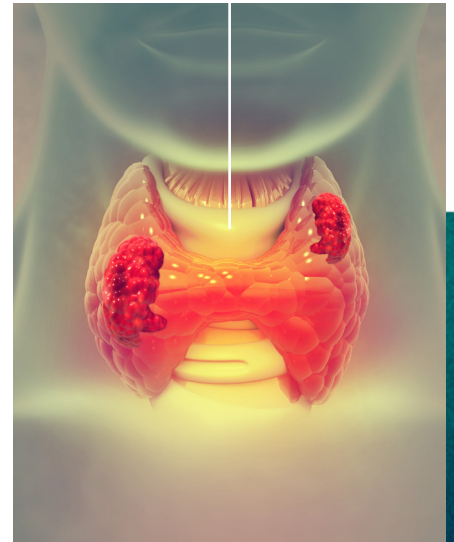
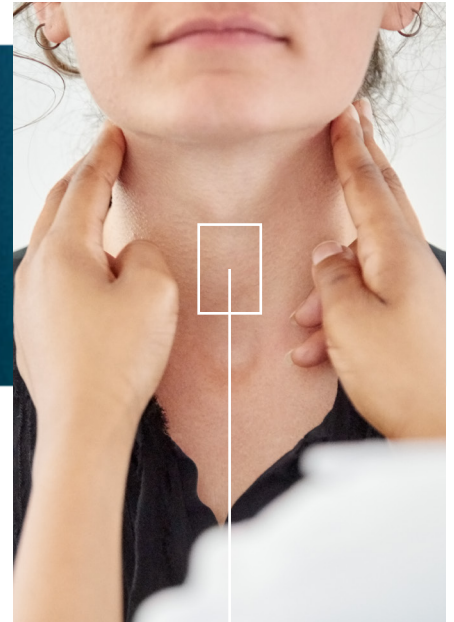
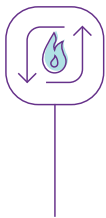


WHAT IS THE THYROID?

The thyroid is a butterfly-shaped gland located in the neck that plays a crucial role in regulating metabolism and energy production. It produces hormones that influence the functioning of almost every cell in the body, controlling the rate at which the body uses energy and affecting processes such as growth, development, and temperature regulation.

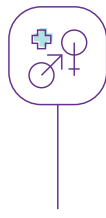


FUNCTIONS OF THE THYROID GLAND



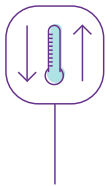
Metabolism Regulation

The thyroid produces hormones, primarily thyroxine (T4) and triiodothyronine (T3), crucial for regulating the body's metabolism and influencing the rate at which calories are burned.



Reproductive Health

Thyroid hormones play a role in reproductive health, influencing menstrual cycles in women and fertility in both men and women. Thyroid dysfunction can contribute to irregularities and infertility.



Temperature Regulation

Thyroid hormones influence thermogenesis, the process by which the body generates heat, helping to maintain optimal body temperature.



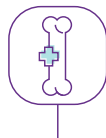
Cholesterol Levels

Thyroid hormones help regulate cholesterol levels in the blood, preventing imbalances that could lead to cardiovascular problems.



Cardiovascular Function

The thyroid affects heart rate and cardiac output, contributing to a healthy cardiovascular system and preventing rhythm abnormalities.



Bone Health

Thyroid hormones contribute to bone growth and maintenance, affecting bone density and the risk of conditions like osteoporosis. Others, ensuring you receive appropriate care.

IDENTIFICATION & TREATMENT OF THYROID DYSFUNCTIONS

Thyroid Dysfunction

Disruptions in thyroid hormone function can result from conditions like hyperthyroidism (overactive thyroid) and hypothyroidism (underactive thyroid). In the United States, it's estimated that about 20 million Americans have some form of thyroid disease, with up to 60% being unaware of their condition. Thyroid disorders are more common in women than in men, and the risk increases with age.

Conditions Involving Hypothyroidism

Hypothyroidism, characterized by an underactive thyroid gland, affects around 10% of adults in the United States, with a potentially higher prevalence in older demographics. Common causes include autoimmune disorders (Hashimoto's Thyroiditis), thyroid surgery, radiation therapy, and certain medications.

SIGNS & SYMPTOMS OF HYPO- THYROIDISM



Graves' Disease

An autoimmune disorder and the leading cause of hyperthyroidism in the U.S., Graves' disease involves autoantibodies activating the thyroid-stimulating hormone receptor, leading to excessive thyroid hormone secretion.

Thyroid Storm

Thyroid Storm is a rare but life-threatening complication of hyperthyroidism, and Graves' disease is a common underlying cause. It is characterized by a sudden and severe exacerbation of the symptoms of hyperthyroidism, often triggered by a stressful event, infection, or untreated hyperthyroidism.

Signs & Symptoms of Graves' Disease

This disease is marked by persistent unexplained weight loss, rapid heartbeat, sweating, trembling hands, bulging eyes (exophthalmos), anxiety, fatigue, muscle weakness, and difficulty sleeping.

Symptoms of Thyroid Storm

include extremely high fever, rapid heart rate, confusion, and other signs of severe hyperthyroidism.

HYPOTHYROIDISM AFFECTS APPROX.

1% OF THE
U.S.
POPULATION

Treatment of Thyroid Dysfunction

The primary approach for managing both hypo- and hyperthyroid conditions often involves pharmaceutical interventions. In cases of low thyroid function, commonly addressed with hypothyroidism, thyroid hormone replacement medications like levothyroxine are commonly prescribed. On the other hand, hyperthyroid conditions, such as Graves' disease, may be addressed with medications that inhibit thyroid activity. In certain situations, non-pharmaceutical interventions may also be recommended for Graves' disease, including radioiodine therapy, or, in some cases, surgical interventions.



In the functional medicine model, optimizing thyroid function is achieved by addressing nutrition, lifestyle, and environmental factors that may impact thyroid hormone production. This approach emphasizes a comprehensive strategy to promote optimal thyroid health.

Nutrition & Thyroid Health

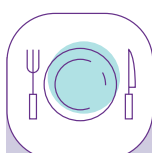
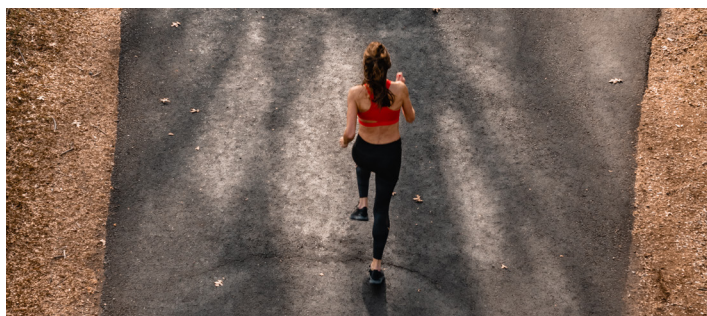
Nutrition is crucial for thyroid function as the thyroid gland depends on specific nutrients like protein, iodine, selenium, and zinc for synthesizing essential hormones. Deficiencies in these nutrients can impair thyroid function and hormone production. Additionally, adequate caloric intake is another important factor for optimizing thyroid function. Insufficient food intake, especially chronically, negatively impacts thyroid function by reducing hormone production, disrupting metabolic processes, and potentially leading to hypothyroidism.

Lifestyle & Thyroid Health

Regular exercise positively impacts thyroid health by enhancing the production and utilization of thyroid hormones, supporting overall metabolic function. It's essential to balance exercise intensity with proper recovery, and integrate stress-reducing activities.

Environment & Thyroid Health

Environmental factors can adversely affect thyroid function, with exposure to endocrine-disrupting chemicals. Common hormone disrupting chemicals like pesticides, plastics and industrial pollutants interfere with hormone processes, including production, release, transport, metabolism, binding action, and elimination. High levels of environmental stressors, such as pollution and heavy metals, can contribute to thyroid dysfunction by inducing inflammation and oxidative stress. Ensuring a clean and supportive environment, while minimizing exposure to potential thyroid disruptors, is critical for optimal thyroid health.



THE THYROID GLAND DEPENDS ON:

protein

iodine

selenium

zinc



REGULAR EXERCISE POSITIVELY IMPACTS THYROID HEALTH BY:

enhancing the production
& utilization of hormones

supporting overall
metabolic function



THYROID FUNCTION CAN BE ADVERSELY AFFECTED BY:

pesticides

plastics

industrial pollutants

RESOURCES

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