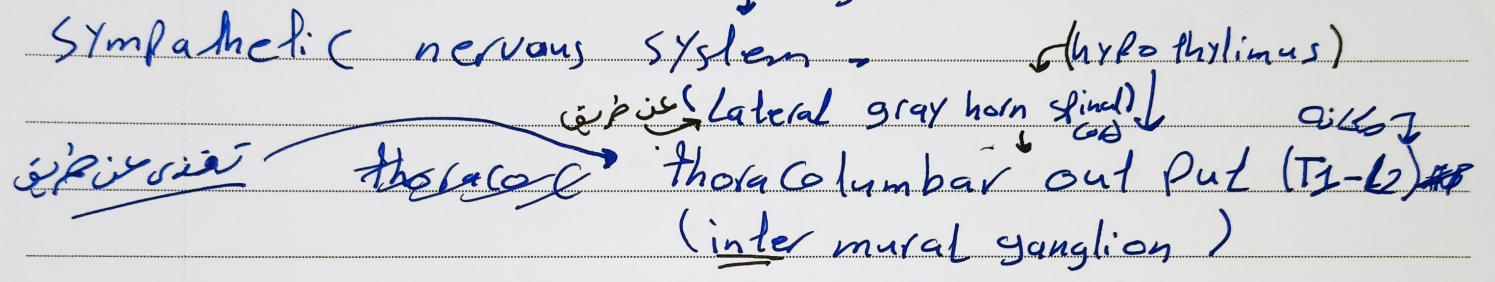


No.

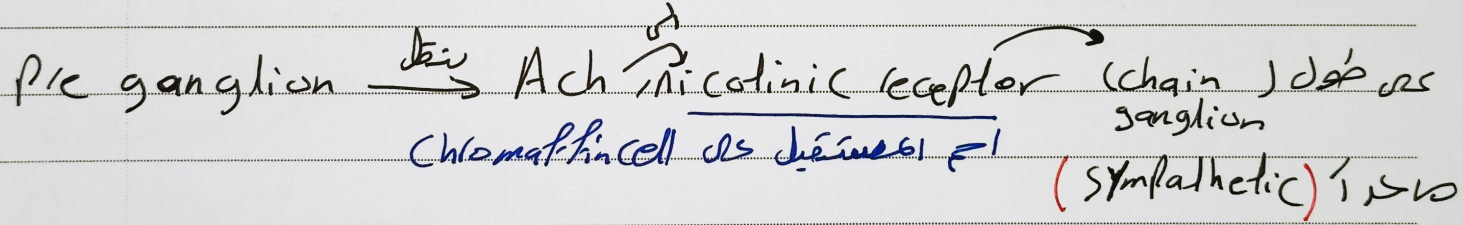
Mechanism of secretion Adrenal medulla

Adrenal medulla $\xrightarrow[\text{LX}]{\text{ضيق}}$ Chromaffin cell

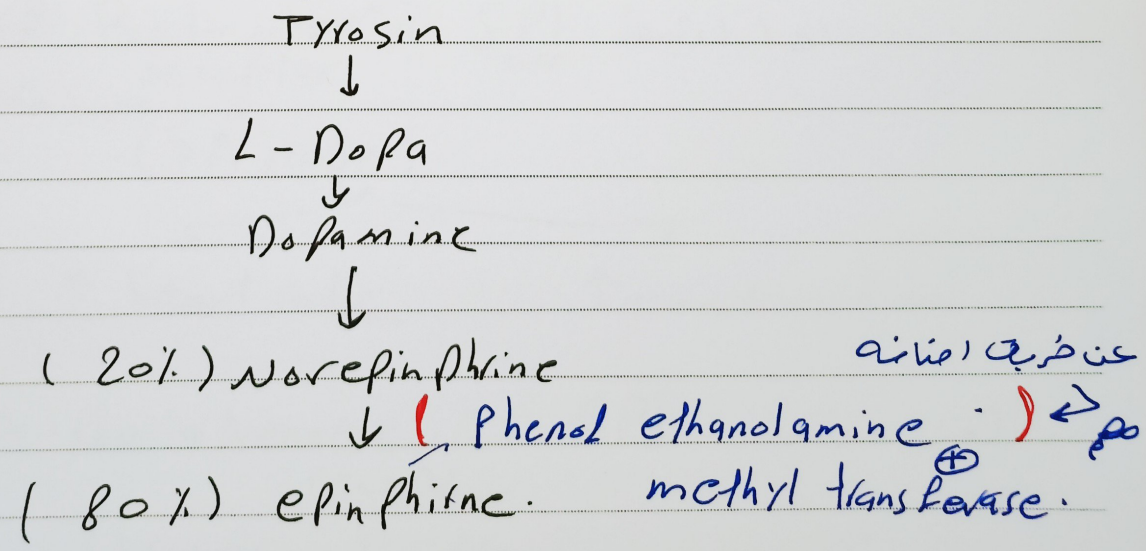
Chromaffin cell: Cell bodies of post ganglionic motor neuron



- 1) short time stress (Acute stress) \leftarrow Chromaffin cell
- 2) Fight or flight.



طريقة صناعة الأبتفرين ونورإبينفرين



تأثير ادرينالين (epinephrine) على

1) Liver: EPI $\xrightarrow{\text{ارتباط}}$ G protein $\xrightarrow{\text{تنشيط}}$ PKA \rightarrow \uparrow cortisol sensitivity

gluconeogenesis \uparrow glycogenolysis \uparrow

\downarrow ينتج
(hyperglycemia)

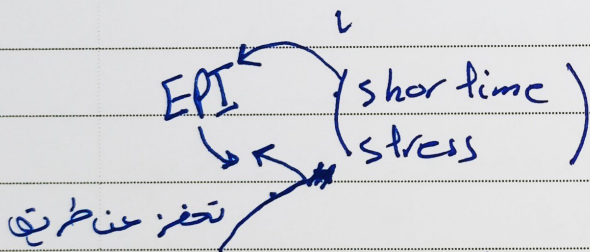
عن طريق تحويل

- 1) odd chain FA
- 2) glycerol, AA
- 3) lactic Acid
- 4) Adipocly $\xrightarrow{\text{خاصية عن طريق}}$

تعزيز من إنتاج EPI \downarrow G protein \rightarrow \uparrow H sensitive lipase

\uparrow lipolysis

glycerol \downarrow (Liver)
 F.A \downarrow (Beta oxidation in muscle &)
 \downarrow تنتج (ATP)



2) Heart: \rightarrow \uparrow blood pressure

\rightarrow β adrenergic receptor (مكان الارتباط) \downarrow (SA node)

\uparrow heart rate

\uparrow contraction

\rightarrow α adrenergic receptor (Vasoconstriction)

③ Lung : ↑ Respiration rate.

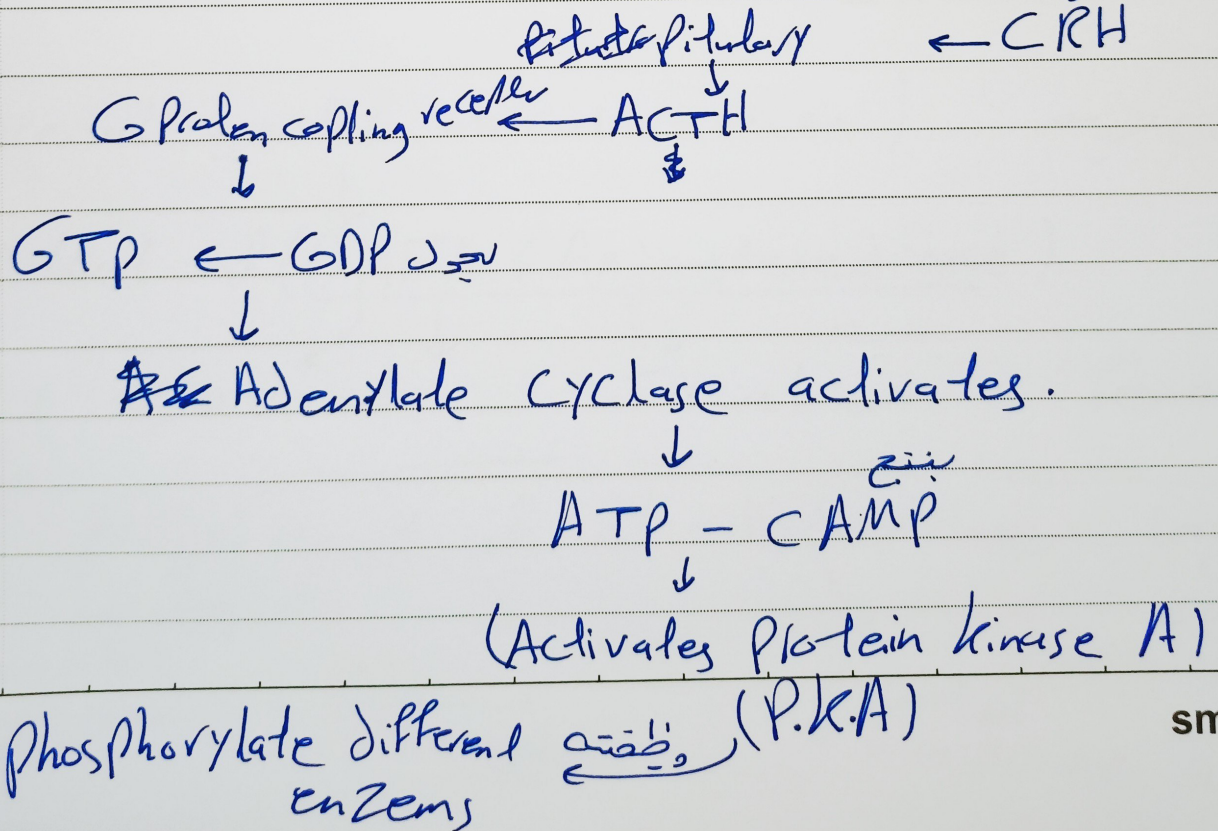
↳ Beta adrenergic receptors EPI
↓
dilate bronchioles → ↑ Respiration rate

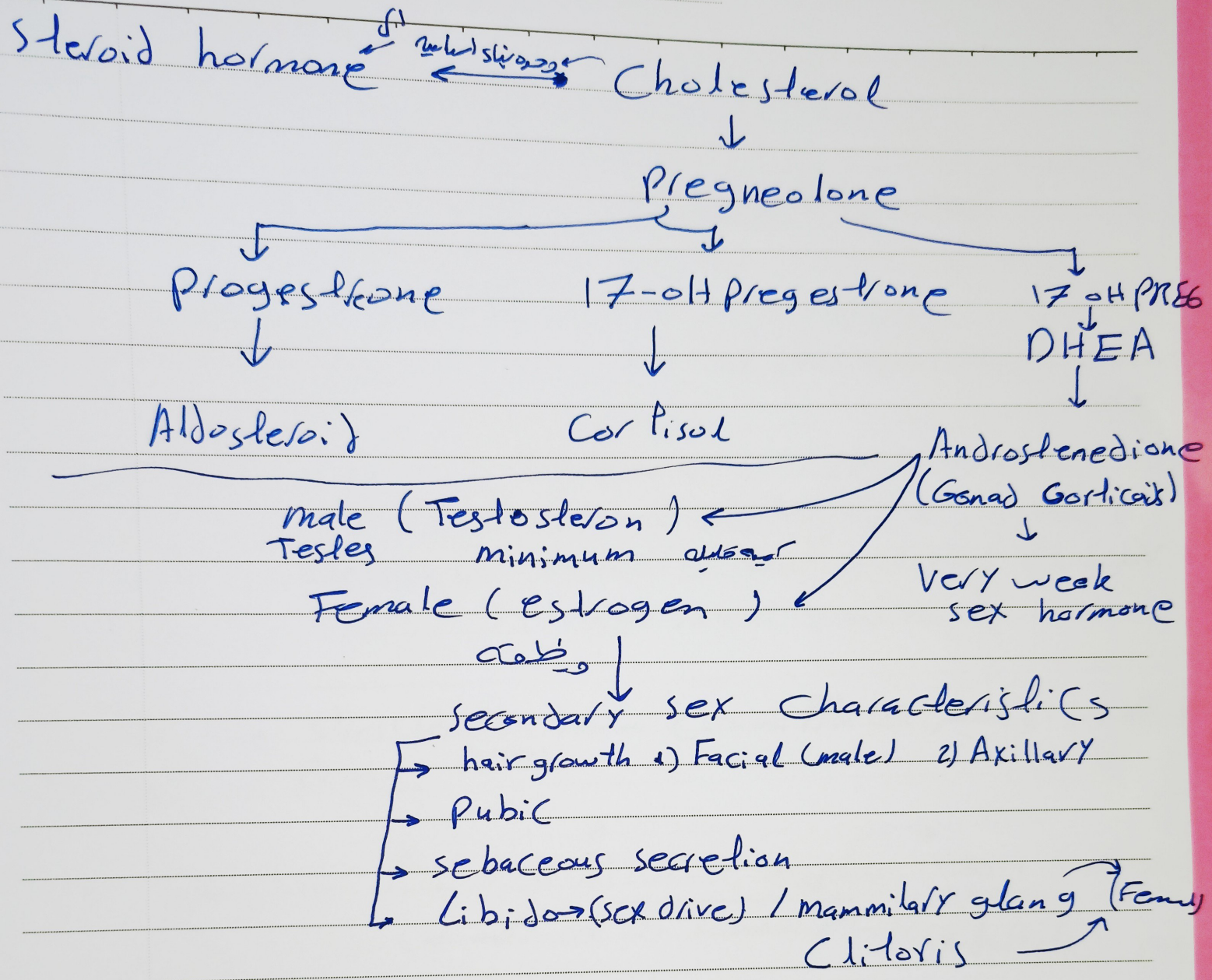
④ GIT
kidney
skin } → Constrict blood vessels.

note

④ Pheochromocytoma : Cancer of (Adrenal medulla)
↓
Norepinephrine and Epinephrine

Gonadocorticoids
Hypothalamus → Para ventricular nucleus





(Adrenal genital masculinization) ← مردانه

↑ level of (DHEA & Androstenedione)

↑ libido in male

Facial hair in female

Deficiency of 21-hydroxylase (male & children)

Adrenogenital syndrome

↑ adrenal Androgen

Cortisol

Aldosterone

Ambiguous genital

smile for life hypoadrenalism