

Analysis of the Effects of Human Endocrine System on Maintaining Physical Health

Jianjun Meng

School of Life Sciences, East China Normal University, Shanghai, 200241, China

[Abstract] In the high school biology course, it is learned that the hormone regulation by the human body through the secretion of chemical substances by endocrine glands and endocrine cells is an important and important mode of regulation. Human body secretion and nerve and immune communication maintain the steady state of human life activities. This paper clarifies the function of the endocrine system. It describes the importance of endocrine normality in maintaining good health by introducing endocrine disorders, and analyzes some examples of important endocrine gland hormone secretion to maintain good health.

[Keywords] Endocrine system; Endocrine system function; Maintaining physical health

1. Introduction

The endocrine system of the human body consists of the endocrine glands and endocrine cells distributed in other organs. The main endocrine glands of the human body include the thyroid gland, adrenal gland, pituitary gland, islets, thymus and gonads. Any of these glands play an indispensable and irreplaceable role in the human body. They secrete different hormones, form a tight regulatory mechanism, properly control and regulate the organism, and maintain the homeostasis of the living environment together with the nervous system and immune system.

2. Endocrine System Function

The endocrine system of the human body can be said to be an important command system, which is in contact with the nervous system and assists each other to adjust the body together. The endocrine gland of the human body refers to a gland without an output catheter, which is distinguished from an exocrine gland such as a sleeping fluid gland. Endocrine glands or cells can secrete hormones.

Hormone is a small but powerful chemical, the commander of the entire command system, which can regulate the body's physical metabolism, water and salt balance, growth and development, body aging, development and maturity of reproductive organs, etc. Therefore, the secretion of hormones from endocrine glands or cells is an important guarantee for the health of the body.

3. Endocrine Disorder

When certain endocrine glands or cells of the human body cannot normally secrete hormones, that is, too much or too little or even secreted, it will cause imbalance of hormones, that is, endocrine disorders, also called endocrine disorders. There are more than 75 kinds of hormones secreted by the human body. Each hormone plays an important role in itself, and it also affects the secretion of other hormones. When endocrine glands or cells are affected by physiological factors, nutritional factors, emotional factors and environmental factors, the endocrine disorders of the human body will be caused, and the body will be out of balance, leading to some unhealthy manifestations or diseases that affect the health of the body.

4. Examples and Analysis of Endocrine System for Maintaining Physical Health

Through the above description, if the endocrine disorder occurs, it will cause some diseases. Then the normality of every gland or secretory cell in the human endocrine system is the key to the health of the body. The multiple glands of the human body play an irreplaceable role. Here are two glands that are important to the human body to analyze their important effects on human health.^[1]

4.1 The Pituitary

The pituitary gland of the human body secretes a variety of hormones, such as thyroid stimulating hormone, gonadotropin, etc., and the most important role is to secrete growth hormone to promote the growth of the human body. It mainly controls the synthesis of proteins in the body and affects the growth of bones. When the pituitary gland normally secretes auxin, it can promote the growth and development of children, such as increasing height. However, if too much secretion is not necessarily a good thing, it will suffer from “giant disease” and too little secretion, it is “dwarf disease”; if a person continues to secrete auxin after entering adulthood, the bone cannot be increased longitudinally and becomes acrom.

Therefore, the normal secretion of auxin from the pituitary gland is important for the growth and development of human body. For children and adolescents in the growth stage, if you want to grow taller, you should pay attention to the health of the pituitary and follow its rules of secretion. The pituitary secretion of auxin is secreted when the human body is asleep, and the secretion time is about 22:30~23:00. After this period of time, the pituitary gland no longer secretes growth hormone. Therefore, be sure to fall asleep early during this period to ensure sleep, to ensure the normal secretion of growth hormone.

4.2 The Thyroid

The thyroid gland is called the “engine of the human body” and plays an important role in maintaining normal metabolism and promoting growth and development. In particular, the thyroid gland affects the development and function of the central nervous system. At present, there is further research and discovery in medicine for the thyroid gland.

4.2.1 Thyroid and Depression

Depression is a state of chronic stress or psychopathology caused by dysfunction of certain organs of the body or long-term loss of mood. It not only has a high incidence rate, but also has people at different ages, affecting the physical and mental health of patients, and affecting family happiness and social stability. The incidence of depression in China has increased at a rate of 11.3% per year. Suicides in many celebrities and autistic events in depressed children have led the medical community to pay more and more attention to the causes of depression due to physiological changes.^[2]

Some medical scholars have analyzed that the disorder of the endocrine system causes disease, and the secretion of thyroid hormone is the most important. Because the study found that patients with depression have changes in the level of thyroid hormones in the body, and the thyroid hormone levels change after taking drugs for treating depression, However, the current mechanism of action is not yet detailed, and researchers need to further study the role of the hypothalamic-pituitary-thyroid axis for further analysis.

4.2.2 Thyroid and Offspring IQ

According to analysis by existing medical researchers, pregnant women with thyroid dysfunction will have an increased incidence of complications during pregnancy. Their offspring have autism spectrum disorders, attention deficit hyperactivity disorder, and the risk of disease increases. The most important of these is the damage to the fetal nervous system, affecting fetal development and mental development. Some people have done a controlled study and found that the IQ of a baby born to a pregnant woman with normal thyroid function is significantly higher than that of a baby born to a pregnant woman with hypothyroidism.

This is enough to show that thyroid hormones not only affect themselves, but also the next generation. Therefore, pregnant women should pay special attention to whether their thyroid function is normal, and go to the hospital to evaluate and measure thyroid hormone. In this way, the health of the pregnant woman and the growth and development of the body, mind and mind of the fetus are guaranteed.

5. Conclusion

The endocrine system is essential for maintaining good health. It has a deep understanding of its composition and function, and its own endocrine organs, so that people can fully consider whether it is endocrine problems when they are found to be unwell or sick. As a student, one should have a solid grasp of the knowledge of the endocrine system. In the future, with the advancement of basic research and new technologies in the field of biotechnology, the content of endocrine research will continue to develop, and breakthroughs in research on diseases caused by endocrine abnormalities will solve the medical problems of human secretion.

References

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