



IMAGE AWARENESS WELLNESS INSTITUTE

Adrenal Health (Part 1)

1271 HIGH STREET, AUBURN, CA 95603 • PHONE (530) 823-7092 • ORDER LINE (800) 359-6091
HOURS: TUES. – FRI. 10 A.M. – 4 P.M. • E-MAIL: MAIL@IMAGEAWARENESS.COM WEB: WWW.IMAGEAWARENESS.COM

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ADRENAL GLANDS

The adrenal glands are the body's key responders to stress. These are quite small pancake-shaped or pyramid-shaped glands which sit on top of the kidneys. They weigh about 5 grams which is the same as a slightly rounded teaspoon of sugar. It would be difficult to live three days without these glands.

The adrenals have an inside and an outside. The inside is called the medulla. This is the source of what we commonly know as adrenaline. Scientifically the secretions are known as epinephrine (adrenaline) and norepinephrine. These hormones allow the body to cope with immediate stress.

The outer part of the adrenal gland is called the cortex. The cortex has three layers. The outermost layer produces mineralcorticoids which regulates mineral or electrolyte balance. The middle layer produces the glucocorticoids (cortisol and cortisone) which regulates glucose metabolism, and vascular tone (blood pressure). The innermost layer of the cortex produces sex hormones and anabolic steroids. The functioning of this last layer declines considerably with age resulting in decline of sex hormones and decline of tissues dependent upon the anabolic (building up) hormones.

Stress makes demands upon the entire adrenal, but particularly on the adrenal cortex. Cortisol is the primary stress hormone.

REFERENCE:

Durrant-Peatfield, Barry, *Your Thyroid and How to Keep it Going*, London, UK.: Hammersmith Press, Ltd., 2010, 106-110..

STRESS

The term "stress" was coined by Dr. Hans Selye. He observed that response to stress goes through three stages. The first response to a stress is alarm. The second is resistance. The third stage is exhaustion which is followed by deterioration and death if the stress is prolonged.

We tend to think of stress as emotional conflict. For this reason many people do not understand the broad range of factors which can contribute to adrenal exhaustion. Emotional conflict is indeed a powerful contributor to overworking the adrenal.

Physical factors can also function as a stressing agent. Changes

in temperature can be quite stressful for some people. Excessive exercise can be quite stressful.

Nutritional factors can also be powerful adrenal stressors. High sugar intake can increase adrenal secretions three or fourfold. Caffeine can also serve as a powerful adrenal stimulant.

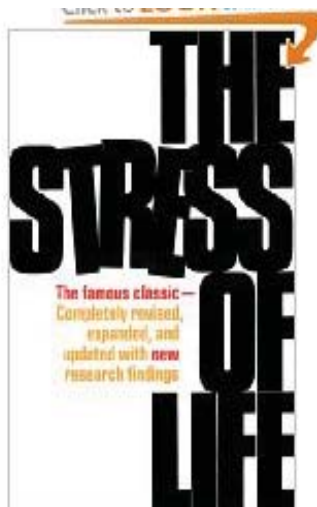
Malnutrition stresses the adrenal gland. Researchers have learned that deficiencies of vitamin C, B complex, trace minerals, or lipids can detrimentally affect the functioning of the adrenal decreasing its capacity to cope with stress.

The quality of the diet is also important. Dr. Francis Pottenger, Jr., learned long ago that supplementation with the adrenals of cattle fed fresh green grass was therapeutically valuable for his patients, while the adrenals of cattle fed highly processed foods was far less beneficial.

SIGNS OF ADRENAL WEAKNESS

A key sign of adrenal weakness is postural hypotension. Blood pressure falls rather than rises when a person with a weak adrenal rises from a sitting position. They may become dizzy or even faint if they rise suddenly. Those with weak adrenals are also prone to motion sickness.

Another key sign is an abnormal pupillary reflex when light enters their eyes. The pupil may dilate





rather than constrict or it may open and close as if unable to make up its mind. These individuals often feel more comfortable if they wear sunglasses when they go into bright light.

Those with a weak adrenals are often sensitive to both heat and cold temperatures. Their tolerance of cold is little better than an individual with low thyroid. In hot weather the skin may feel cool and clammy. Many of the symptoms of weak adrenal overlap those of low thyroid, which is not surprising as the two work together.

Those with a weak adrenal often suffer with deficiency of hydrochloric acid and pancreatic enzymes. This contributes to a tendency to develop a wide range of allergic problems which are often indicated by dark circles under the eyes called allergic shiners. These unfortunate individuals are prone to develop hay fever and arthritis. The deficiency of digestive substances makes them more prone to digestive disorders such as irritable bowel syndrome.

Weak adrenals can cause excessive pigmentation of the skin and mucous membranes. The skin pigmentation is sometimes evident in skin creases.

The adrenal regulates salt metabo-

lism. One of the signs of weak adrenal is a craving for salt. Salt tends to improve symptoms, while salt restriction or a low salt diet makes an individual with weak adrenals feel worse. The intake of salt is rarely a problem for someone with weak adrenal glands because the blood pressure tends to be low.

Those with weak adrenals will often have very sparse body hair. Men will often lose the hair on the lower legs. Even pubic and underarm hair can be lost.

Endocrinologist John Tintera wrote, "The chief complaints listed for patients with hypoadrenocorticism are often similar to those found in persons who are in the hypoglycemic state. Patients finally adjudged to be hypoadrenocortic invariably report feelings of weakness, fatigue, and faintness, all of which could result from periods of low blood sugar level..."

One very common manifestation of low adrenal reserve is allergies. John Tintera observed, "I'm an endocrinologist. In more than twenty years of a busy practice with thousands of patients, I've yet to work with an allergic person whose troubles weren't basically due to his poorly functioning adrenals, or who wasn't relieved of all his allergic woes when his adrenals were put into proper working order. Included among these patients were sufferers from asthma as well as from hay fever, people 'sensitive' to beef protein as well as those sensitive to house dusts or to tomatoes or parsnips, or to whatever the so-called 'sensitizing agent' happened to be."

REFERENCES:

Schwarz, Edward F., *Endocrines, Organs and Their Impact*, Third Edition, Maple Valley, WA: Edmar Printing, 1979, 2-6.

Durrant-Peatfield, Barry, *Your Thyroid and How to Keep it Going*, London, UK.: Hammersmith Press, Ltd., 2006, 110-115.

Tintera, John W., *Hypoadrenocorticism*, New York: Adrenal Metabolic Research Society of the Hypoglycemia Foundation, Inc., 1980, 2.

Tintera, John, What you should know about your glands and allergies, *Woman's Day*, February 1959.

HYPOGLYCEMIA

Remember that the adrenal regulates glucose metabolism. One of the signs of a weak adrenal is fluctuations in blood sugar characteristic of hypoglycemia. The pancreas works to decrease blood sugar. When blood sugar becomes too low, the brain and nervous system begin to suffer and malfunction. The adrenal raises blood sugar when it drops too low.

John Tintera provided physicians with a detailed description of patients whose hypoglycemia was associated with underfunctioning of the adrenal glands. In addition to the signs which have already been noted he observed that those with hypoglycemia caused by weak adrenals tend to be extremely sensitive to alcohol.

Mild hypoglycemics are prone to inward trembling, emotional disturbances, excessive perspiration and chilliness. There is a tendency toward pallor and even numbness around the mouth. Mental cloudiness and confusion are common. The pulse can race. The hypoglycemic can have cold, moist and clammy hands.

As the severity of hypoglycemia progresses the victim may develop headaches, disorientation, dizziness, faintness, double vision, and cold extremities. Muscle twitching and convulsions as well as amnesia can develop in severe hypoglycemia.

Tintera, John W., *Hypoadrenocorticism*, New York: Adrenal Metabolic Research Society of the Hypoglycemia Foundation, Inc., 1980, 119.





RECOVERY FROM HYPOGLYCEMIA

Jeraldine Saunders records the narrative of Gael, her daughter, who died of the consequences of hypoglycemia. Hypoglycemia is often a consequence of severe sugar addiction. After the funeral Jeraldine looked in the refrigerator and found that her hypoglycemic daughter had stocked it with colas, sweet rolls, and cakes. The medicine chest was filled with sleeping pills to help her sleep.

Jeraldine's subsequent experience taught her that the hypoglycemic becomes addicted to sugar even though it is one of the worst foods they can eat. She also records the difficulty of giving up the sweets for those who are addicted. She writes, "When I first started working with patients with hypoglycemia, some of them complained about feeling bad when they started the diet. I assumed the program was incorrect and stopped it. Since then, I have learned to expect an initial difficult period for the patients and warn them about it and encourage them throughout it."

The hypoglycemic goes through three stages of recovery. During the first stage the patient often feels worse experiencing fatigue and depression among other symptoms. It generally takes about three weeks for the craving for sugar to disappear.

During the second stage the patient may have a sudden sense of well-being, but this can be followed by a rapid swing to feeling poorly again with the return of old symptoms. Finally,

the patient stabilizes and feels better. The improvement is very gradual.

Hypoglycemia is very hard on the adrenal glands because they must go into overdrive to compensate for the hormonal alterations triggered by a high intake of sugary foods.

REFERENCE:

Saunders, Jeraldine and Ross, Harvey, *Hypoglycemia: The Disease Your Doctor Won't Treat*, New York: Pinnacle Books, 1980, 76-83.

ADRENAL EXHAUSTION

The adrenals have only a limited functioning capacity. Hans Selye once used the illustration of an oil well. Once the oil was tapped out, the life of the well came to an end. The adrenals are like that for an individual. They have a limited functioning capacity. Once that capacity is depleted we become ill and eventually die.

The functioning capacity of the adrenals varies from individual to individual. Some people are born with powerful adrenals with almost unlimited capacity to function throughout life. Other individuals draw a poorer hand from life's lottery and possess weak adrenals with little reserve to cope with some of the larger stresses which can come our way in life.

Regardless of the strength of the adrenals, a poor diet or excessive stress can overwhelm even the most efficient adrenal glands.

The adrenals are critically dependent upon quality lipids, B complex vitamins, trace minerals and vitamin C.

The adrenals can also be depleted by excessive intake of sugars and caffeine as discussed above. John Yudkin long ago observed that the single factor which most strongly indicated that there was a problem with high sugar intake was its negative impact on the functioning of the adrenal glands and the pancreas.

Yudkin writes, "sucrose...can cause a rise of 50% in the level of insulin in fasting blood, and a rise of

300% to 400% in the level of corticosteroids. Future work on the effects of dietary sugar may reveal more important metabolic effects, but the one property of sucrose that today most seriously calls into question the general assumption that it is a completely innocuous component of our diet, is its effects on hormone levels."

Exposure to toxic substances and strong allergens can also weaken the adrenals. When a food to which one is allergic is consumed it will often result in an increase in pulse rate. This change is often observable by taking the pulse before and after eating a food to which one is allergic. This increase in pulse rate is an activation of the adrenal.

Dr. Arthur Coca discovered that when an individual consumed a food to which he was allergic the pulse tended to increase, often dramatically, as a result of release of adrenaline and other adrenal hormones. He believed that any time the pulse jumped over 84 beats per minute an allergic response had been triggered.

Dr. Coca's wife suffered a wide variety of complaints including heart pain, migraine, colitis, attacks of dizziness and fainting, abnormal tiredness and indigestion. All of these mysteries were gone after she avoided foods which increased her pulse. The significance of Dr. Coca's work was that it demonstrated that allergy to a wide variety of foods could weaken the adrenal glands.

John Tintera writes, "Walking is stress because it burns more body fuel. Running is a greater stress and so are heated arguments, tearful and other powerful emotions and thousands of other things which require changes in blood flow rate, in the diameters of arteries and veins, in the tensions of muscles."

"All these stresses are perfectly normal, and it is no less normal for our bodies to be under constant attack by 'foreign' invaders since everything



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outside ourselves is foreign. But this constant attack is constant stress. Add everything together and you get the idea of how much work our adrenals are required to do. They're uncomplaining, strong organs when all is well with them. But some people are born with undersized or weak adrenals, due to the accidents of heredity. Under the stresses and strains of living, the question for any individual is how much his adrenals can take; how much reserve strength do they have?"

REFERENCE:

Yudkin, John, Sugar and Disease, Nature, Vol. 239, September 22, 1972.

Coca, Arthur F., *The Pulse Test*, New York: St. Martin's Press, 1994, 31.

Tintera, John, What you should know about your glands and allergies, *Woman's Day*, February 1959.

ADRENAL AND THYROID

There is an intimate connection between the adrenal and the thyroid glands. If the thyroid function is low the adrenals will compensate with increased cortisol production.

On the other hand, if the adrenal is weak thyroid hormone supplementation may provide little benefit. Thyroxine (T4) is not properly converted to tri-iodothyronine (T3),

the active form of the thyroid hormone. The body can actually become toxic with unused and unusable T4 hormone in adrenal deficiency.

Even worse, with adrenal insufficiency the receptors in the cell membrane for T3 operate less efficiently. Dr. Barry Durrant-Peatfield writes, "I must tell you now that the failure of thyroid supplementation to restore normal health may well be largely down to the adrenal problem. This is scarcely ever considered by physicians since they do not recognize low adrenal reserve, and may even miss the diagnosis of established Addison's disease.... Whatever you may be told, adrenal insufficiency in thyroid disorders is very common indeed and should always be considered at the onset of treatment. Failure to respond to thyroid supplementation, or actually feeling less well, is likely more often than not to involve the low adrenal reserve syndrome."

Low adrenal reserve is quite common in modern individuals who consume diets of highly processed foods and live stress-filled lives. This tends to not only create symptoms characteristic of low adrenal function, but also symptoms associated with low thyroid

function even though testing will show thyroid hormone production is normal.

REFERENCES:

Durrant-Peatfield, Barry, *Your thyroid and How to Keep It Healthy*, Second Edition, Hammersmith Press, Ltd.: London, UK, 2010, 114-115.

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