as this one: http://www. mendosa.com/gilists.htm

**Summary of Case Studies:**

While all of the subjects had the same diagnosis, not all of the subjects had exactly the same symptoms or the same findings from the iris analysis. The causes of the symptoms varied from

individual to individual depending on factors ranging from genetic weaknesses to diet, lifestyle and acquired imbalances. Each of us is unique and, as such, there cannot be a "blanket" approach to the iris analysis for any symptoms, conditions, or diagnoses. Each case has to be considered individually with careful attention paid to relationships existing in the body between the organs and the systems.

**Conclusion:**

Iridology is one of the best health screening tools available that can be used to identify the underlying causes of the symptoms at the organ and tissue level. It is, therefore, a very useful tool for early detection and prevention. The people in the Case Studies have for some years now, been managing the symptoms through diet. When they do not adhere to the diet, the symptoms reappear to a lesser or greater extent. Instead of continuing this seemingly vicious circle, by using Iridology, restoration and maintenance of health can be atttainable by building up the body's immunity and life force through non-invasive, natural means.

BIBLIOGRAPHY:

Taber's Cyclopedic Medical Dictionary, *edited by Clayton L. Thomas, M.D., M.P.H., F.A. Davis Company, 1974*

Prescription for Nutritional Healing, Second Edition *by James F. Balch, M.D. & Phyllis a. Balch, C.N.C., Avery Publishing Group, 1997*

The Merck Manual, Twelfth Edition *by David N. Holvey, M.D., Editor & John H. Talbott, M.D., Consulting Editor, Merck Sharp & Dohme Research Laboratories, 1972*

Your Health Under Siege: Using Nutrition to Fight Back *by Jeffrey Bland, PH.D., The Stephen Greene Press, 1981*

The Joy of Stress, Revised Second Edition *by Peter G. Hanson, M.D., Hanson Stress Management Organization, 1985*

The Holistic Lifestyle Newsletter Volume 1 Issue 1 June 2000 *published by Holistic International, Calgary, Alta.*

Enter The Zone, A Dietary Road Map *by Barry Sears, PH.D., Regan Books an Imprint of Harper Collins Publishers, 1995*

www.medicinenet.com - Medical References – *hypoglycemia*

The Science and Practice of Iridology Volume 1, 25th Printing *by Bernard Jensen, D.C., Ph.D., Bernard Jensen International, 1998*