به نام خداوند جان و خرد

HYPERTHYROIDISM

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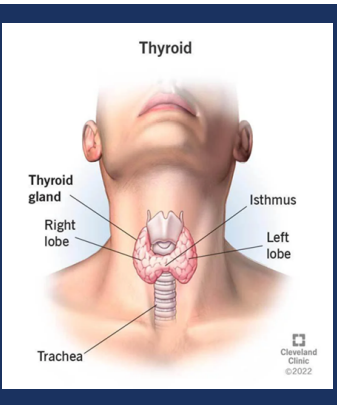


مباحث

پرکاری تیروییید

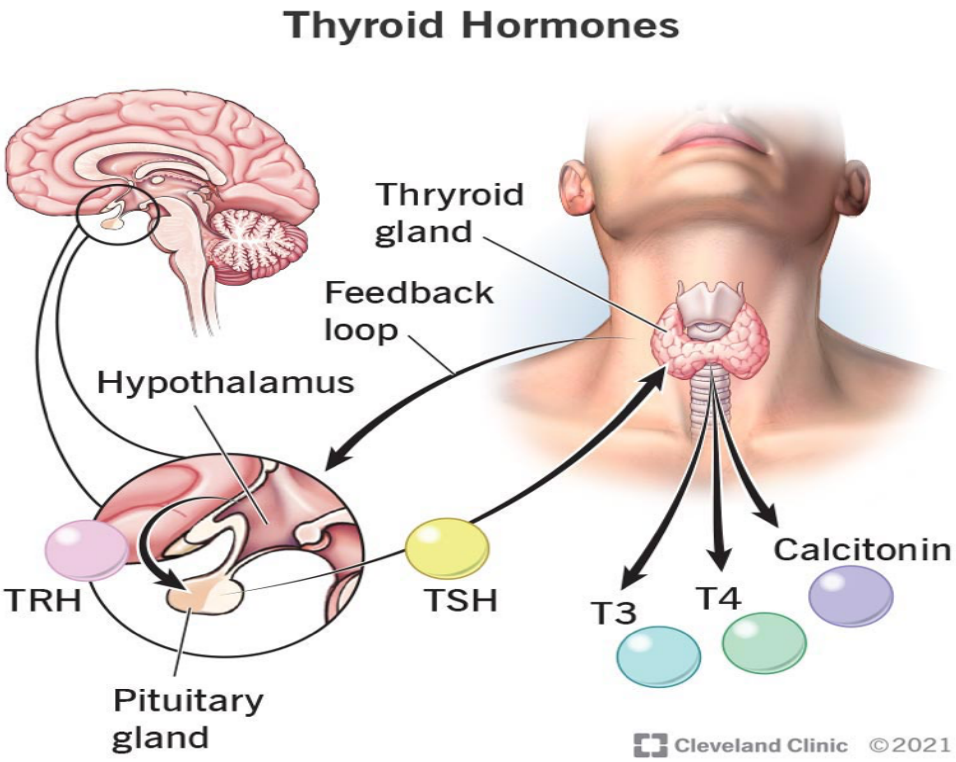
- تعریف و انواع
- عوامل خطر بروز
- اتیولوژی
- علایم و نشانگان بالینی
- تشخیص
- مدیریت
- عوارض

HYPERTHYROIDISM: DEFINITION

- **Hyperthyroidism** is the condition that occurs due to excessive production of thyroid hormone by the thyroid gland.

OR

- **Hyperthyroidism** is hyperactivity of the thyroid gland leading to sustained increase and excessive synthesis and release o thyroid hormones and accelerated metabolism in the peripheral tissues.



HYPERTHYROIDISM: TYPES

- **Primary Hyperthyroidism:** Arising from the intrinsic thyroid abnormality.
- **Secondary Hyperthyroidism:** Arising from process outside of the thyroid gland, such as TSH secretory Pituitary tumor.
- **Apathetic Hyperthyroidism:**

HYPERTHYROIDISM: TYPES

- **Apathetic Hyperthyroidism:**
  - It is a form of hyperthyroidism occurring at all ages, especially in the elderly.
  - The typical features of thyroid hormones excess in younger patients are blunted.
  - The diagnosis is made during investigation for unexplained weight loss or worsening Cardiovascular diseases.
  - The cardinal symptoms are depression and apathy.
  - The absence of classical signs and symptoms of hyperthyroidism delays the diagnosis and treatment of disease as it is often misdiagnosed as primary psychiatrics disorders.

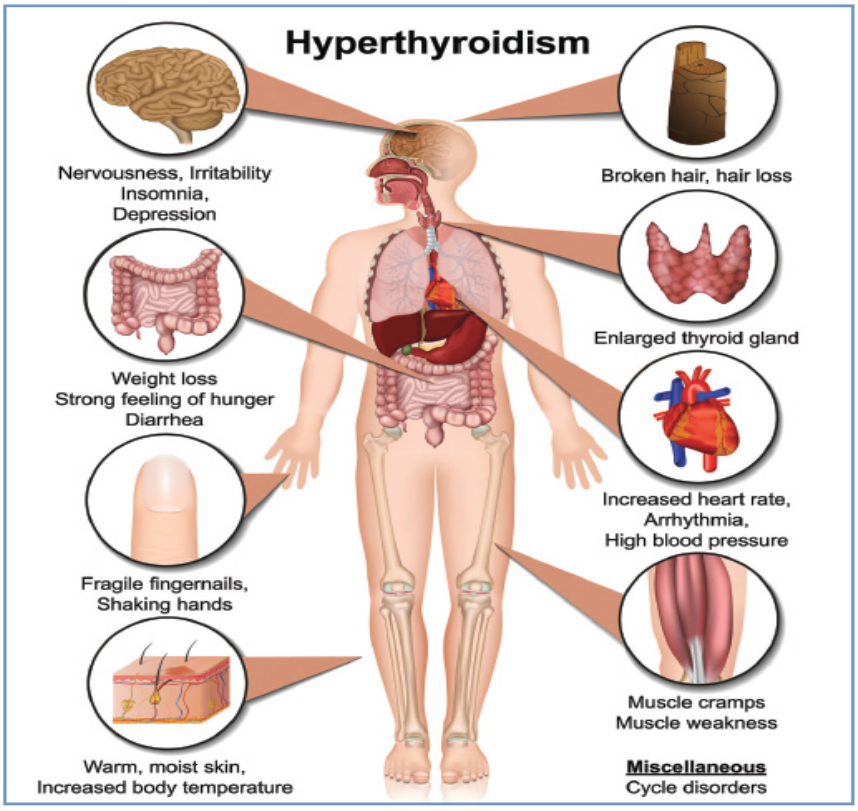
HYPERTHYROIDISM: RISK FACTORS

- A family history of thyroid diseases, particularly Graves's disease
- Female Sex
- The presence of diseases such as diabetes type 1, Addison disease, and pernicious Anemia (Vitamin B12 Deficiency)
- Age more than 60 years
- Consume an Iodine rich diet or Medications containing Iodine like Amiodarone
- Thyroid surgery or Goiter
- Radiation
- Smoking

HYPERTHYROIDISM: ETIOLOGY

- **Grave's Disease:** it is most common causes with 50%-80% worldwide.
- **Toxic Thyroid Adenoma**
- **Toxic Multinodular Goiter**
- **Thyroiditis**
- **Excessive Intake of Thyroid Hormone**
- **Excessive Iodine Intake**
- **Abnormal Secretory of TSH**
- **Struma Ovari** is a specialized or monodermal teratoma predominantly composed of mature thyroid tissue.

Clinical Manifestations:



HYPERTHYROIDISM: DIAGNOSIS

- **History Taking:** Family history, Signs and Symptoms (heat intolerance, increase sweating, warm skin , etc.), Dietary pattern, Current medications.
- **Physical exams** (Tremor of hands, Soft eye changes, etc), Neck examination
- **Laboratory Tests** (Free T4 or T4, Free T3 or T3, TSH, Thyroid Antibodies, Lipid profile, ESR , …)
- **Imaging Studies** (Sonography, Scan)
- **Histologic Exam** (Nodule FNA)
- **Ophthalmological Exam**

HYPERTHYROIDISM: MANAGEMENT

- **Management** depends on gender, age of patients, severity of disease and complications.
- The **goals** of management are to return metabolism to normal level and control complications.
- Three forms of treatment are available:
  - **Pharmacotherapy:** Anti-thyroid Medications (Methimazol, PTU), Beta Blokers
  - **Radiation (I 131)**
  - **Surgery**

DOSE

- **Methimazol 5 mg :**
  - At first, 15 to 60 milligrams (mg) per day, given in 3 divided doses about every 8 hours.
  - The maintenance dose is 5 to 15 mg per day.
- **PTU 50 mg**
  - At first, 300 to 900 milligrams (mg) daily, divided into 3 equal doses and given every 8 hours.
  - The maintenance dose is usually 100 to 150 mg daily.

ANTI-THYROID MEDICATIONS SIDE EFFECTS

- Skin rash or hives
- Liver injury (rare): eyes or skin disorders, itching, or dark urine
- Low white blood cells (rare) –agranulocytosis . It can become a life-threatening problem.

THYROID SURGERY INDICATIONS:

1) **Thyroid cancer**
2) **A large Goiter**
3) **Been unresponsive to medications**
4) **Been unresponsive to radiotherapy**

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Thank you