

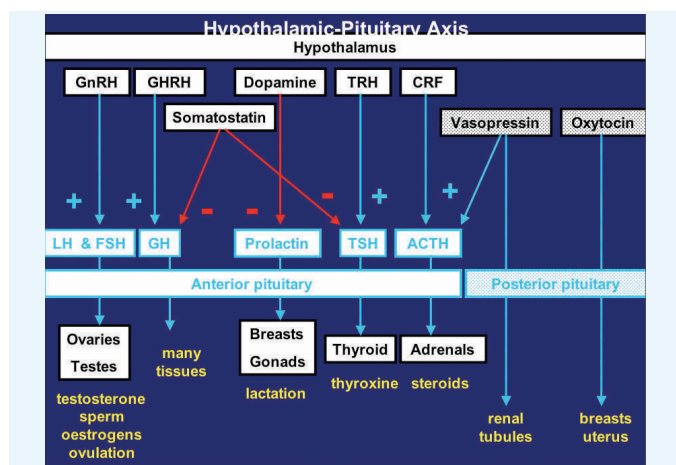
Thyroid

The thyroid gland's structure, function and common pathologies are included in **PME Revision Guide for Finals: Surgery**.

For those of you attending Medicine only, copies of this section are available on request. Email your details to info@pmeducation.co.uk quoting 'thyroid'.

Pituitary Disease

The hypothalamic-pituitary axis can be daunting but it is important to understand the pathways as they determine physiological and disease states. Consider the negative feedback loops that regulate the pathways below:



The anterior pituitary secretes:

- gonadotrophins, FSH and LH
- growth hormone
- prolactin
- ACTH
- TSH
- MSH

The posterior pituitary secretes:

- ADH or vasopressin
- Oxytocin

Pituitary adenoma

Definition

A pituitary tumour of which 99% are benign

- Between 5% and 10% of intracranial tumours
- Present as a result of endocrine effects or because of compression of visual pathways



Symptoms and Signs



May arise due to mass effects or endocrine effects:

Mass effects:

- Headache
- Visual field defects – from pressure on the inferior optic chiasm; begins as superior temporal quadrantanopia progressing to bitemporal hemianopia



Bitemporal hemianopia

- Cavernous sinus compression – resulting from lateral extension of the tumour into the cavernous sinus. Most often produces a cranial nerve III palsy but can also compress IV, Va, Vb or VI
- Erosion of the mass through the sphenoid sinus produces a CSF rhinorrhoea

Endocrine effects:

- Hyperprolactinaemia – most common
- Gigantism / acromegaly – from GH hypersecretion
- Cushing's disease – from ACTH hypersecretion – presents as Cushing's syndrome (hypersecretion of cortisol)
- Hypersecretion of TSH, FSH, LH – very rare
- Symptoms due to hypopituitarism – underproduction of hormones may give rise to the symptoms and signs of hypopituitarism.

Investigation



- Prolactin, TFT, short Synacthen test, LH/FSH, testosterone
- Pituitary MRI
- Visual field mapping

Management



Treatment depends upon the age of the patient, the clinical

presentation, and the nature of the tumour.

Medical treatments:

- Somatostatin analogues (e.g. octreotide) inhibit growth hormone production
- Dopamine agonist (e.g. bromocriptine) lowers circulating hormone levels, shrinks tumour

Surgical approaches:

- Trans-sphenoidal
- Trans-ethmoidal
- Transfrontal