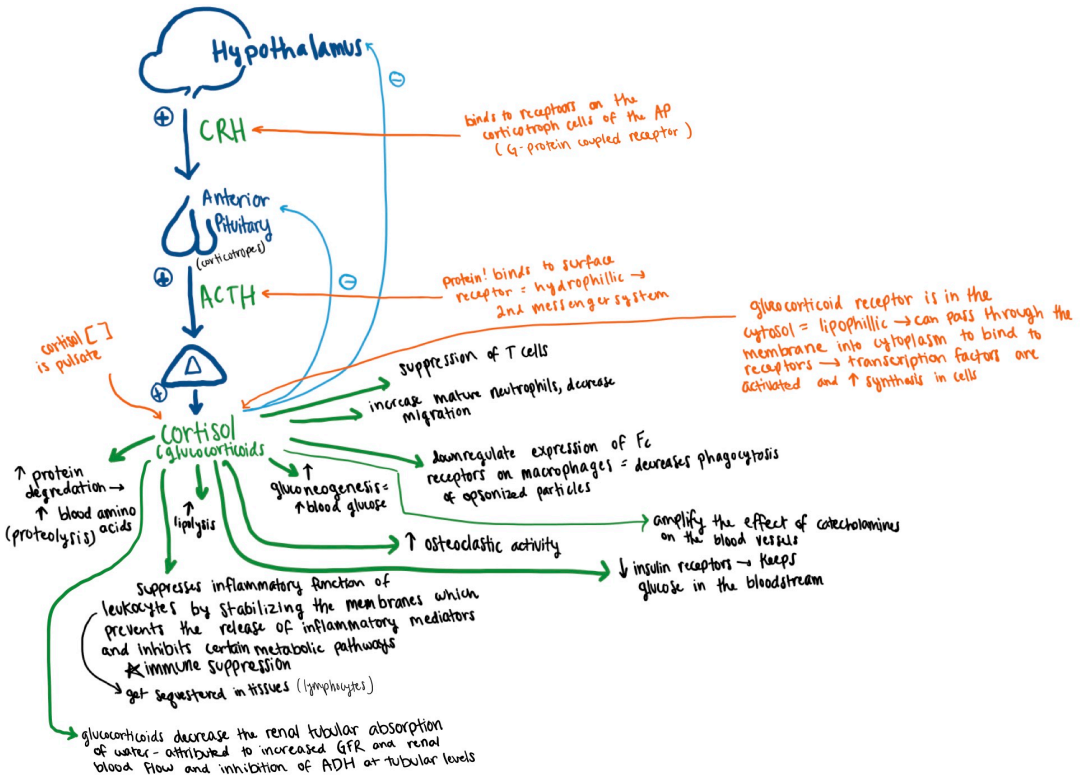
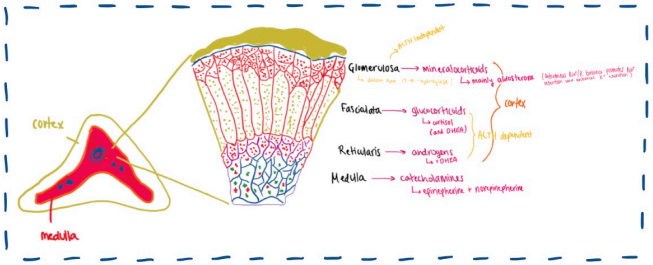
HPA Axis

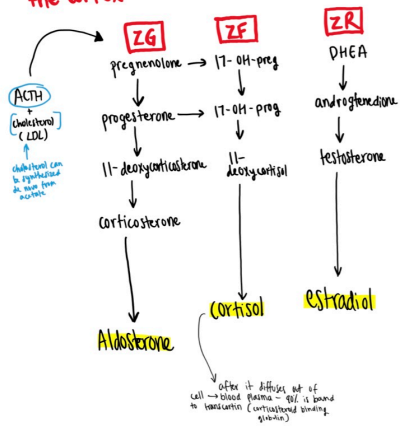
Hypothalamic-Pituitary-Adrenal Axis



Adrenal Anatomy



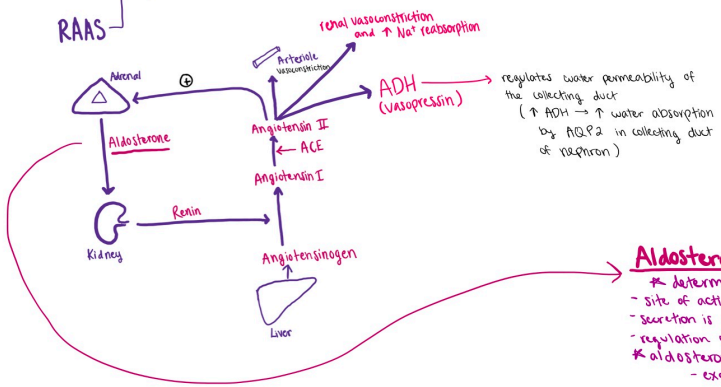
Synthesis in the cortex



★ Diurnal rhythm and stress act on the hypothalamus to influence secretion of CRH
↳ high levels of cortisol in the morning, lower levels at night
(pulsate rhythm)

Renin-Angiotensin-Aldosterone System (RAAS)

RAAS → goal of RAAS = increase blood volume and Na^+ concentration



Aldosterone

★ determines Na^+ / K^+ balance
- site of action = distal tubules + collecting ducts of kidney (principal cells)
- secretion is influenced by RAAS by Na^+ concentration and fall in blood pressure
- regulation of aldosterone secretion is largely independent of anterior pituitary control

★ aldosterone stimulates:
- excretion of K^+ and retention/absorption of Na^+ and water