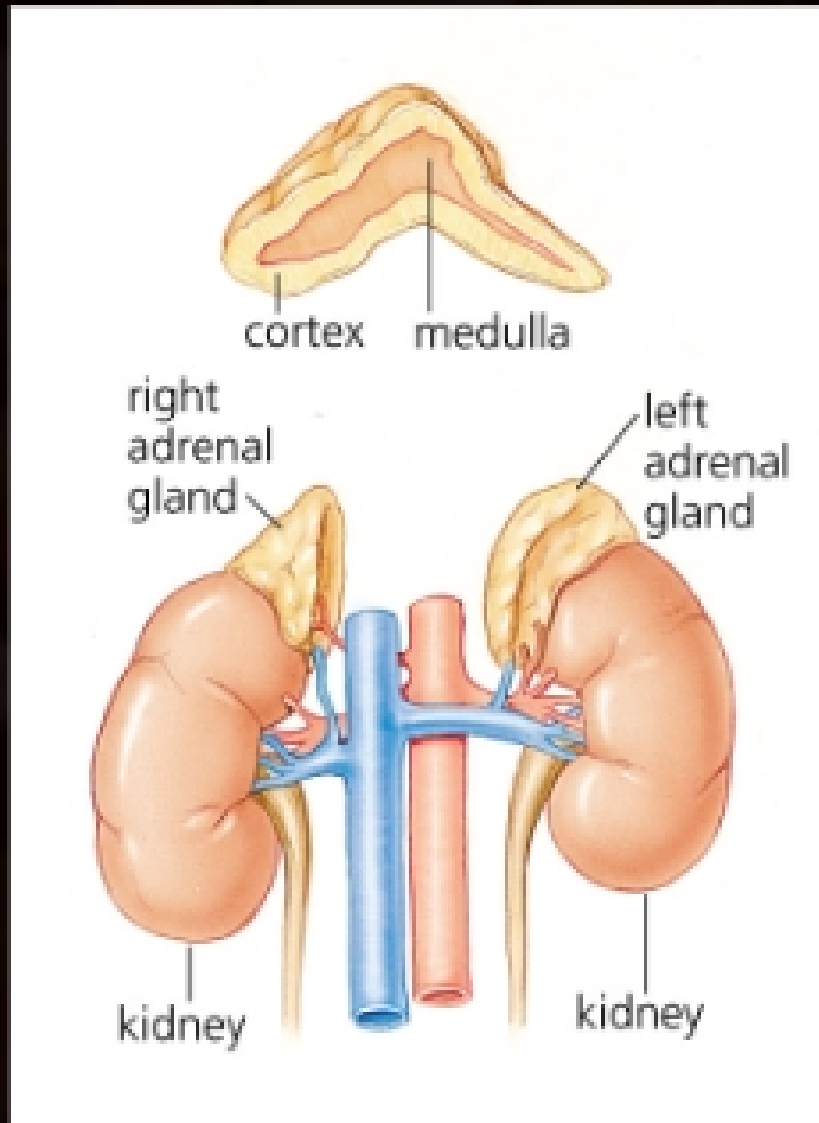


# Steroid-based Drugs

- Adrenocortical Hormones



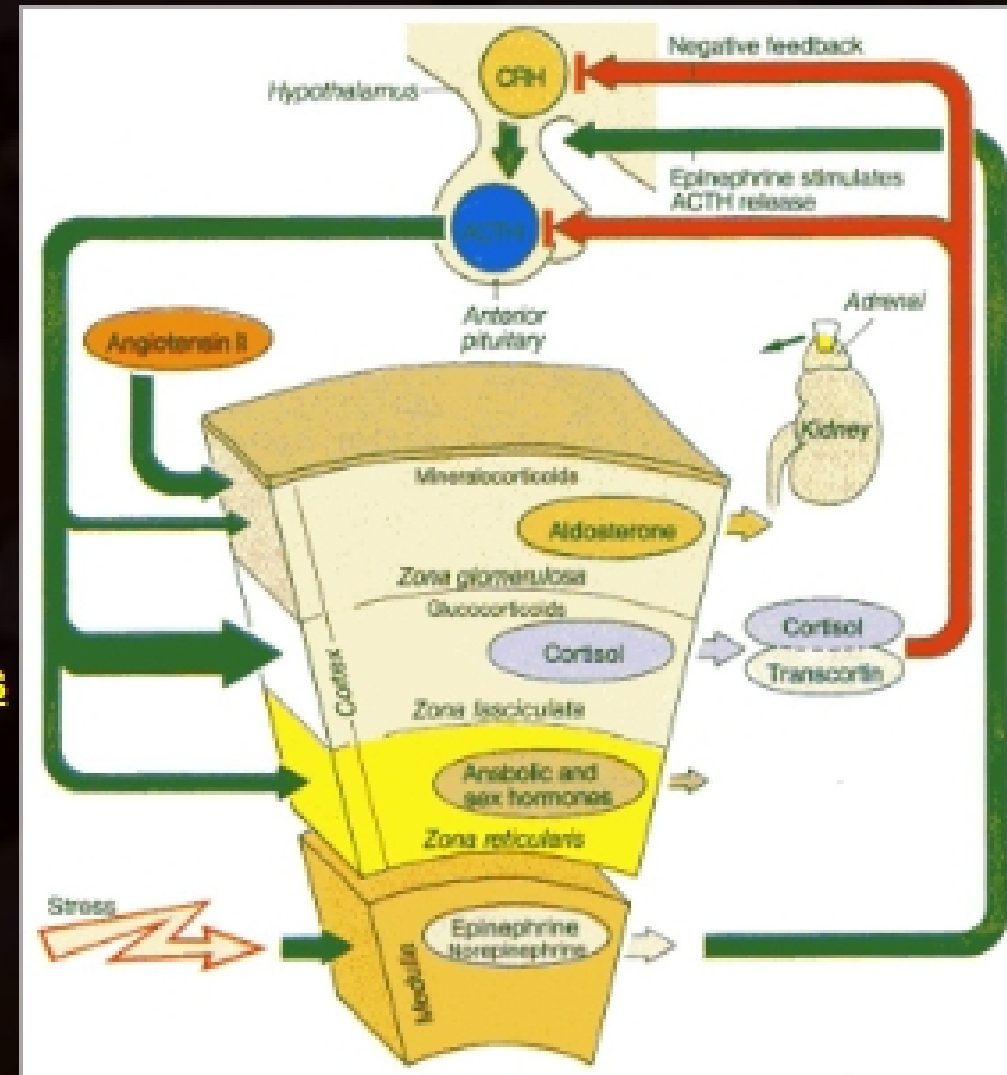
Cut section



# Adrenocortical Hormones

## Adrenal gland:

- Medulla:
  - produces Epinephrine (stimulated by sympathetic impulse)
- Cortex:
  - Zona glomerulosa – produces Aldosterone (stimulated by Angiotensin II and ACTH)
  - Zona fasciculata – produces Glucocorticoids (stimulated by ACTH = Corticotropin)
  - Zona reticularis – produces Androgens (physiological role unclear)



# Adrenocortical Hormones

## Steroid hormone synthesis:

- Pregnenolone synthesis is rate-limiting step
- C21 hydroxylase:
  - Prevents hydroxylation of C17 (-> c)
  - => Only **mineralocorticoids**
- C17 hydroxylase:
  - Hydroxylation of C17 (-> f, g) can be followed by hydroxylation of C11 and C21 (-> h, j, k)
  - => **Sex hormones and glucocorticoids**
- P450<sub>C17α</sub> hydroxylase:
  - Produces 17-Keto-steroids (-> l)
  - => **Sex hormones**

