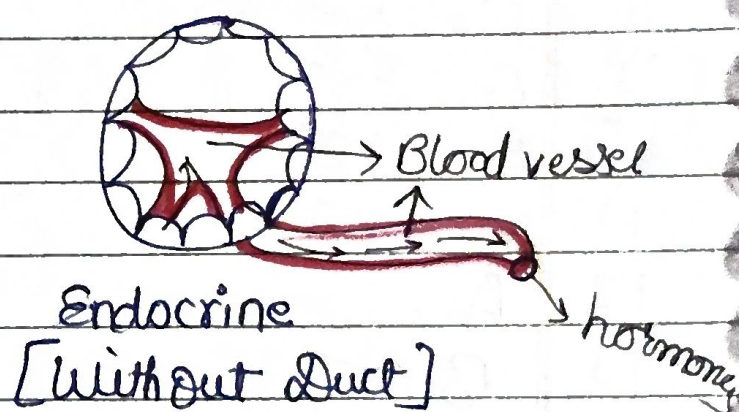
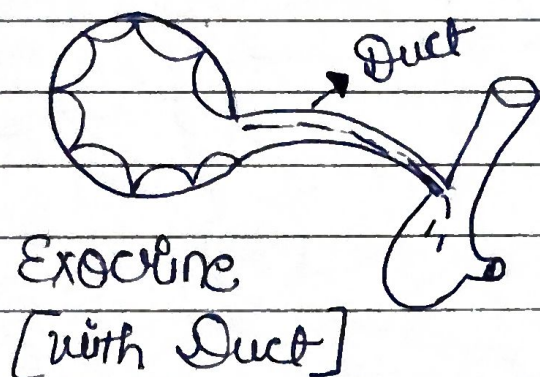


Chemical co-ordination & integration

Lecture - 01

Endocrine glands and hormones

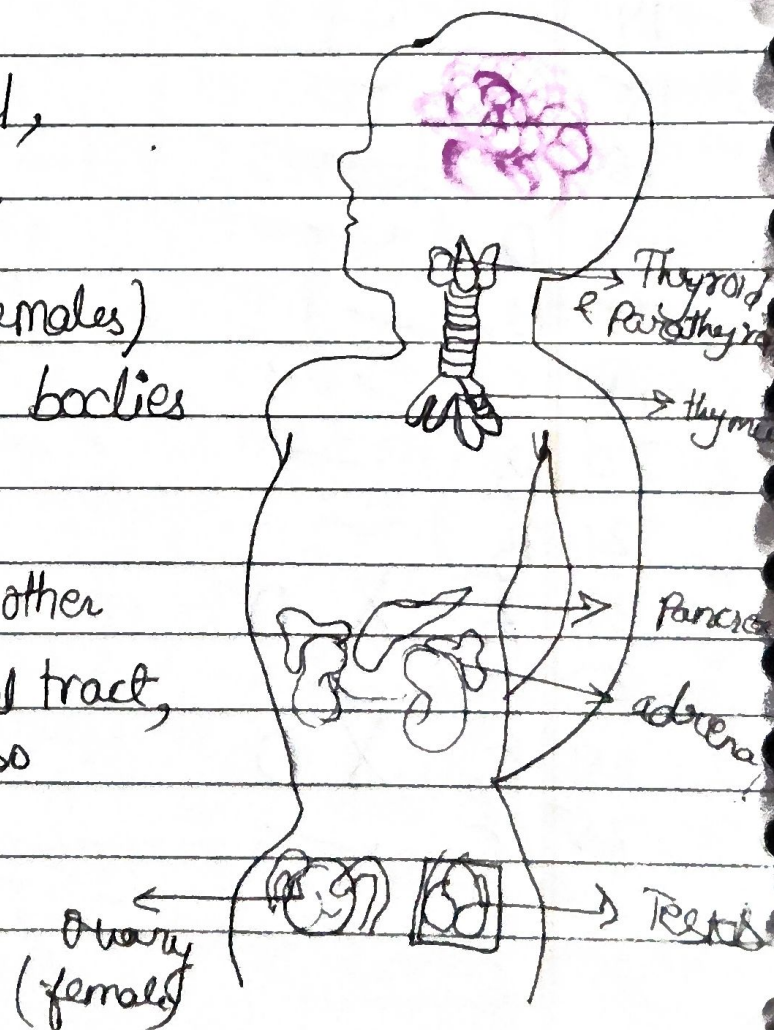
- Endocrine glands lack ducts & are hence called ductless glands. Their secretions are called ~~to~~ hormones.
- The classical definition of hormone as a chemical produced by endocrine glands & released into the blood.
- Current scientific definition as follows; Hormones are non-nutrient chemicals which act as intercellular messengers & are produced in trace ^{very little} amounts.



Human Endocrine System

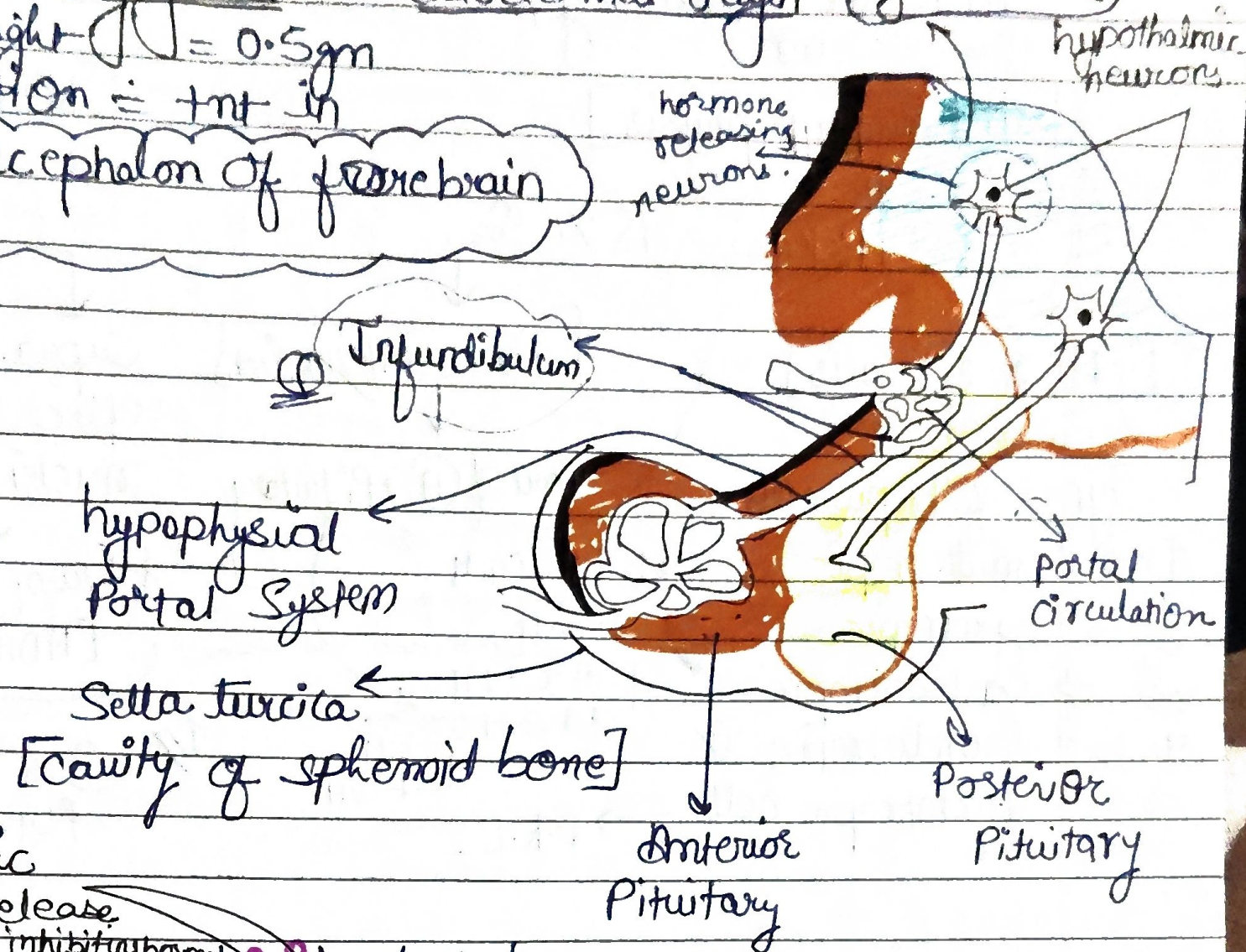
- Pituitary, pineal, thyroid, ~~adrenal~~ adrenal, pancreas, parathyroid, thymus & gonads (testes in males & ovaries in females) are the organized endocrine bodies in our body.

- In addition to these, some other organs, e.g.:- gastrointestinal tract, liver, kidney, heart also produce hormones.



portal system -> To Capillary bed
 Orig. role had
 for capillary me
 lat. large

Pituitary gland = Ectodermal origin
 -> weight = 0.5gm
 -> position = +nt in
 Diencephalon of forebrain

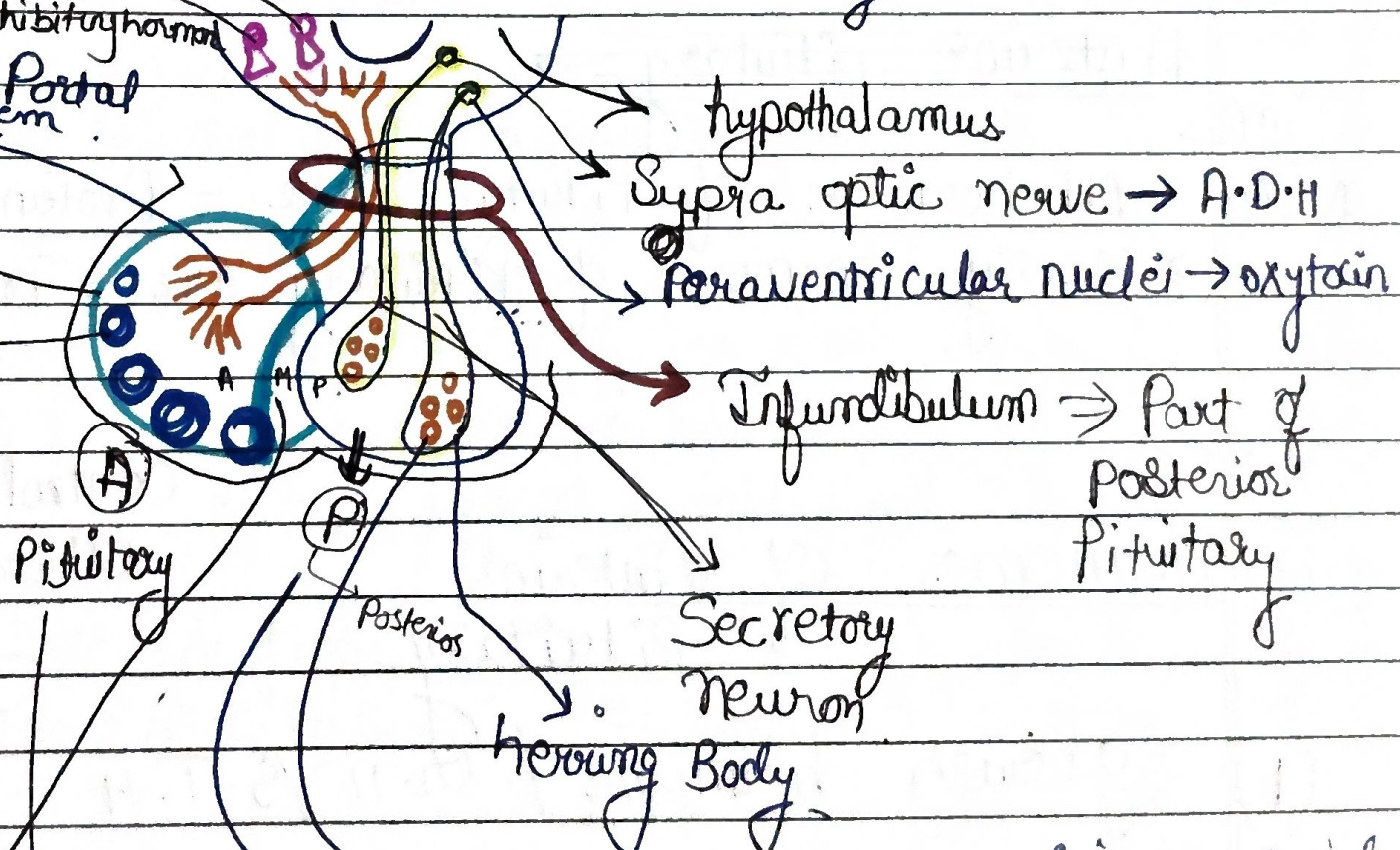


hypothalamic
 neurons - Release
 releasing & inhibiting hormone
 hypophyseal Portal
 System

Sella Turcica

hormone
 Producing
 group of
 Cells

[Tropic
 Cells] = Stipes



hormone containing vesicles
 hormone of P. Pituitary synthesized
 by hypothalamus

Anterior Pituitary me fuse together
 All hormone synthesized
 & Release.

Anterior Pituitary or

[Adenohypophysis]

Release = 75% ϕ

Posterior Pituitary or

[Neurohypophysis]

25% of total secret

[Pars Distalis]

[Pars intermedia]

Supra
 optic
 nuclei

Para
 ventricular
 Nuclei

Types of Tropic cells

- 1) Somatotrophic $\rightarrow$ ST-H / Cr-H
- 2) Thyrotrophic $\rightarrow$ T.S.H
- 3) Corticotrophic $\rightarrow$ A.C.T.H
- 4) Gonadotrophic ϕ $\rightarrow$ L.H
- 5) Lactotrophic cells $\rightarrow$ P.R.L

Part of (A) $\rightarrow$ Pituitary

Growth hormone

Thyroid stimulating hormone

Adeno cortico tropic hormone

M.S.H $\rightarrow$ melanocyte stimulating

L.H
 F.S.H

protection

[Vasopressin]
 [ADH]

[Oxytocin]

Both Produced By
 Hypothalamus