

## Freedom from Disease-Living in a Healthy Body

Basic information about the power of the endocrine system may help you understand how important it is to provide the nutrients needed for these important functions of the amazing human body. Nutrient dense whole foods supply the necessary raw materials to enable the functions listed below.

### Hypothalamus:

- Interpreter that activates messages sent to the endocrine system from the nervous system.
- The hypothalamus is part of the brain not protected by the blood brain barrier. This allows it to monitor what is going on in the blood. It sends messages to the endocrine glands to regulate the activities of the organs and control such levels as hormone production hunger, thirst and temperature. The hypothalamus is very effected by everything we consume both beneficial and toxic.
- The hypothalamus is also linked to emotions like anxiety and fear, and the effect of these emotions on blood pressure, heart rate and breathing. Continuous emotional stress may weaken the hypothalamus.
- The hypothalamus works very closely with the pituitary gland sending it messages that regulate hormone production, so when working with hormones, be sure to consider the stress issues and their effect on this interpreter.
- Supplements for the nervous system would be helpful if desired. Supplements like magnesium, B vitamins, and controlling stress helpful here.
- Deep in center at base of the brain stem.

### Thymus

- Located just behind the breast bone and above the heart. From birth grows until puberty and starts to degenerate and in adult hood is only about ½ ounce in size but is responsible for the manufacturing of lymphocytes in the immune system.
- The PMS week in a woman's menstrual cycle the immune system is weakened and the thymus is especially active to compensate.
- Thymus is responsible for distinguishing healthy normal cells from outside invaders.
- The child hood emotions of love, joy laughter and happiness keep the thymus healthy while sorrow, grief, hate and jealousy tend to weaken the thymus. Maybe the reason for shrinking as we age.
- Junk food and chemicals also are considered a reason for the thymus shrinking.
- Symptoms of a weak thymus, low self esteem, weak immune system, autoimmune disorders, craving for junk food, alcohol or drugs.
- Patting someone on the back literally or verbally is helpful to the thymus, the thymus thump just over the breast bone in the center of the chest; 1-2-3 stimulates the thymus.
- Emotions caused by the weekend thymus, unsafe, unprotected, others are out to get me.

### Pituitary gland

- Hypothalamus controls the pituitary function.
- Anterior pituitary supplies hormones for the menstrual cycle. It is the follicle stimulating hormone from the anterior pituitary gland that causes the immature ovarian follicles to start growing and secreting estrogens.
- As estrogen content in the blood increases, it stimulates the anterior pituitary to secrete the luteinizing hormone, which is responsible for maturing and releasing the ovum. (egg ready for fertilization)
- Anterior pituitary signals the thyroid to produce prolactin. Production occurs in the mammary glands, bone and muscle growth and the skin's melanin production.

- The posterior pituitary controls the hormone oxytocin which regulates muscle contractions during labor and well as mammary gland function. It also regulates fluid in the body at the kidney tubules.
- Pituitary gland regulates general hormone production for growth, tissue repair and reproductive cycle of the body by telling other members of the endocrine system to work harder or slow down. It produces and governs a variety of hormones.
- Proper blood flow to the brain is needed to carry nutrients to the pituitary so exercise plays an important role.
- Alfalfa, bee pollen or spirulina helpful with minerals needed.
- Emotions affecting the Pituitary gland, worry, fear.

#### Pineal Gland

- Regulate wake and sleep hormones
- Darkness equals melatonin production
- Daylight equals serotonin production
- Seasonal depression due to lack of daylight
- Night lights interfere with melatonin production
- Problems for shift workers
- Rest in a dark quiet place is necessary to support the pineal gland.

#### Pancreas

- Pancreas behind the stomach, pain is mistaken for a stomach ache.
- Produces digestive enzymes
- Part of endocrine gland, secretes glucagon and insulin hormones into the blood to keep blood sugars stable.
- Produces, amylase for digestion of starches, lipase for fats and protease for protein.
- Produces sodium bicarbonate that is needed to neutralize hydrochloric acid in the stomach juices as they enter the small intestine.
- Eat a balanced diet to strengthen the pancreas it is the basic control over digestion and assimilation of food.
- Emotion associated with pancreas is grief

#### Ovaries

- Anterior pituitary gland regulates the ovaries to produce estrogens and progesterone and estradiol that allow the menstrual cycle to happen.
- When a complete hysterectomy women have their uterus and the ovaries removed. They no longer produce the hormones.
- The adrenal glands are turned to produce enough reproductive hormones to keep symptoms of menopause at a minimum. Adrenal gland function is important in this case.

#### Testes

- Produce testosterone responsible for the masculinizing of the male body.
- Production of the testosterone is based on the circulating levels of pituitary hormone called interstitial cell stimulating hormone (ICSH). The more (ICSH) in the blood the more male hormone.
- Temperature and good quality fats effect sperm count.

#### Thyroid Gland

- Butterfly shaped gland that hugs the esophagus and produces thyroxin. This important hormone controls body temperature, and metabolism. The speed at which you burn fats, carbohydrates and proteins.
- Thyroid hormone regulates every cell in the body.
- Dietary oil negatively affects the thyroid. Vegetable oils, known as polyunsaturated oils mostly from soybean oils.

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- Makes protective hormone progesterone and pregnenolone these hormones are lowered when anything interferes with the function of the thyroid.
- Thyroid hormone required to regulate cholesterol
- Environmental chemicals interfere with thyroid function.
- Symptoms of low thyroid include, intolerance to cold, exercise does not help with weight loss, low energy mid afternoon, profuse perspiration on the head, constipation, elevated cholesterol, heavy menstrual cycle, lack of ability to speak out. Feeling humiliated overwhelmed and powerless, victimized.
- Support mineral iodine, is needed. Digestion of fats, and proteins usually a problem.
- Poor absorption of calcium hypothyroidism goes along with osteoporosis.
- Xenoestrogen drugs like prednisone, and HRT and birth control pills and thiocyanide in cigarettes, effect thyroid hormone production.

### Parathyroid

- Directs where calcium goes.
- Where the body can steal calcium when an acid condition occurs.
- Thyroid parathyroid balance is vital to the nervous and cardiac systems.
- Keeping thyroid healthy will insure parathyroid health.

### Adrenal glands

- The most common reason for adrenal fatigue is stress
- Most adults suffer from adrenal fatigue sometime.
- Adrenal gland Size of a walnut and located on the top of the kidneys
- Stimulants exhaust the adrenal gland, caffeine, sugar and refined foods
- Divided into two parts the Medulla governs the adrenalin which controls the sympathetic nervous system (fight or flight), the cortex is responsible for the balance of sodium, potassium and fluids in the body. It also produces an anti-inflammatory hormone, cortisol.
- Help with estrogen production after menopause.
- Male menopause is referred to as andropause and it is also reliant on the function of the adrenal glands to help regulate hormones as the body ages.
- Symptoms of Adrenal gland weakness include
- Dependence on caffeine or sugar for energy.
- Difficulty dealing with stressful situations
- Cannot tolerate warm environment
- Intolerant of exercise
- Feel tired all day even when you get up
- Need a fan or open window at night
- Stick your tongue out while looking in the mirror if your tongue quivers you need adrenal support
- Visible dark grey circles below the inner half of the eye are a sign of low adrenal function.
- Rise or lower in blood pressure reading from sitting to standing
- Increase weight gain around the middle
- Decreased sex drive
- Erratic low blood sugar levels
- Fall asleep easily and awaken wide awake in 2-3 hours.

### Liver

- Not part of the endocrine system but stores nutrients needed to feed the endocrine system, as well as helps detoxify extra or unhealthy hormones.

- Key filter to estrogen and progesterone. It converts strong hormones to less active hormones and either disposes of them through the urine and feces or recycles them for other uses.
- If the liver is overloaded with toxins it allows less harmful estrogens to overload the system hoping to get to them another day. This often causes estrogen dominance problems.
- High fiber low fat and sugar diet allows for easy bonding of toxins in the intestinal tract allowing more filtering of estrogen.
- Breast cancer 4 times higher in women who have less than 1 bowel movement a day.
- The liver produces bile, which is needed to break down fats in food as well as fat stored in cells. Keeping healthy sized fats is important to hormone regulation because fat cells are involved in making estrogen. Having enlarged fat cells may lead to estrogen dominance. Obesity will also extend the years you have a menstrual cycle. A thinner person will probably experience an earlier, easier menopause.
- B6 is necessary to eliminate estrogen from the blood stream, b vitamins and magnesium are critical to health of the liver.

This is a brief overview but you can see the hormones are related to every function in the body.

From here we can evaluate every disease and discomfort. You can also see the role stress and emotions play as well.