Hyperthyroidism at a glance

**Epidemiology**
- Age: most common 30–60 years of age
- Sex: 90% female
- Genetics: shows a familial tendency
- Geography: more common in iodine-replete areas

**Causes**
- Graves’ disease*
- Toxic multinodular goitre
- Toxic adenoma
- Iodine induced
- TSH-secreting tumour

**Eyes**
- Exophthalmos
- Lid lag
- Conjunctival oedema
- Ophthalmoplegia

**Neuropsychiatric**
- Imitability
- Psychosis

**Nervous system**
- Hoarse voice
- Slow relaxing reflexes

**Thyroid**
- Goitre
- Bruit*

**Cardiovascular**
- Cardiac failure
- Tachycardia
- Atrial fibrillation
- Systolic hypertension

**Gut**
- Increased appetite
- Increased stool frequency
- Weight loss
- Oligomenorrhoea
- Proximal myopathy

**Investigations**
- Biochemistry—T4 and T3 raised
- Immunology—thyroid receptor antibodies titre raised
- Ultrasound + nuclear imaging help distinguish Graves’ and adenoma Histopathology—small follicles and scant colloid in Graves’

**Hands**
- Tremor, sweating
- Warm peripheries
- Palmar erythema
- Onycholysis
- Acropachy*

**Pretibial myxoedema***

**Treatment options**
- Education—warn about drug side effects
- Drugs—carbimazole, propylthiouracil, propranolol
- Surgery—large goitre failed medical treatment
- 131—I indications vary depending on cause and course of disease; patient’s age and sex

**Fig. A** Histological appearance of Graves’ disease. The follicles are small and lined with hyperplastic columnar epithelium. Colloid within the lumen is sparse or absent. There is also infiltration of the gland with lymphocytes and plasma cells.

**Fig. B** After treatment with anti-thyroid drugs the follicles become larger and the lining epithelium flatter.

**Fig. C** Patients with Graves’ disease appear thin, nervous, hyperactive and unable to sit still, often with a wide-eyed expression and symmetrical thyroid enlargement that moves on swallowing.