



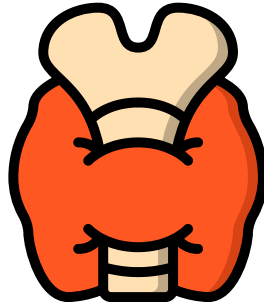
جامعة الإمام عبد الرحمن بن فيصل

IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

مستشفى الملك فهد الجامعي

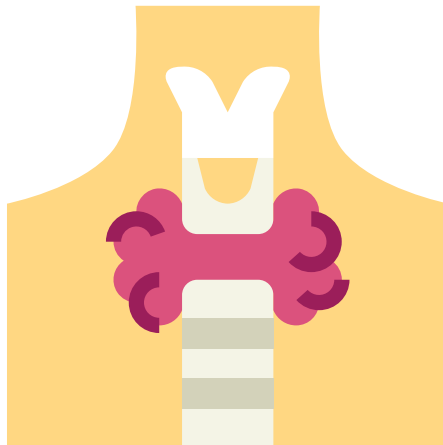
King Fahad Hospital The University

Hypothyroidism and Hyperthyroidism



What is the thyroid gland? Where is it located in the human body?

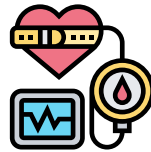
The thyroid gland is one of the endocrine glands and located in the middle of the front of the neck below the cartilage of the thyroid gland ([Adam's apple](#)), and it consists of two lobes on either side of the trachea, linked by a central part known as the [isthmus](#) and weighing about [15 to 20](#) grams in adults of normal cases.



What is it the function of the thyroid gland?

The thyroid gland produces the **thyroxin hormone**, which in turn regulates the body's metabolism rate, as it controls the following:

- Heart rate



- Blood pressure



- Body temperature



- Weight



What are the types of thyroid gland dysfunction?

There are two types of the thyroid gland:



- ❖ First type: Hyperthyroidism



- ❖ Second type: Hypothyroidism

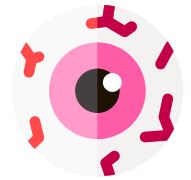
What is Hyperthyroidism?

It is a mal case where the thyroid gland produces **thyroxine** more than the body needs which causes acceleration in metabolism.



There are three types as below:

1. **Graves' disease:** it occurs with ophthalmopathy, as the patient with this type usually suffers from bulging eyes.



2. Toxic Multi-nodular Goiter



3. Solitary Toxic Adenoma



What are the symptoms of Hyperthyroidism?

Symptoms of hyperthyroidism are proportional to the level of the **thyroxine hormone** in the blood, and it may not be pathogenic if the hyperthyroidism portion is simple or pathogenic.

In mal cases, the patient may suffer from the following:

1. Weight loss



2. Increase in appetite for food



3. A rapid heartbeat (palpitations)



4. Slight tremors in the hands

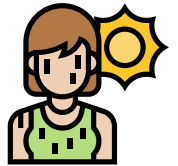


What are the symptoms of Hyperthyroidism?

5. Nervous tension and Anxiety



6. Sweating and increased sensitivity to heat



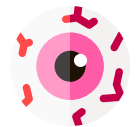
7. Fatigue and sleeping difficulty



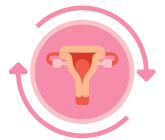
8. Enlarged thyroid gland



9. Bulging eyes in the case of Graves' disease



10. Change in menstruation



What are the methods of therapy?

There are three options to be followed by medical staff:

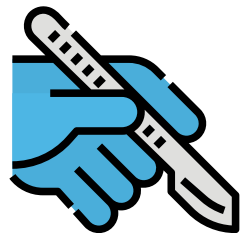
1. Anti-thyroid medications



2. Radioactive iodine to reduce the production of the thyroxine



3. Surgically, By removing the thyroid gland either by removing one lobe or both depending on the cause of this hyperactivity



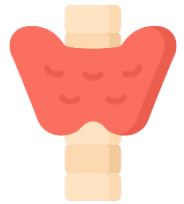
What is Hypothyroidism?

It is a mal case where the thyroid is not able to produce enough amount of the **thyroxine** to enable the body performs its functions normally in a stable way.



What are the causes of Hypothyroidism?

1. Hashimoto's thyroiditis



2. Lack of iodine intaking



What are the causes of Hypothyroidism?

3. Thyroidectomy without taking enough thyroid hormone tablets, or taking them wrongly



4. Take radioactive iodine



5. Insufficient function of the pituitary gland

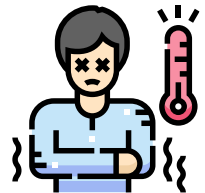


What are hypothyroidism symptoms?

Symptoms of hypothyroidism depend mainly on the extent of failure of the gland to produce an adequate amount of thyroxine, as it may be non-pathogenic if the level of deficiency is very mild or pathogenic.

In pathogenic cases, the patient may suffer from more obvious signs and symptoms that are determined by the level of hormone deficiency in, which leads to a slowdown in the body's metabolism and may cause the following symptoms: atigue

- Sensitivity to cold

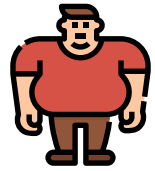


- Dry skin



What are hypothyroidism symptoms?

- Weight gain and swelling of the face



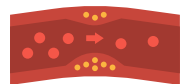
- Hoarseness



- Weakness of the muscles

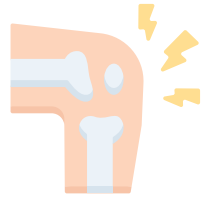


- Increase in the level of cholesterol in the blood



What are hypothyroidism symptoms?

- Pain and stiffness in the joints



- Slowing heart rate



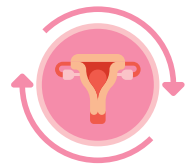
- Depression



- Poor memory



- Irregular menstrual periods.



What is the therapy of Hypothyroidism?

hypothyroidism is treated by taking thyroid hormone tablets at a dose determined by the attending physician depending on the percentage of deficiency and the patient's response to treatment, and the symptoms of the patient's hypothyroidism, the level of stimulating hormone and thyroid hormone before and after starting treatment until it reaches a normal level. It is a safe and effective.



Sources and references

All pictures used are from Flaticon.com and freepik

Review and audit:

The content of this booklet has been reviewed by consultants of Endocrine Surgery and General Surgery at King Fahd University Hospital.

Health Awareness Unit

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