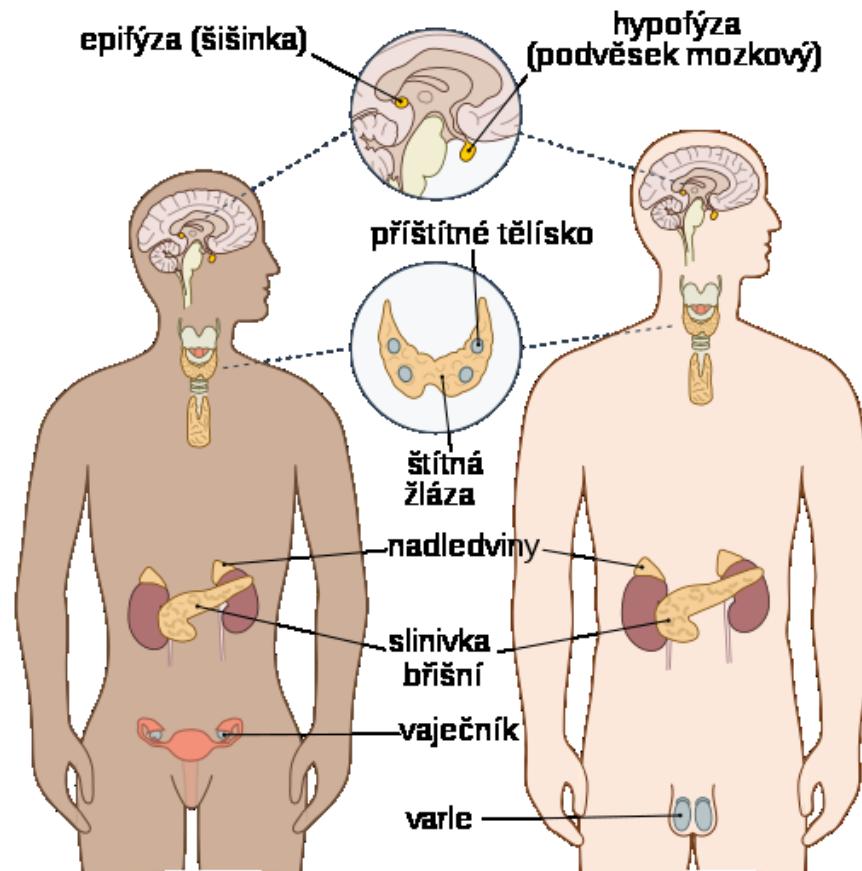


Hypotalamo-hypofyzární systém – komentovaná prezentace

Mgr. Romana Klášterecká, Ph.D.



SOUSTAVA ŽLÁZ S VNITŘNÍ SEKRECÍ



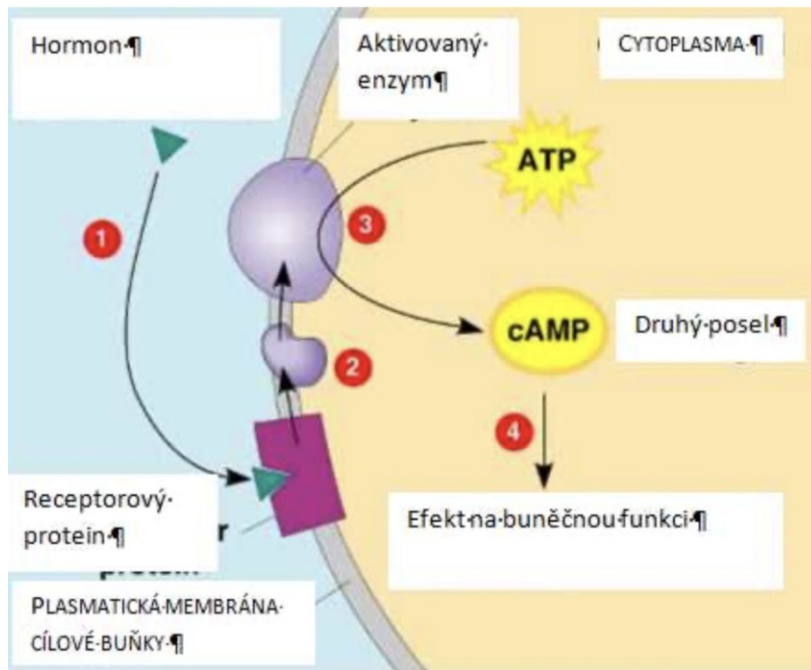
DĚLENÍ HORMONŮ

- Podle chemické struktury
- Podle způsobu účinku
- Podle rozpustnosti
- Podle převažujícího účinku

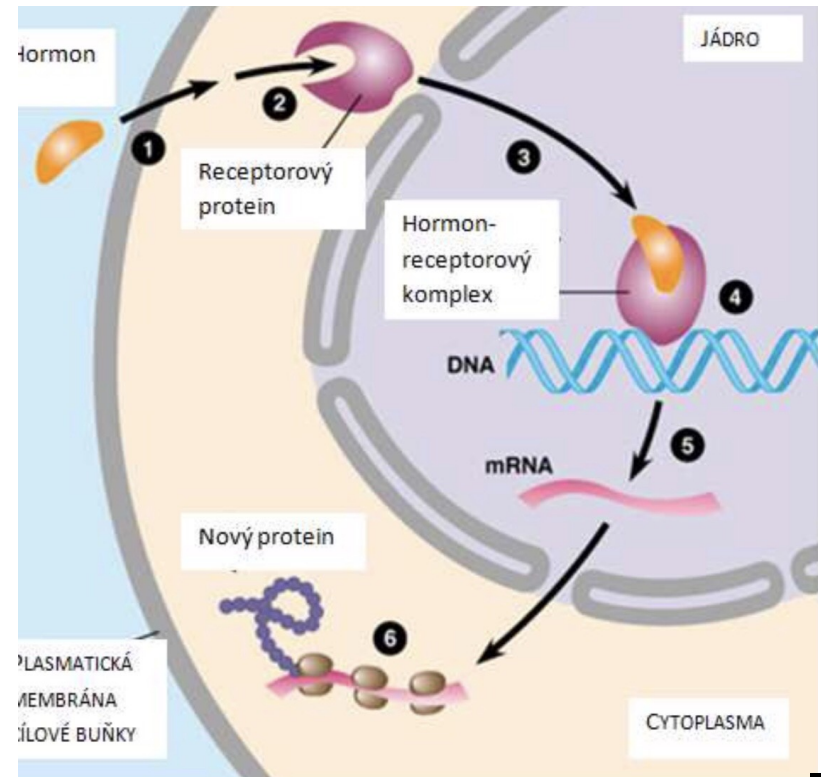


Mechanismus ÚČINKU HORMONŮ

NA MEMBRÁNĚ

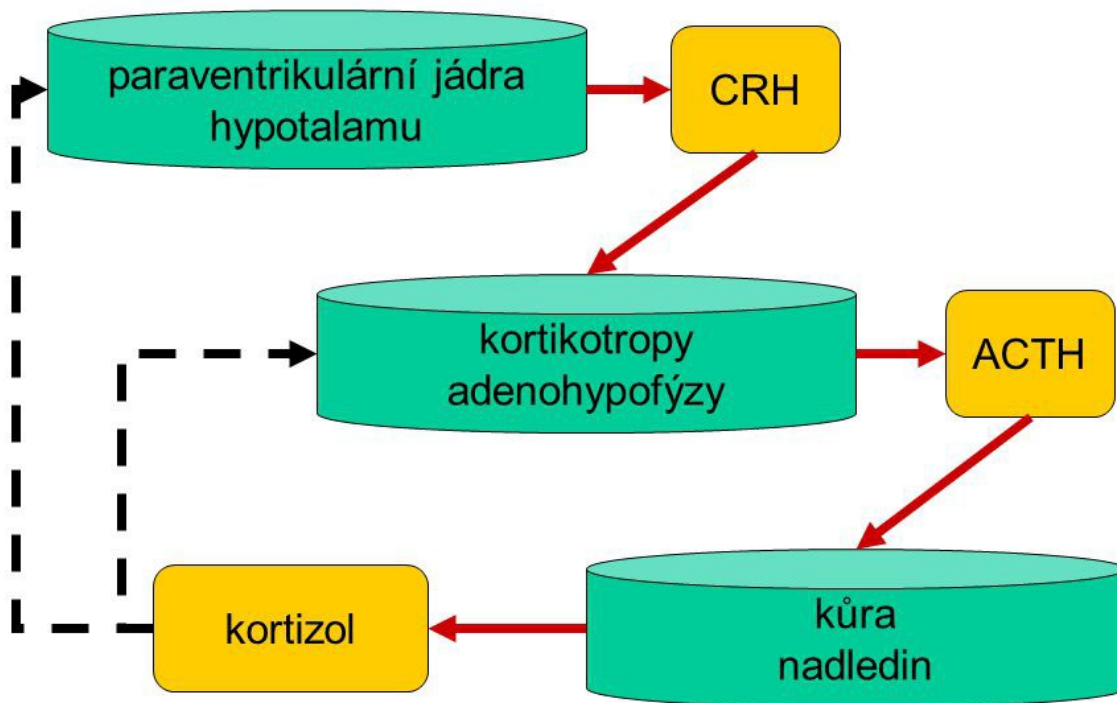


UVNITŘ BUŇKY



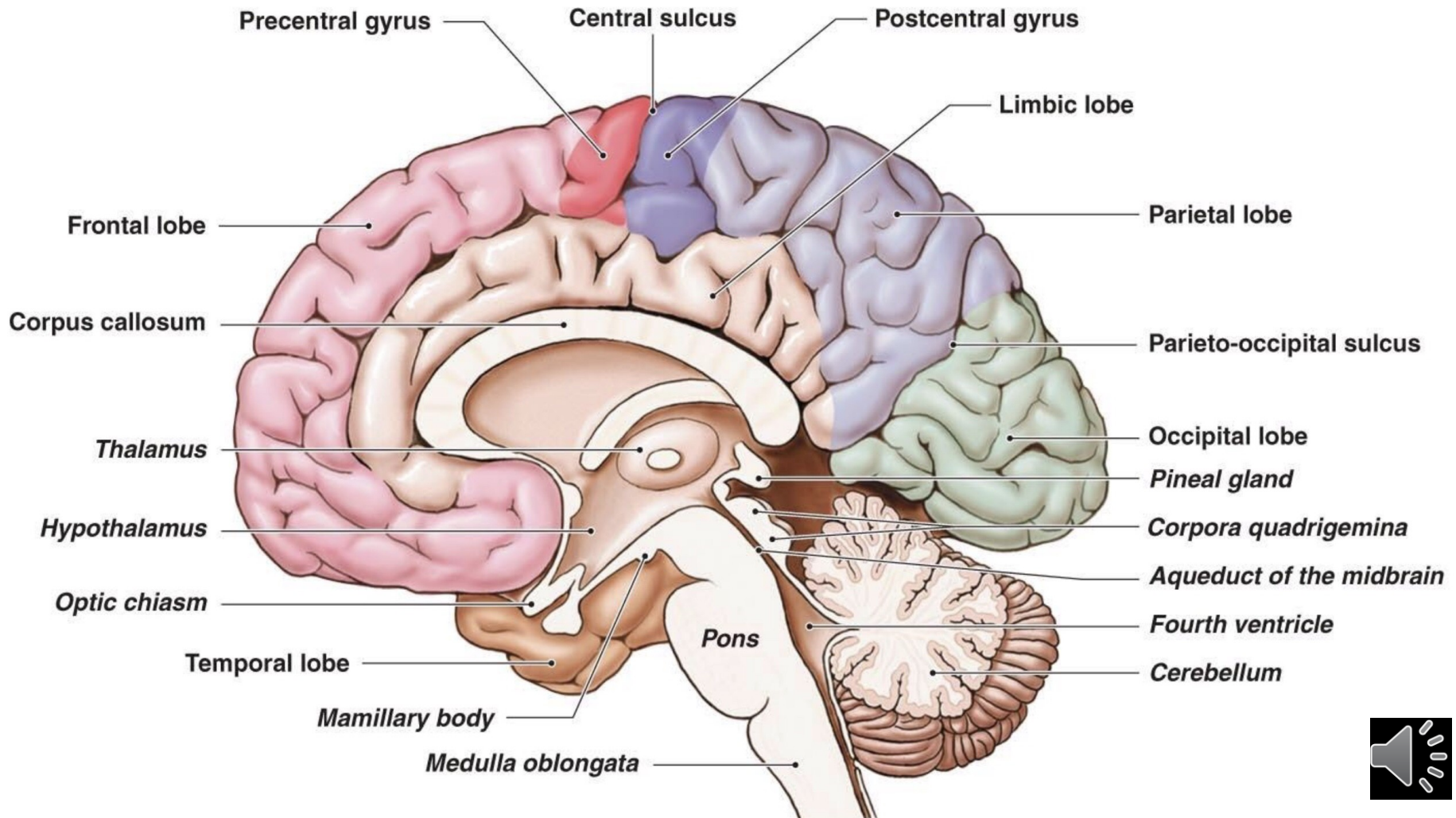
REGULACE VÝDEJE HORMONŮ

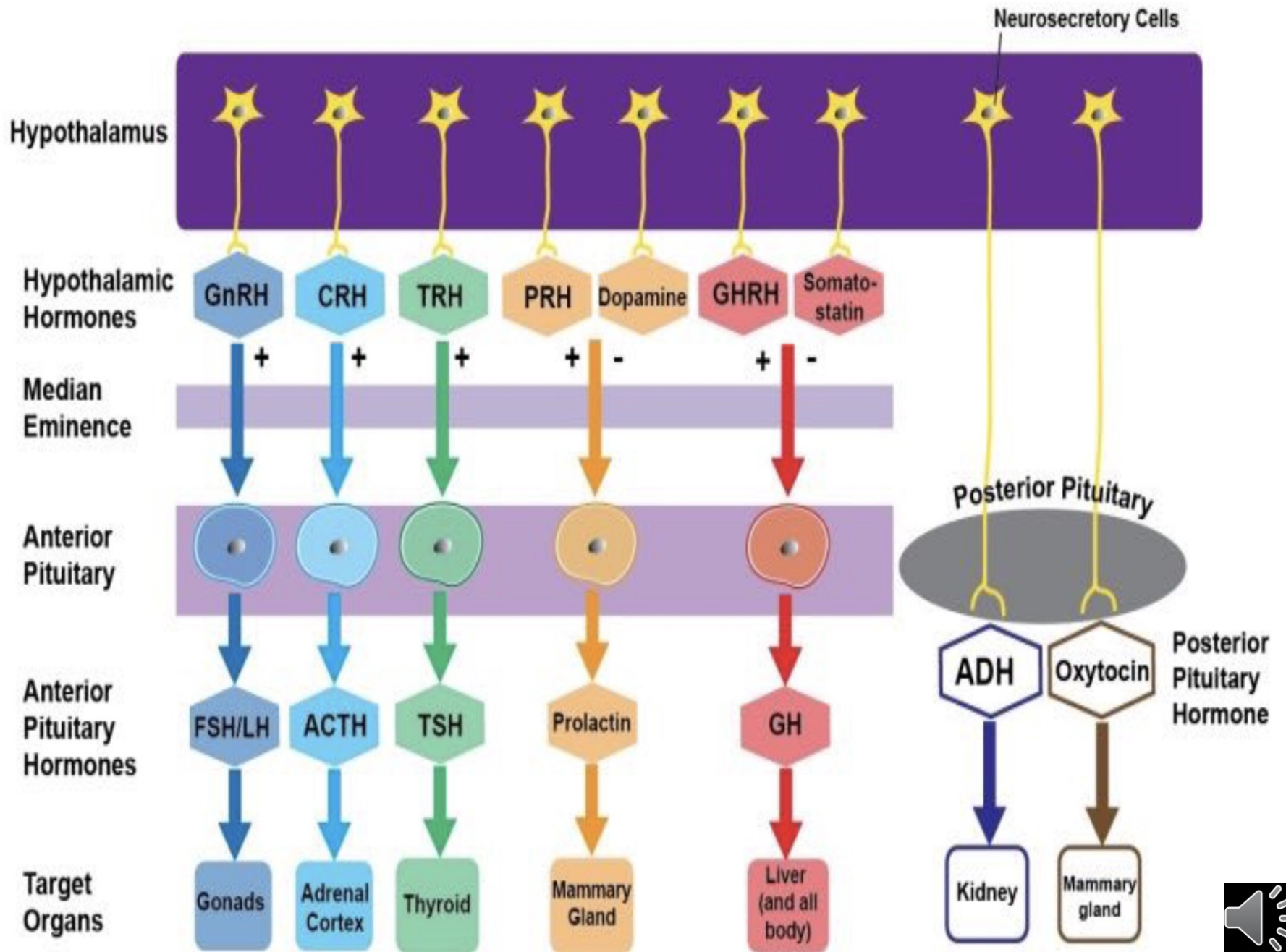
Řízení sekrece kortizolu



Hypothalamo-hypofyzární systém

A midsagittal view showing the inner boundaries of the lobes of the cerebral cortex
(Structures outside of the cerebrum are labeled in italics.)





Hypothalamus

GnRH

CRH

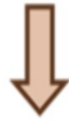
TRH

PRH

GHRH

ADH

Oxytocin



Adenohypophysis

Neurohypophysis

FSH/LH

ACTH

TSH

PROLACTIN

GH



Target organ

Gonads

Adrenal
Cortex

Thyroid

Mammary
gland

Liver
(and all
body)

Kidney

Mammary
gland



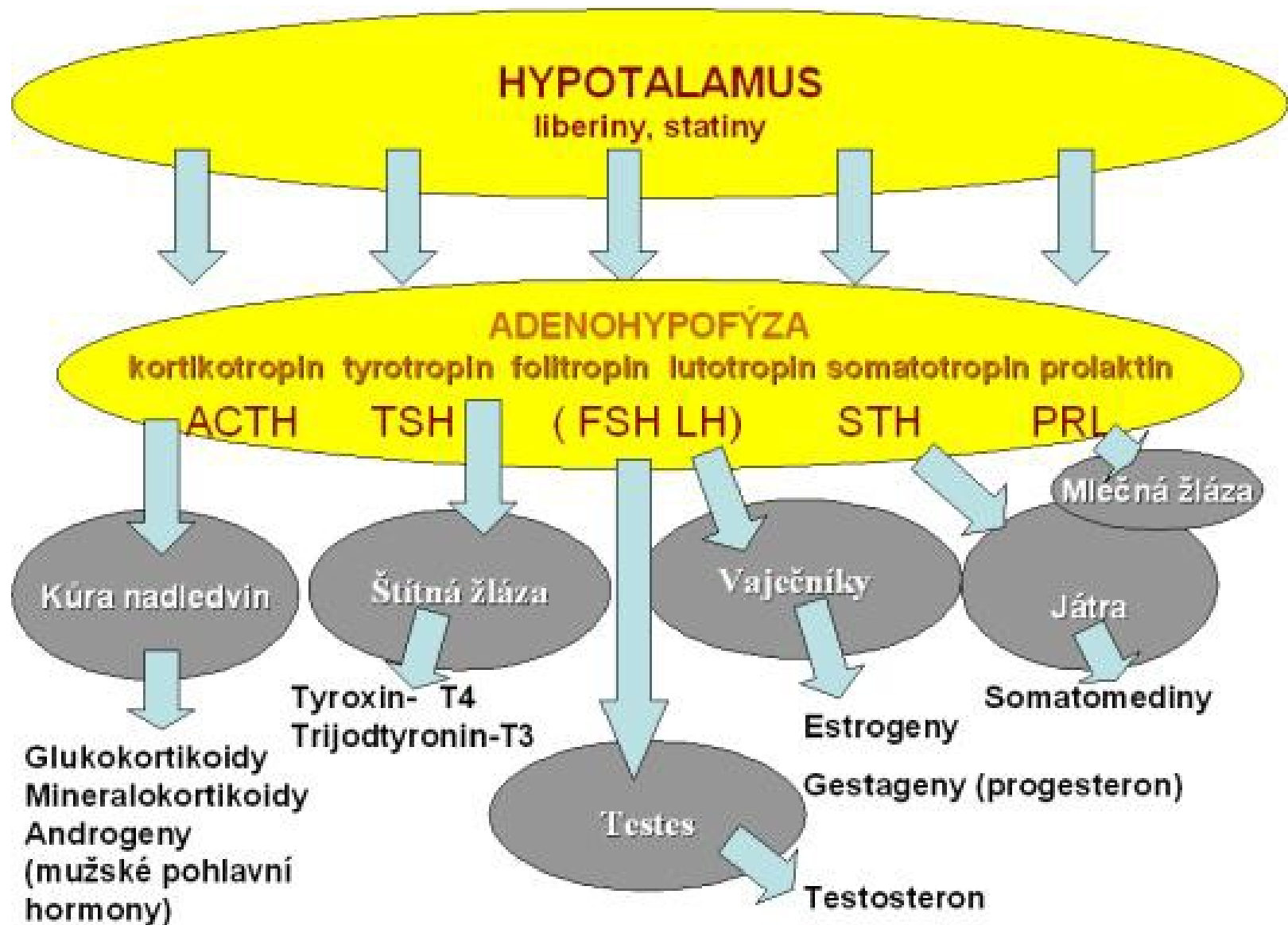
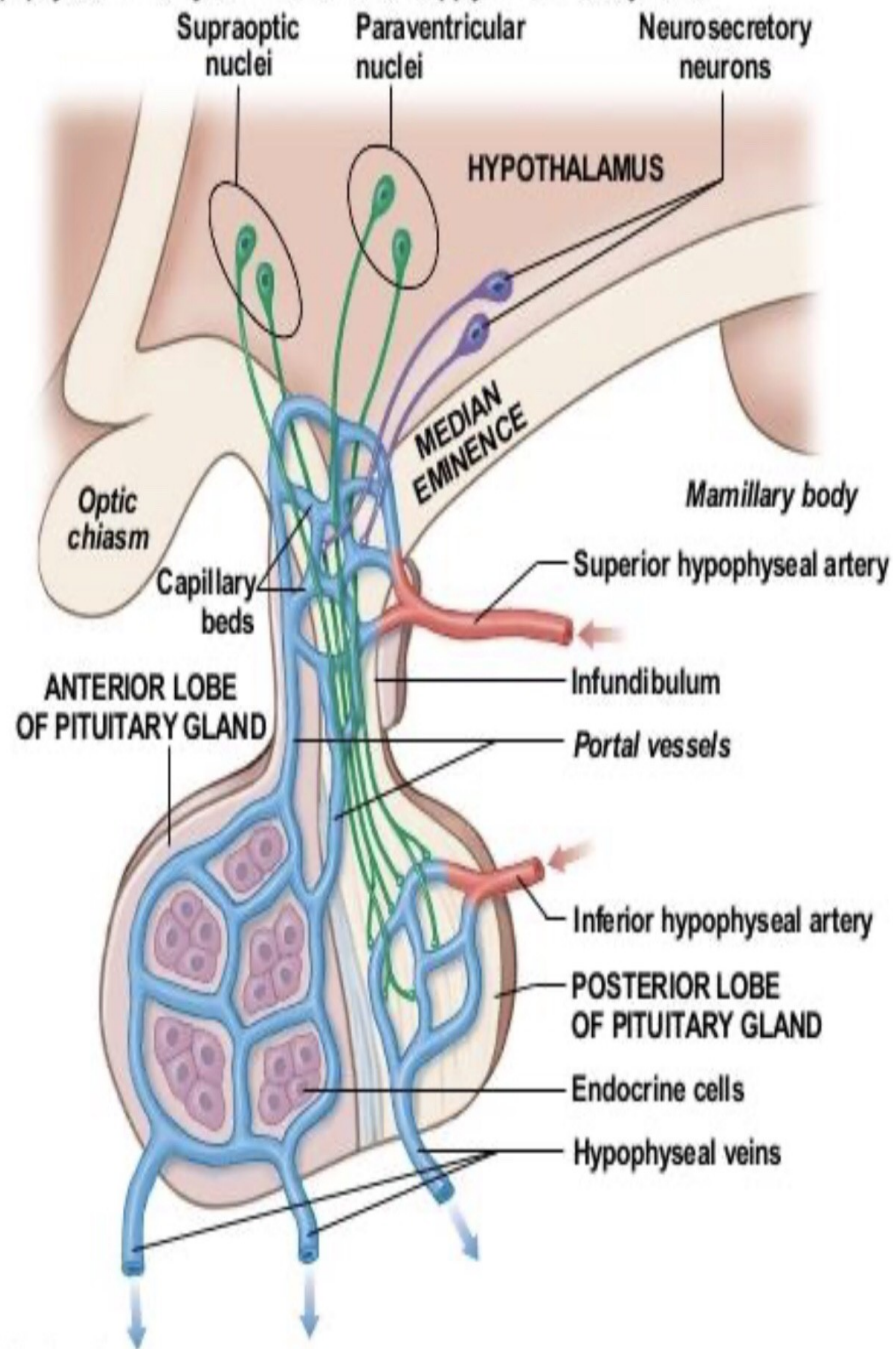
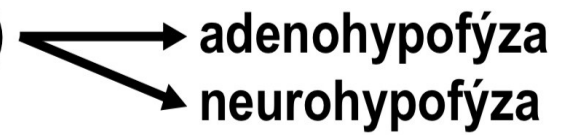


Figure 18-7 The Hypophyseal Portal System and the Blood Supply to the Pituitary Gland

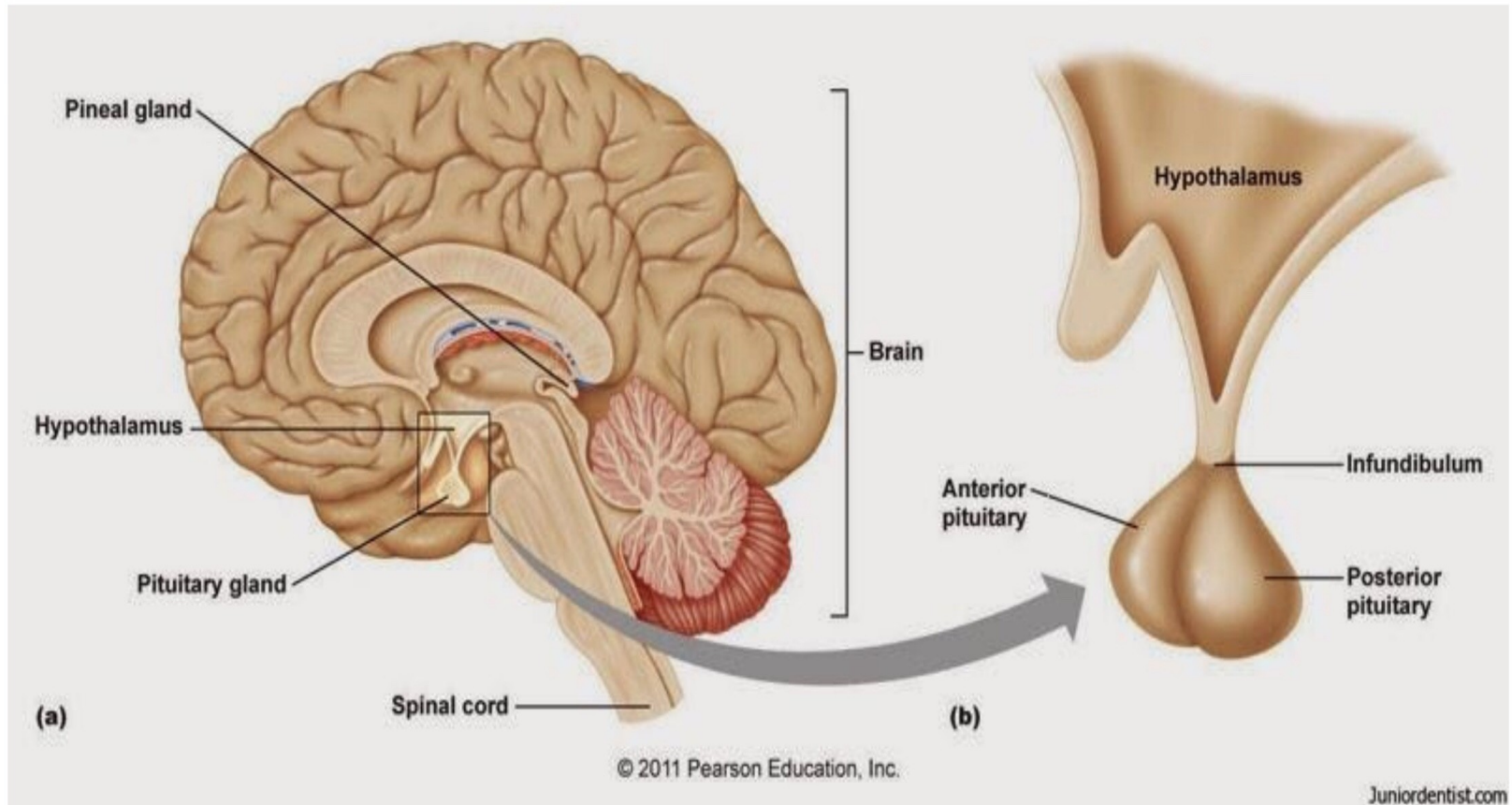


Hypothalamus

Hypofýza (pituitary gland, podvěsek mozkový)



Epifýza (pineal gland, šišinka)



Syntetizovány v hypothalamu!

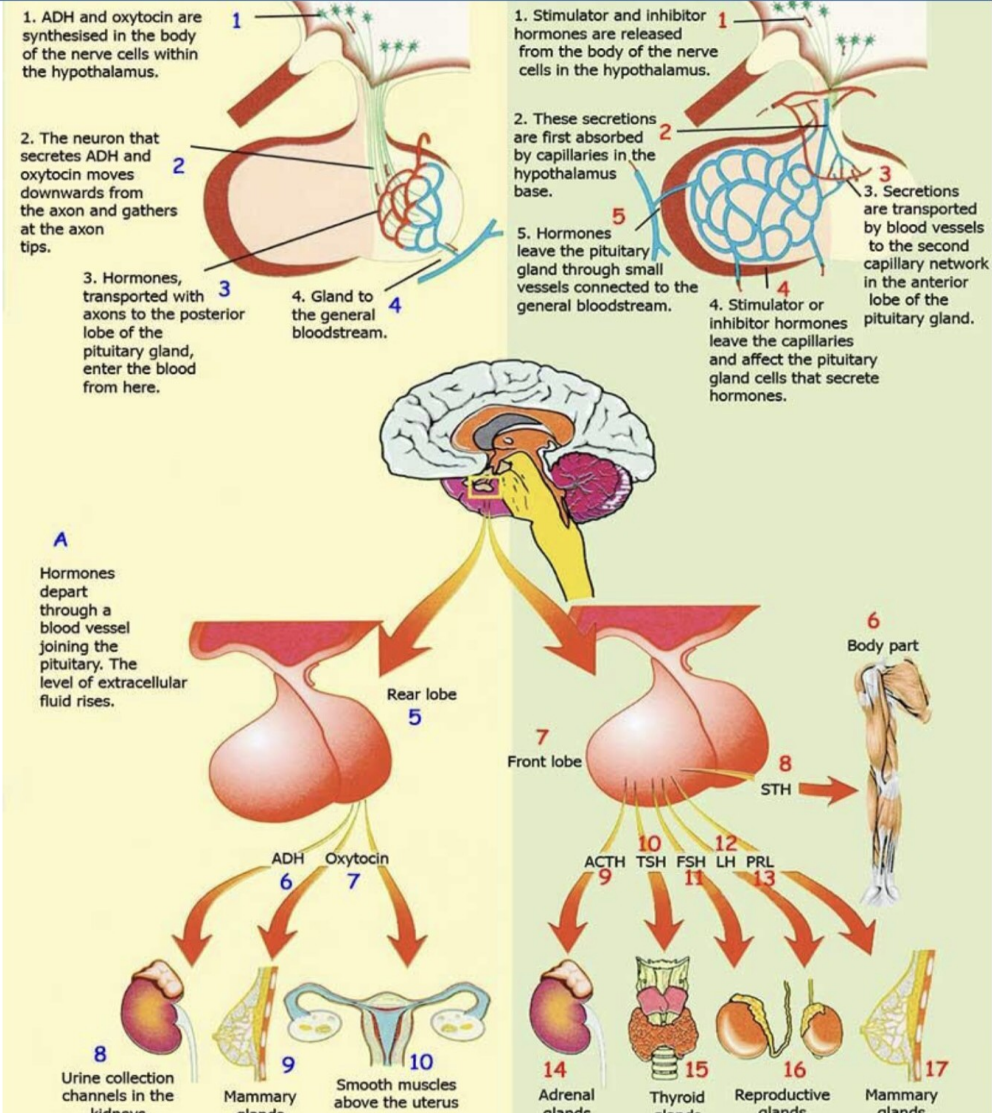
V neurohypofýze uvolňovány do krve.

Secreted hormone	Abbreviation	Produced by
Oxytocin	OXY or OXT	Magnocellular neurosecretory cells of the paraventricular nucleus and supraoptic nucleus
Vasopressin (antidiuretic hormone)	ADH or AVP	Magnocellular and parvocellular neurosecretory cells of the paraventricular nucleus, magnocellular cells in supraoptic nucleus

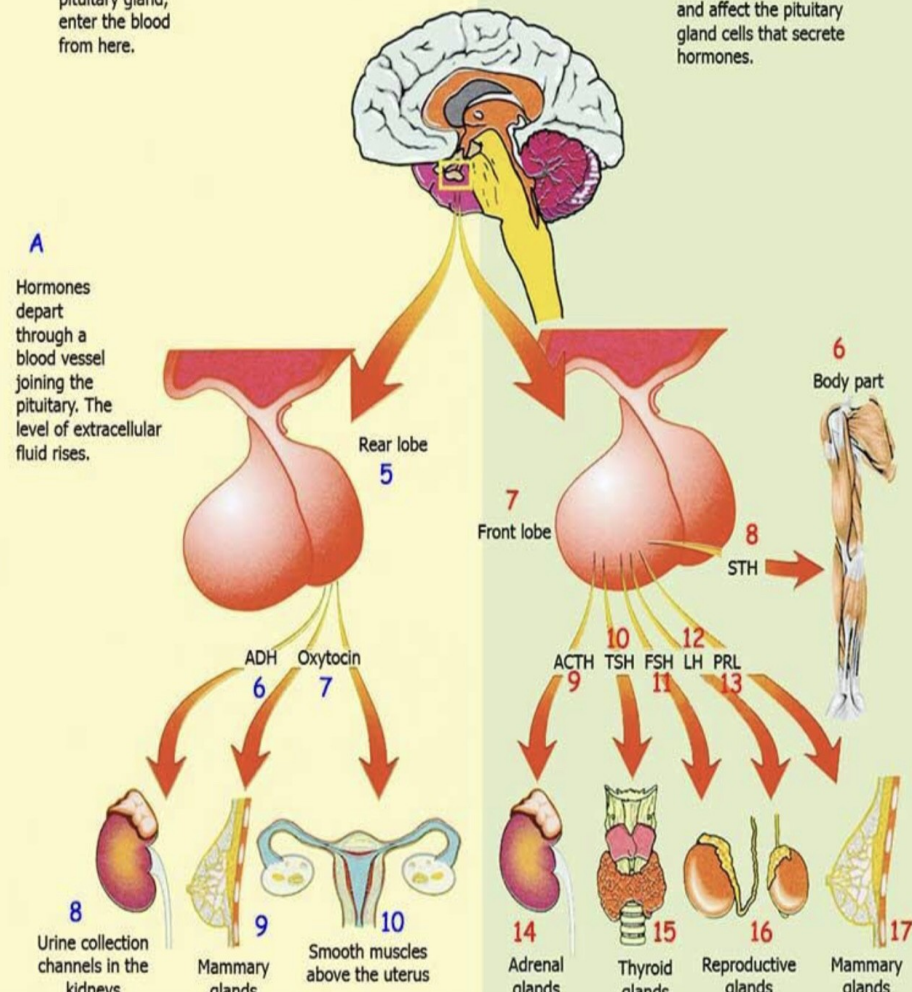
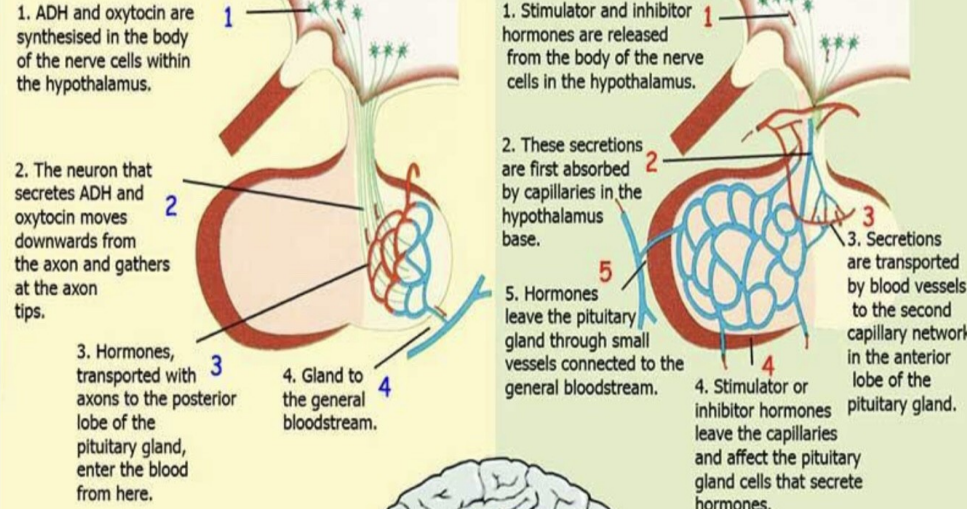
Effect

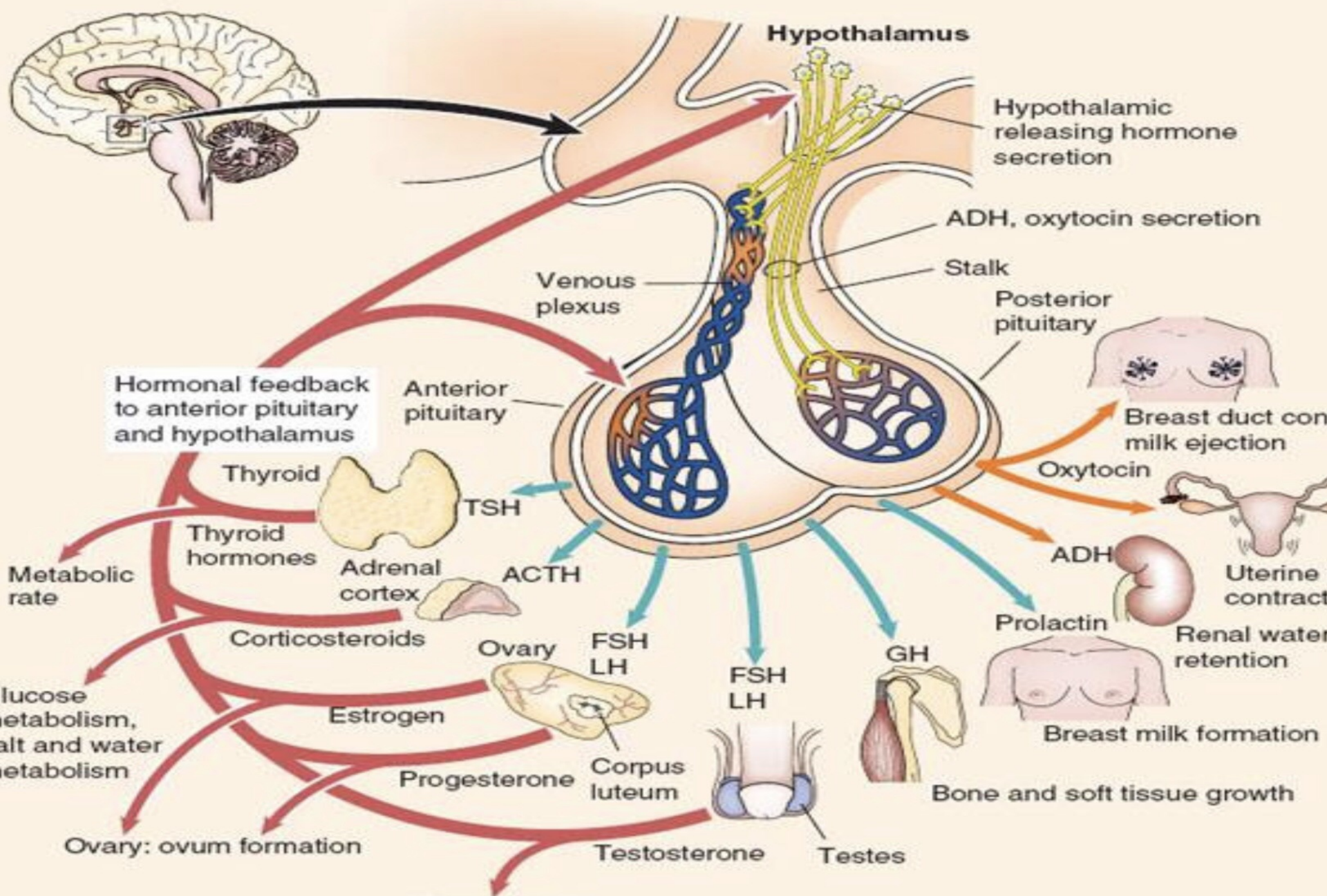
Uterine contraction
Lactation (letdown reflex)

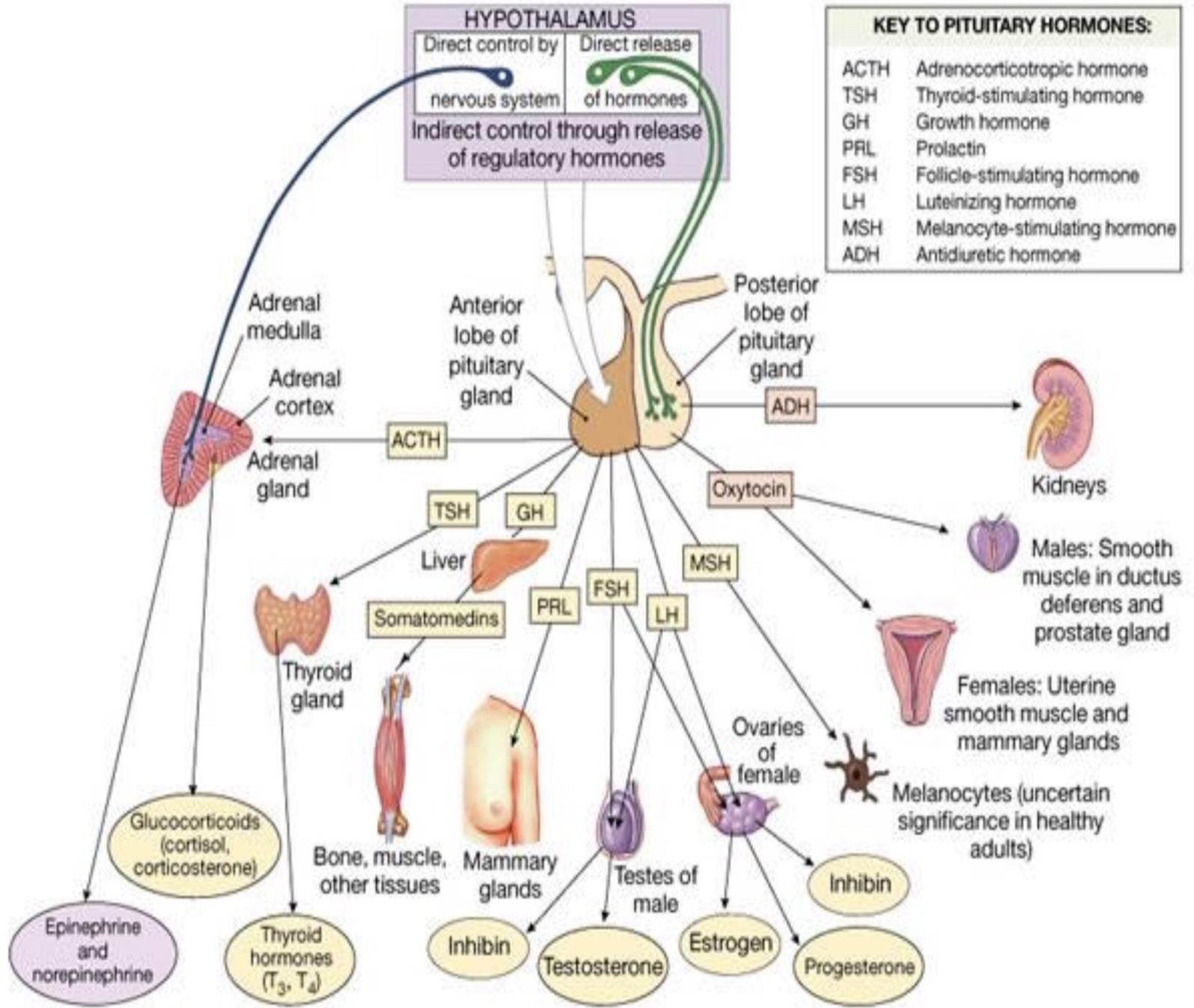
Increase in the permeability to water of the cells of distal tubule and collecting duct in the kidney and thus allows water reabsorption and excretion of concentrated urine



Hormone	Actions
Anterior Pituitary (adenohypophysis)	
Growth hormone (GH, GRH, somatotropin, STH)	Promotes body growth; other metabolic effects
Adrenocorticotrophic hormone (ACTH, corticotropin) – <i>trophic hormone</i>	Promotes secretion of cortisol and related glucocorticoids from the adrenal cortex
Thyroid-stimulating hormone (TSH, thyrotropin) – <i>trophic hormone</i>	Promotes synthesis and release of thyroid hormones and thyroid hypertrophy
Luteinizing hormone (LH) (gonadotropin) – <i>sex hormone</i>	Females: promotes ovulation and luteinization of ovarian follicles Males: promotes testosterone secretion
Follicle-stimulating hormone (FSH) (gonadotropin) – <i>sex hormone</i>	Females: promotes ovarian follicle growth and maturation Males: promotes spermatogenesis
Prolactin (PRL)	Females: stimulates milk secretion
Posterior Pituitary (neurohypophysis)	
Antidiuretic hormone (ADH, Vasopressin)	Promotes water retention in the kidney
Oxytocin	Causes uterine contraction in pregnancy; promotes milk ejection

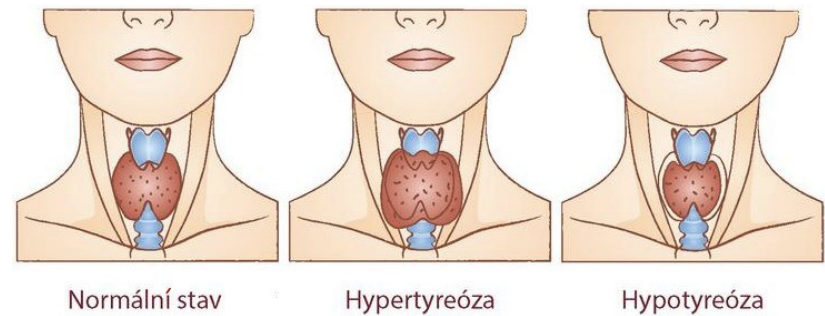
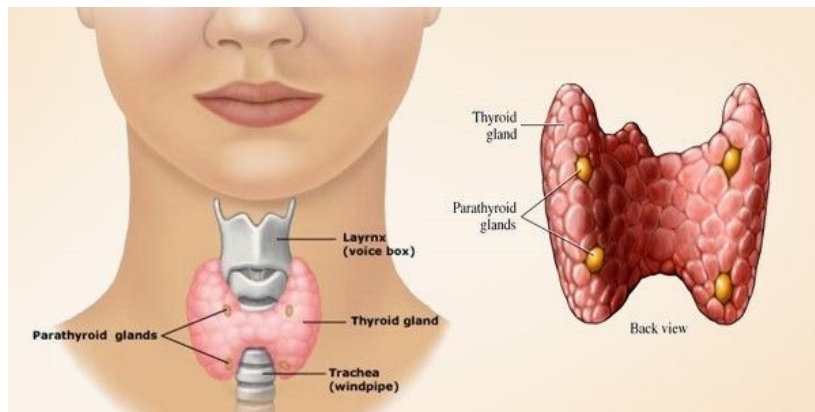








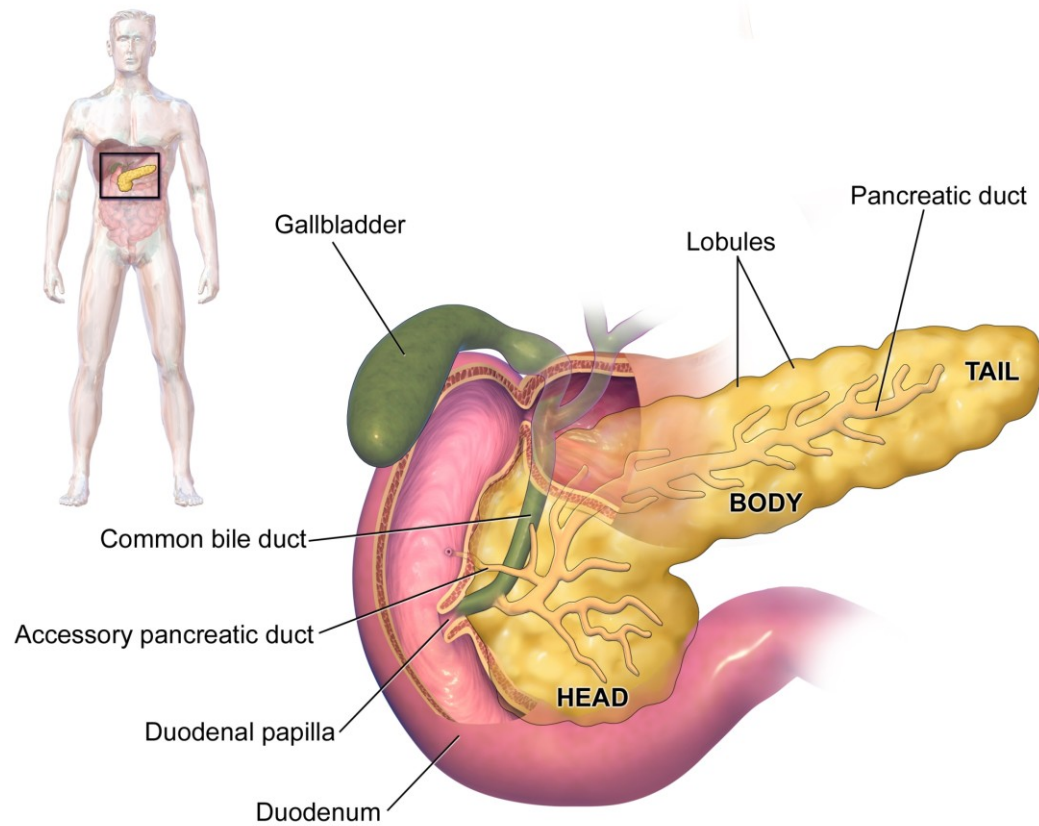
Štítná žláza

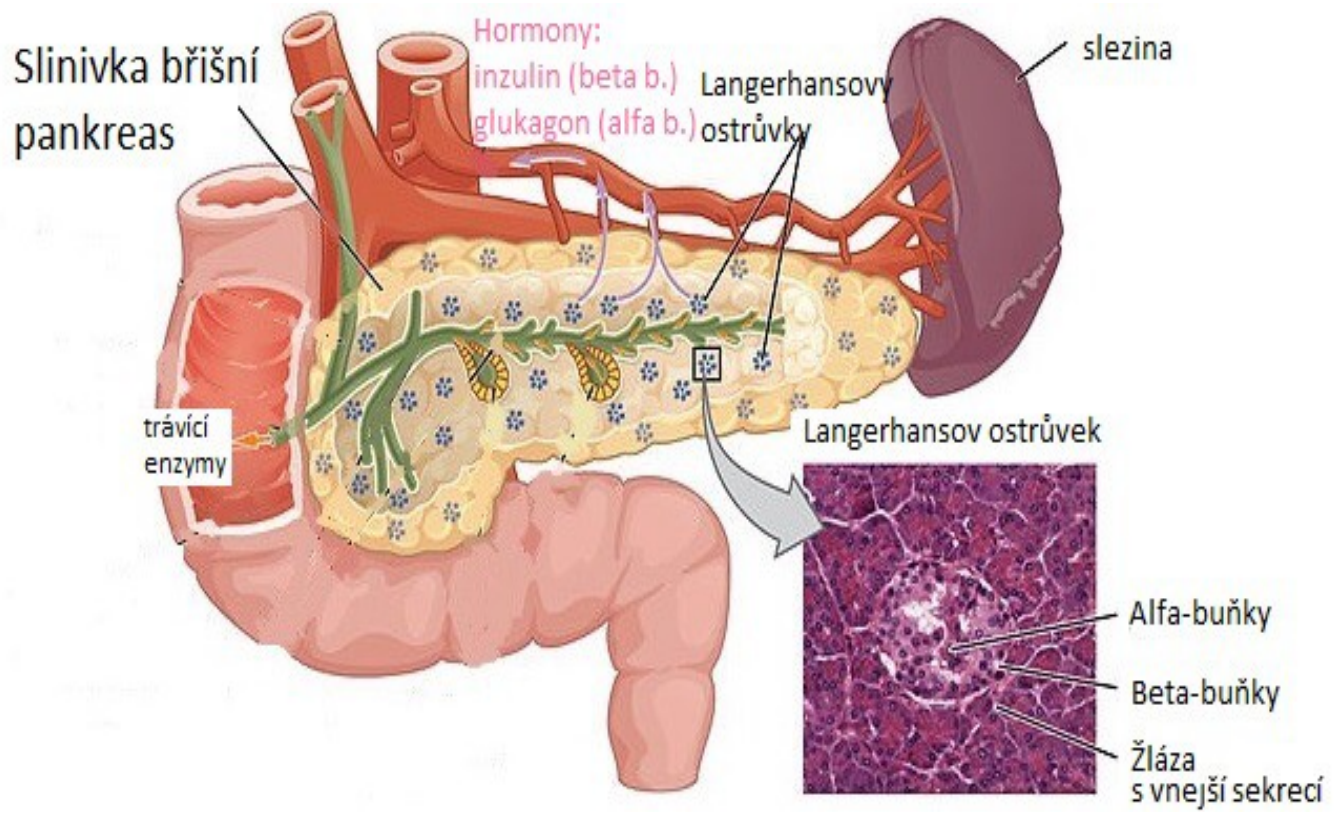


PŘÍŠTÍTNÁ TĚLÍSKA



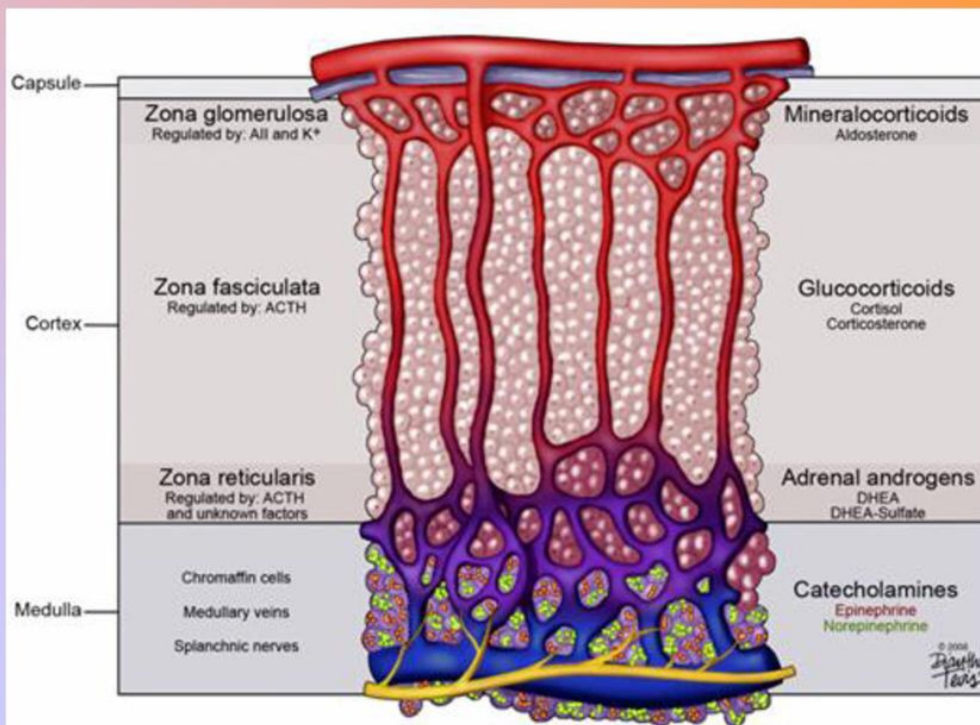
SLINIVKA BŘIŠNÍ





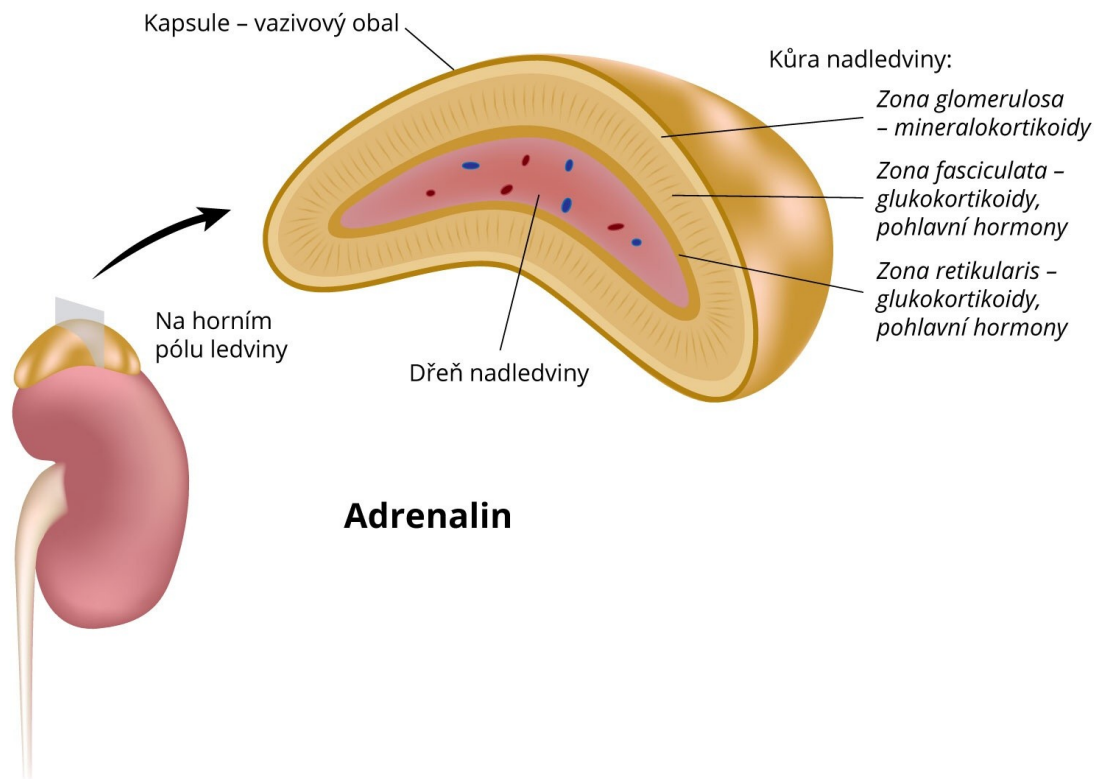
KÜRA NADLEDVIN

Küra nadledvin

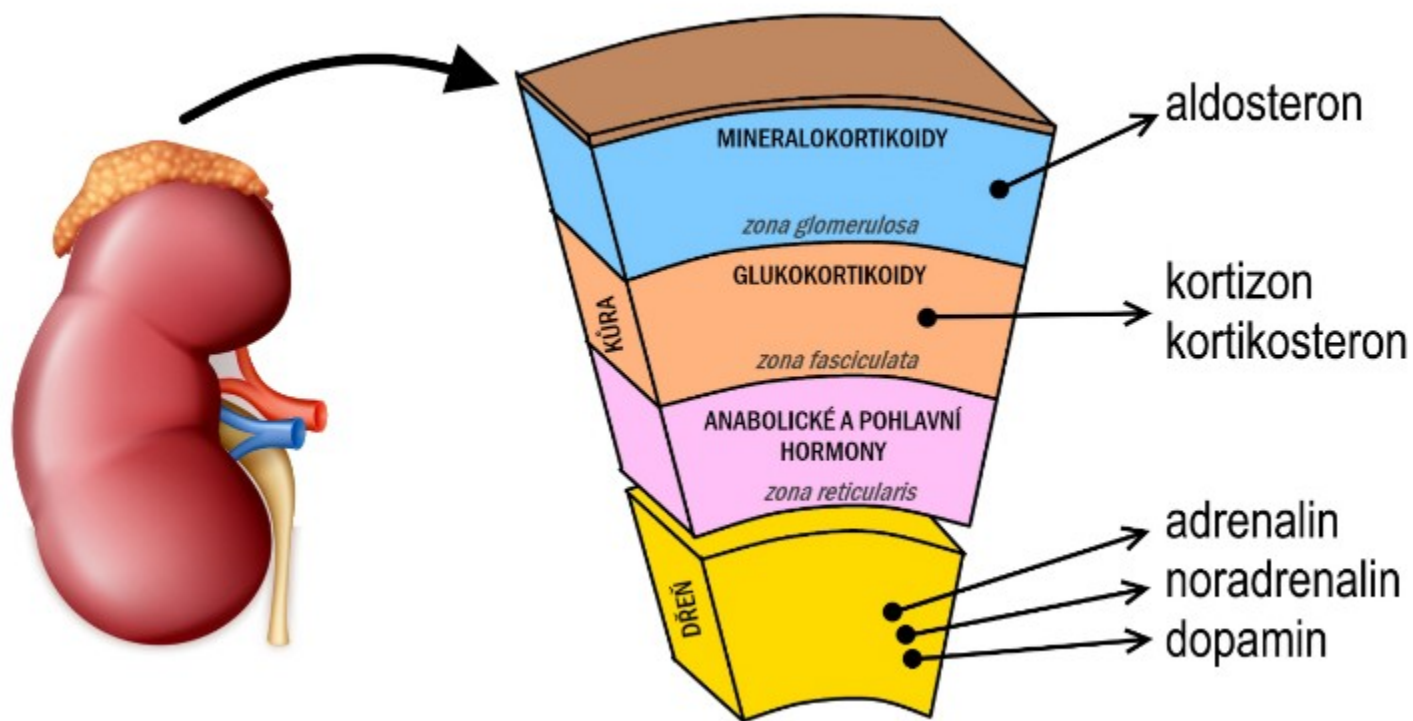


Kůra nadledvin

Nadledvina – glandula suprarenalis



KŮRA A DŘEŇ NADLEDVIN



STRES



STRES



Stres management

