

# Endocrine

## Graves's disease



### Hyperthyroidism

- Is a condition where the thyroid is overactive, producing high amounts of thyroid hormones, this will lead to thyrotoxicosis.

- Thyrotoxicosis: is a collection of symptoms and signs due to high plasma levels of thyroid hormones.

\*Please remember, Hyperthyroidism is not the only cause of thyrotoxicosis.

-Ten times more common in females than in males.

Chief Complaint: Can be any of the symptoms of hyperthyroidism, patient may come with goiter as a primary complaint	
Questions	Indications
<b>Onset and Duration</b>	
When did you first notice that? And for how long?	
Is it a continuous problem or it comes as separated attacks?	
Does the problem get better or worse by certain things?	
Have you felt a neck lump or swelling? Or symptoms like shortness of breath, dysphagia and hoarseness?	This can help in detecting whether the source of the excess hormones is thyroid related or not
<b>Symptoms</b>	
Ask about: <ul style="list-style-type: none"> <li>• High appetite</li> <li>• Weight loss</li> </ul> (If yes how many Kg?) <ul style="list-style-type: none"> <li>• Diarrhea</li> <li>• Warmness</li> <li>• Sweating</li> <li>• Preference of cold weather</li> </ul>	Metabolic and bowel symptoms of thyrotoxicosis
Ask about: <ul style="list-style-type: none"> <li>• Palpitation</li> <li>• Shortness of breath</li> </ul>	Cardiovascular symptoms of thyrotoxicosis

<ul style="list-style-type: none"> <li>• Missed or irregular beats</li> <li>• Tiredness</li> </ul>	
<p>Ask about:</p> <ul style="list-style-type: none"> <li>• <b>Hyperactivity</b></li> <li>• Nervousness</li> <li>• Insomnia</li> <li>• Irritability</li> <li>• Depression</li> </ul>	Neurological symptoms of thyrotoxicosis
<p>Ask about eye problems such as:</p> <ul style="list-style-type: none"> <li>• Double vision</li> <li>• Grittiness</li> <li>• Redness</li> <li>• <b>Pain behind the eyes</b></li> </ul>	Eye manifestations of thyrotoxicosis
<p>In females, Ask about: Amenorrhea or decreased amounts of menses</p>	Most women with this condition have a reduction in the quantity of their menses
<p>Ask about: Do you complain of difficulty in standing after being setting on the ground? Or difficulty in getting out of a chair?</p>	<b>(Proximal muscle weakness)</b>
<b>Past medical history</b>	
Any history of thyroid diseases in the past?	
<b>History of autoimmune diseases?</b>	Tendency to develop Grave's disease
History of cardiac arrhythmias?	Patients may take amiodarone against arrhythmias, which in role can cause thyrotoxicosis
History of hypertension?	Thyrotoxicosis can lead to hypertension
<b>Medication history</b>	
<p>Have you taken thyroxine for any purpose? *Some people use thyroxine to lose weight</p>	Thyrotoxicosis may be caused by excess exogenous thyroxine.
Have you taken <b>amiodarone</b> recently?	<b>Amiodarone is rich in iodine, so it may cause thyrotoxicosis</b>
<b>Family history</b>	
14-Family history of	There is a familial incidence of

thyrotoxicosis?	Grave's disease
<b>Social history</b>	
Origin or place of residence?	Some areas are known to be endemic with multinodular goiter
Current pregnancy?	Pregnancy is associated with higher levels of thyroid hormones in the serum. Thus it may cause milder symptoms of hyperthyroidism or exaggerate a silent hyperthyroid state.
Exposure to iodine whether in diet or as supplements or any other source like imaging contrast?	Excess iodine may be responsible for thyrotoxicosis.
<b>Systemic review</b>	

## Possible differential diagnoses of Thyrotoxicosis:

### 1ry

- **Grave's disease** (Most common cause)
- Toxic multinodular goiter
- Toxic adenoma
- Early course of Hashimoto's thyroiditis
- Subacute thyroiditis
- Postpartum thyroiditis
- Iodine-induced (Jod-Basedow phenomenon)

} **Hyperthyroidism**

### 2ry

- Pituitary (TSH hypersecretion)
- Choriocarcinoma (High HCG)
- Struma ovarii (Ectopic thyroid tissue in the ovaries)
- Excess thyroxine or amiodarone ingestion

## Investigations of hyperthyroidism:

- **Thyroid function test** (To distinguish 1ry from 2ry causes)
- Others
  - 1/Ultrasound
  - 2/Thyroid scan

## Management

Primary causes like Grave's disease is treated either medically by anti-thyroid medications (e.g. Carbimazole) or surgically (Total thyroidectomy) with lifelong thyroxine replacements.

Secondary causes: Treat the underlying cause.