

Goiter (Thyroid swelling)

most common cause of neck swelling and is one of the commonest presentations and usually the first symptom in patients with many thyroid conditions.

- **More common in women.**

- Used to be called Struma.

- **90% of cases worldwide are caused by iodine deficiency.**

Chief Complain: Neck mass (Swelling)	
Questions	Indications
Questions about the main problem	
1-When did you first notice that?	Acute or Chronic
2-Is it growing in a fast or slow pattern?	<i>Very fast: hemorrhage within a follicle or cyst</i> <i>Fast: Malignancy</i> <i>Slow: Benign lesions</i>
3-Is it increasing in growth constantly or grow then decline in size?	Malignancies usually grow without stopping
4-Painful or painless?	<ul style="list-style-type: none"> ○ Painless mass is usually a bad sign, indicating malignancy ○ Painful mass usually benign (e.g. subacute thyroiditis and bleeding into a nodule in case of non-toxic nodular goiter)
5-Any other current masses or history of other masses?	MENII syndrome may result in more than one endocrine tumor at the same time (e.g. Thyroid medullary carcinoma + Pheochromocytoma)
Associated and related symptoms	
6-Have you noticed shortness of breath, difficulty in swallowing or hoarseness of your voice?	This reflects the extent of invasion to the nearby structures (Trachea, esophagus and

	recurrent laryngeal nerve respectively)
7-Do you have any of these symptoms: Palpitation and arrhythmias, tremor, insomnia, hyperactivity, anxiety, diarrhea, weight loss despite increased appetite, heat intolerance, muscle weakness, sweating and moist skin, oligomenorrhea and eye problems?	To identify whether the goiter is toxic (active) or non-toxic (inactive) Toxic goiter is usually one of four differentials: 1/Grave's disease 2/Toxic multinodular goiter 3/Toxic Adenoma 4/Early attack of Hashimoto's thyroiditis
Then ask about the opposite symptoms: Lethargy, cold intolerance, weight gain despite decreased appetite, constipation, apathy (inactivity), sluggishness during talking (heavy tongue), brittle hair or hair loss and dry skin?	This is common in late stages of Hashimoto's thyroiditis and sometimes in non-toxic nodular goiter.
8-Symptoms of bone pain, liver nodules, jaundice, shortness of breath or cough?	These indicate the presence of metastasis (2ry masses) into bone, liver and lung respectively
Medication history	
9-Do you use medications related to thyroid gland disorders such as Thyroxine replacements?	
10-Recent use of Lithium? *Lithium is used in depression	Goiter can be a side effect of Lithium
Past Medical and Surgical history	
11-Previous disorders of thyroid?	
12-Were you diagnosed with an endocrine gland cancer in the past?	MENII syndrome
13-History of autoimmune diseases?	Tendency to develop Grave's disease or Hashimoto's thyroiditis
Family history	
14-Anybody in your family has or had the same problem?	Some thyroid diseases run in a familial pattern (Grave's disease and Medullary carcinoma)

15-Any member in your family was diagnosed with an endocrine gland cancer?	MENII syndrome
Social history	
15-Origin or place of residence?	Some areas are known with endemic goiter due to lack of iodine in food
17-Current pregnancy?	Can lead to a physiological enlargement of the thyroid
18-Diet habits especially (Seafood and iodized salt)	
Systemic review	

Possible differential diagnoses of Neck swelling:

1/Thyroid related

- **Physiological**: in pregnancy and during puberty.
- **Inflammatory**
 - Grave's disease (Present with symptoms of thyrotoxicosis)
 - Hashimoto's thyroiditis (Symptoms of hypothyroidism)
 - Subacute thyroiditis (Influenza like symptoms)
 - Riedel's thyroiditis (rare, thyroid is replaced by dense fibrous tissue and become non-functional)
- **Thyroid cyst** (may bleed causing pain and compression symptoms)
- **Benign growth** (such as follicular Adenoma, can be toxic)
- **Malignancy** (Most common type is Papillary)

2/Non-thyroid related

- Lymph nodes (such as **lymphoma**)
- Parotid gland
- Sebaceous cyst or lipoma
- Carotid aneurysm
- Parathyroid gland (rare)

Investigations done in thyroid diseases:

- Ultrasound (Usually first choice), sometimes + biopsy
- Thyroid function test (Best to detect grave's disease)
- Radioiodine isotope scan
- Sometimes CT + MRI

Management:

1. Grave's disease is treated either medically by anti-thyroid medications (e.g. Carbimazole) or surgically (Total thyroidectomy)
2. Other thyroid causes of goiter are managed by total or subtotal thyroidectomy with life-long replacement of thyroxine