

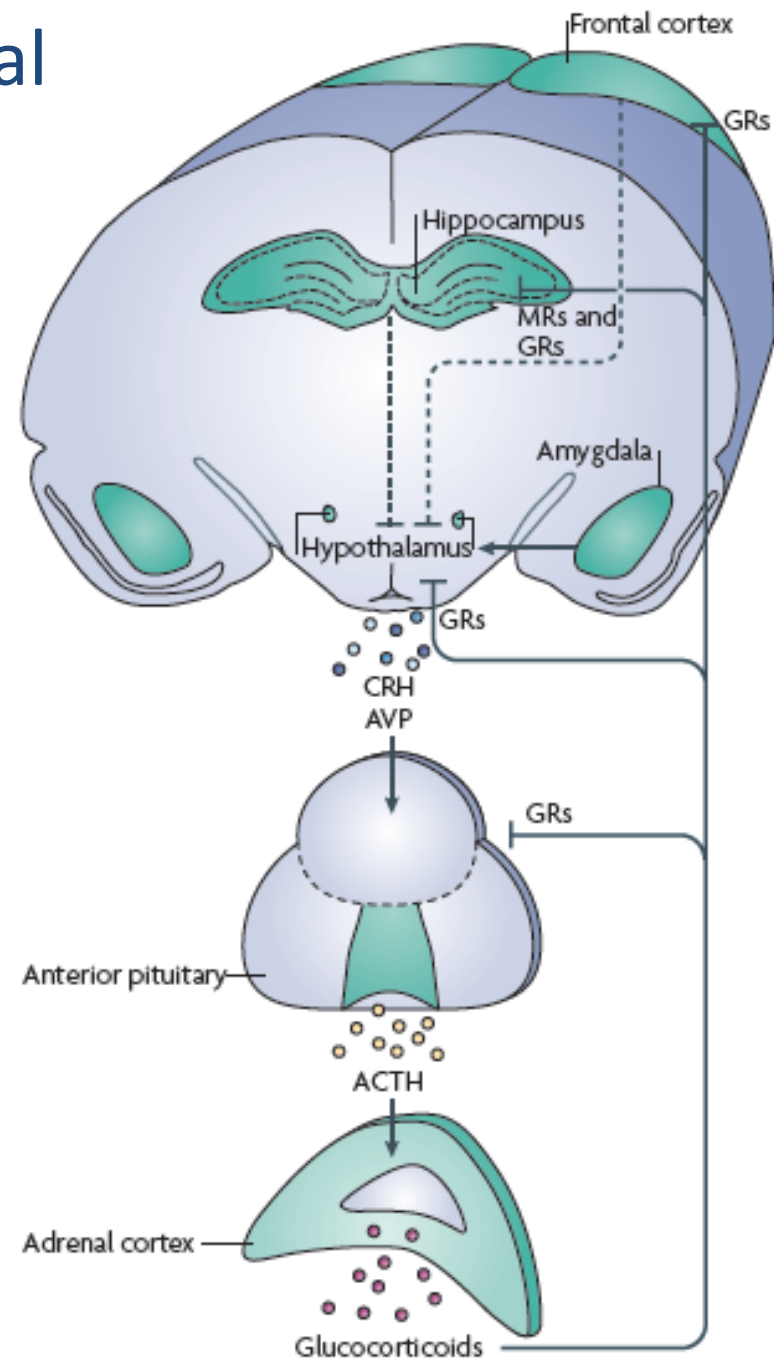
BIF 214

*Fisiologia Animal: Mecanismos e Adaptação do Controle Interno,  
Reprodução e Defesa*

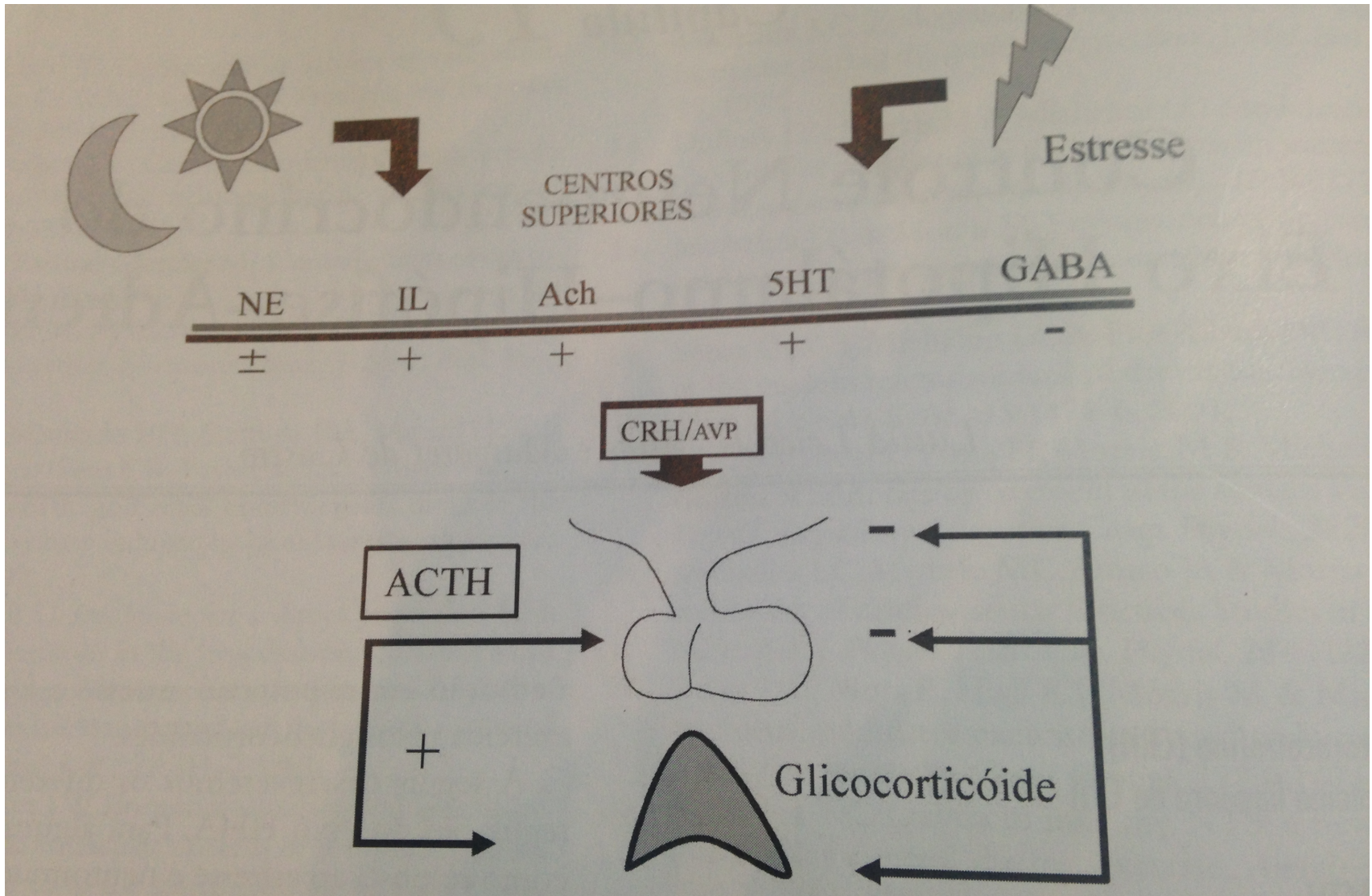
Eixo hipotálamo-hipófise-adrenal

2019

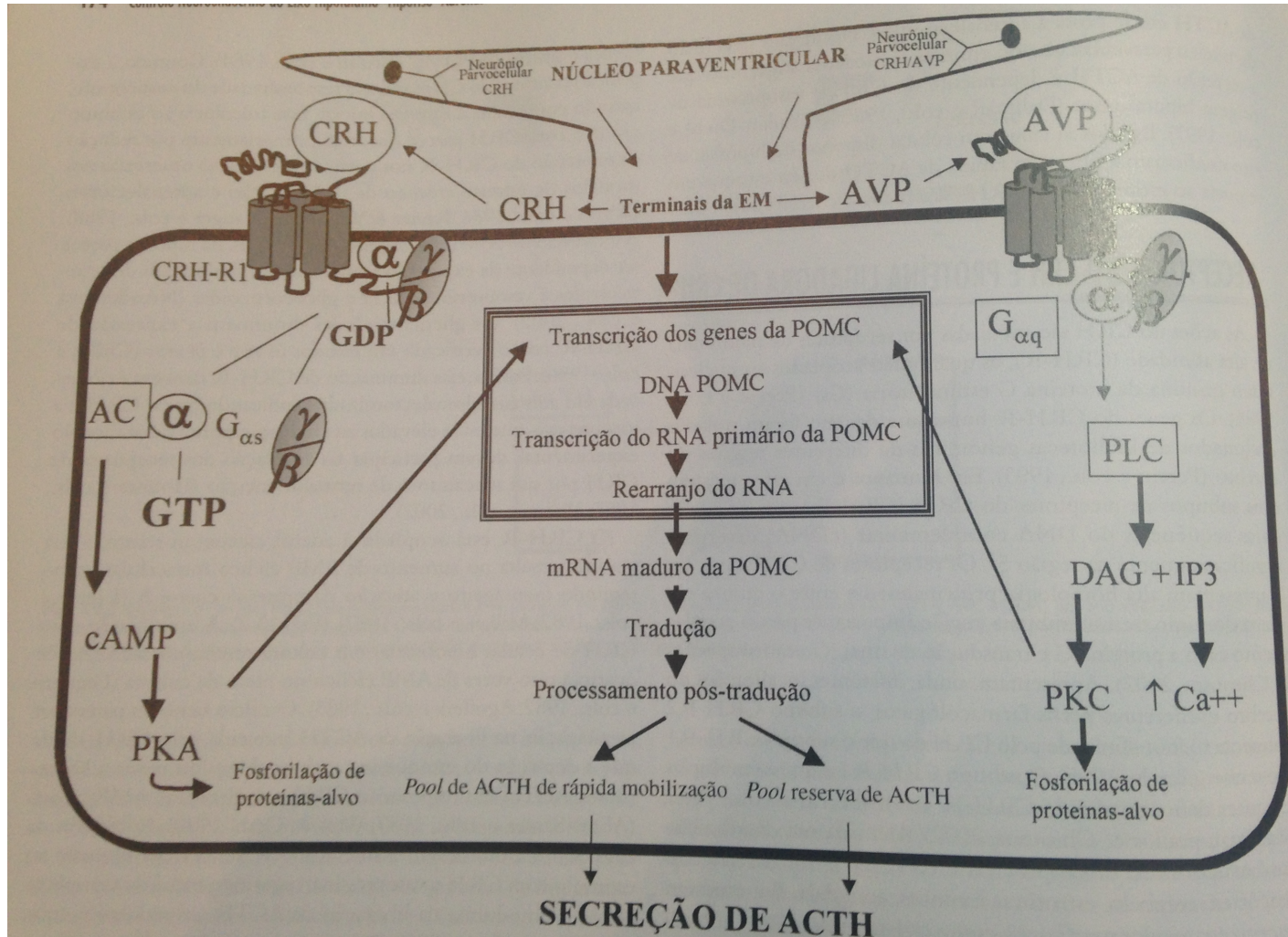
# Eixo hipotálamo-hipófise-adrenal



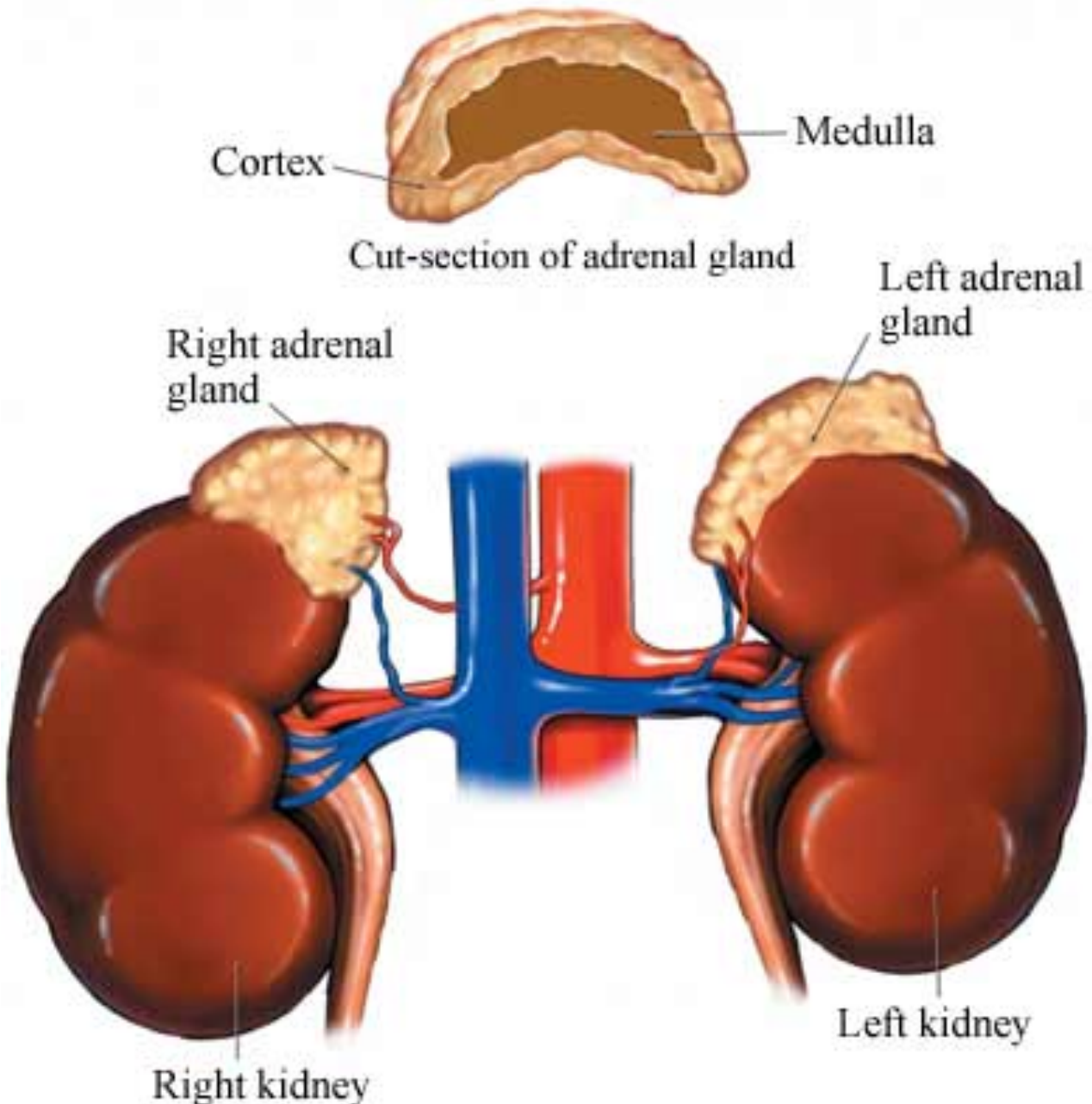
# Regulação do eixo Hipotálamo-Hipófise-Adrenal



# Sinalização de receptores de CRH e vasopressina na célula corticotrófica

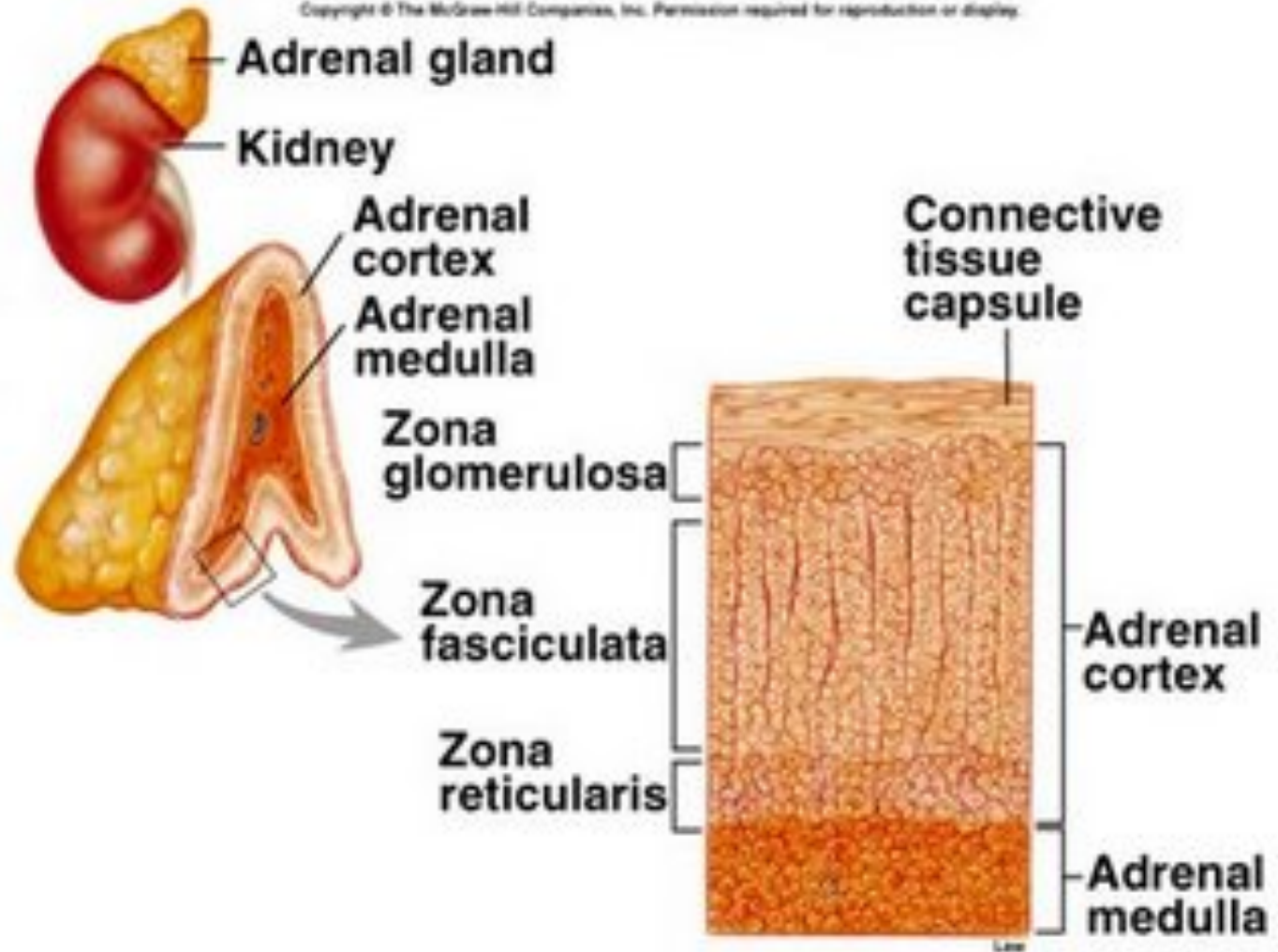


# Glândulas adrenais



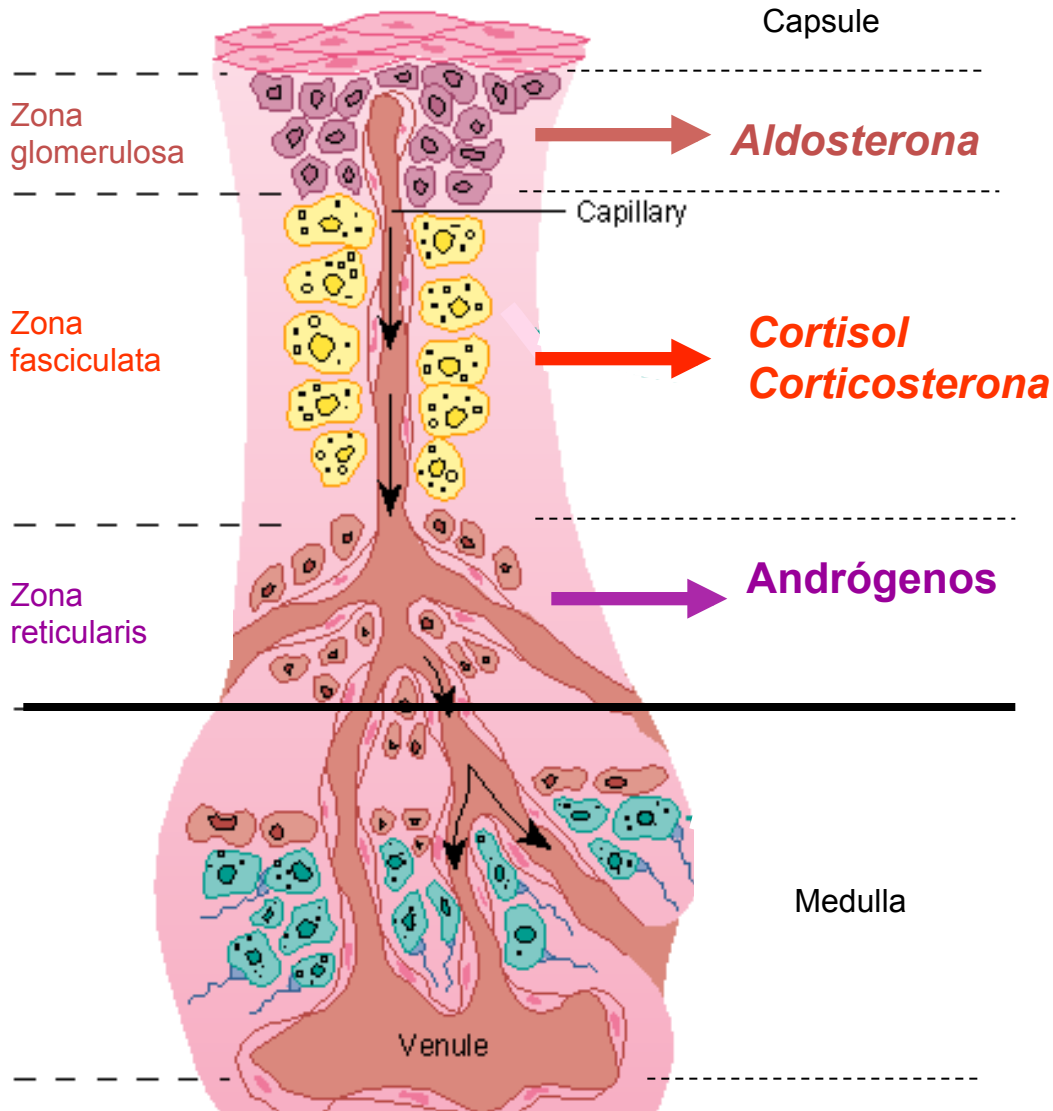
# Glândulas adrenais

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# Córtex Adrenal - 3 camadas

## 3 grupos de hormônios (esteroidais)



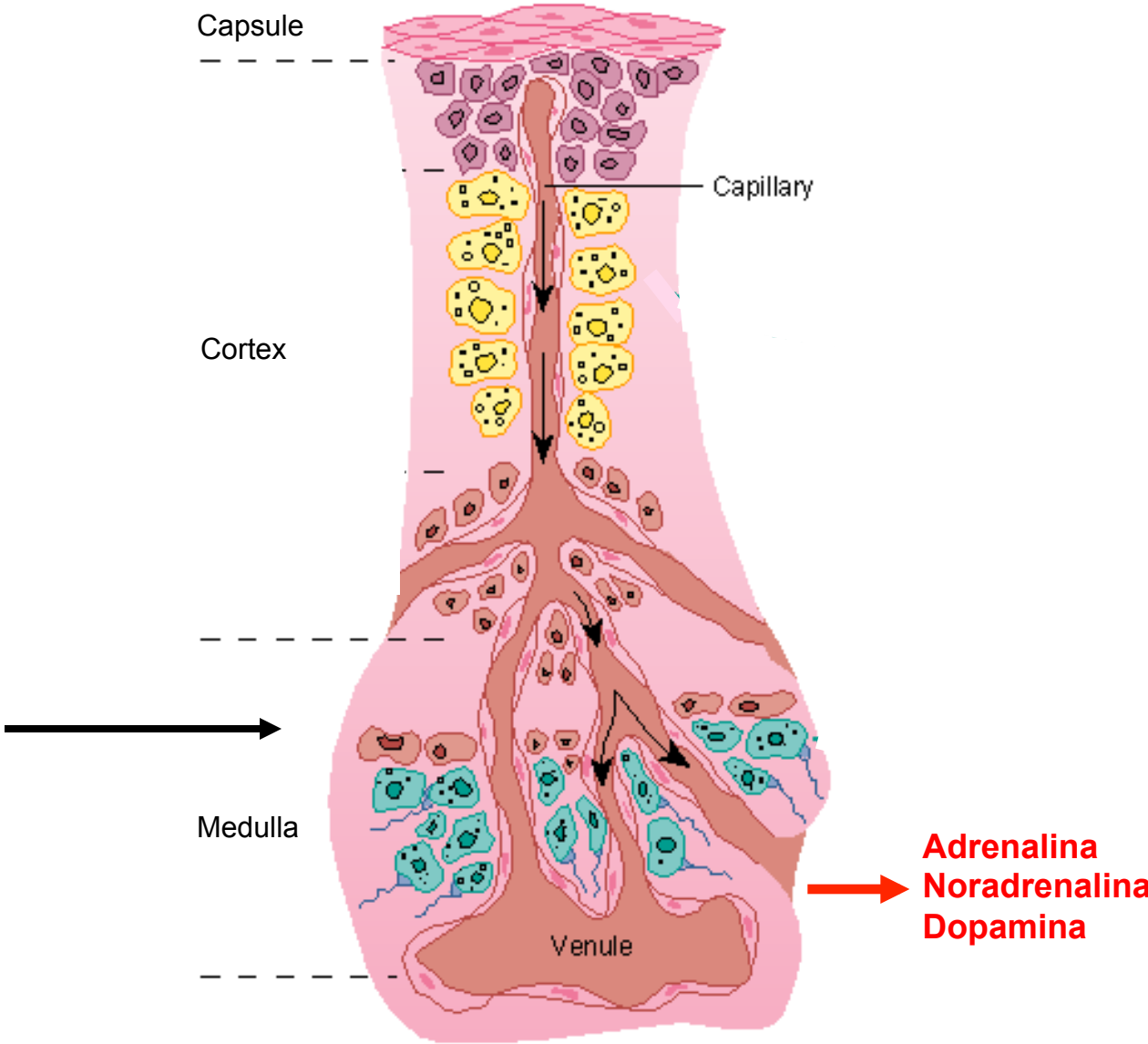
**Mineralocorticóides**  
aldosterona

**Glicocorticóides**  
• cortisol  
• corticosterona

**Andrógenos adrenais**  
androstenediona

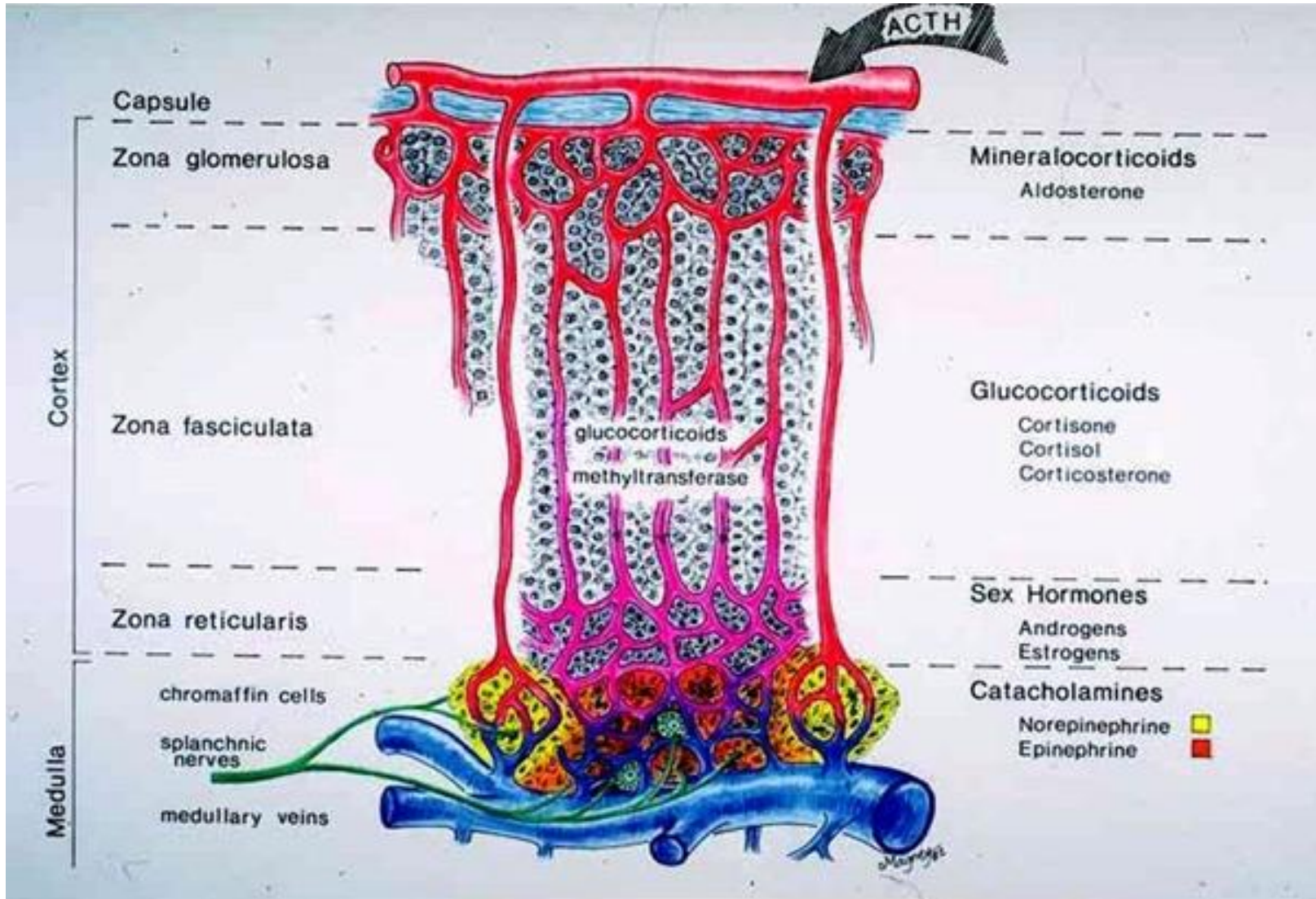
# Medula Adrenal

*medula adrenal*

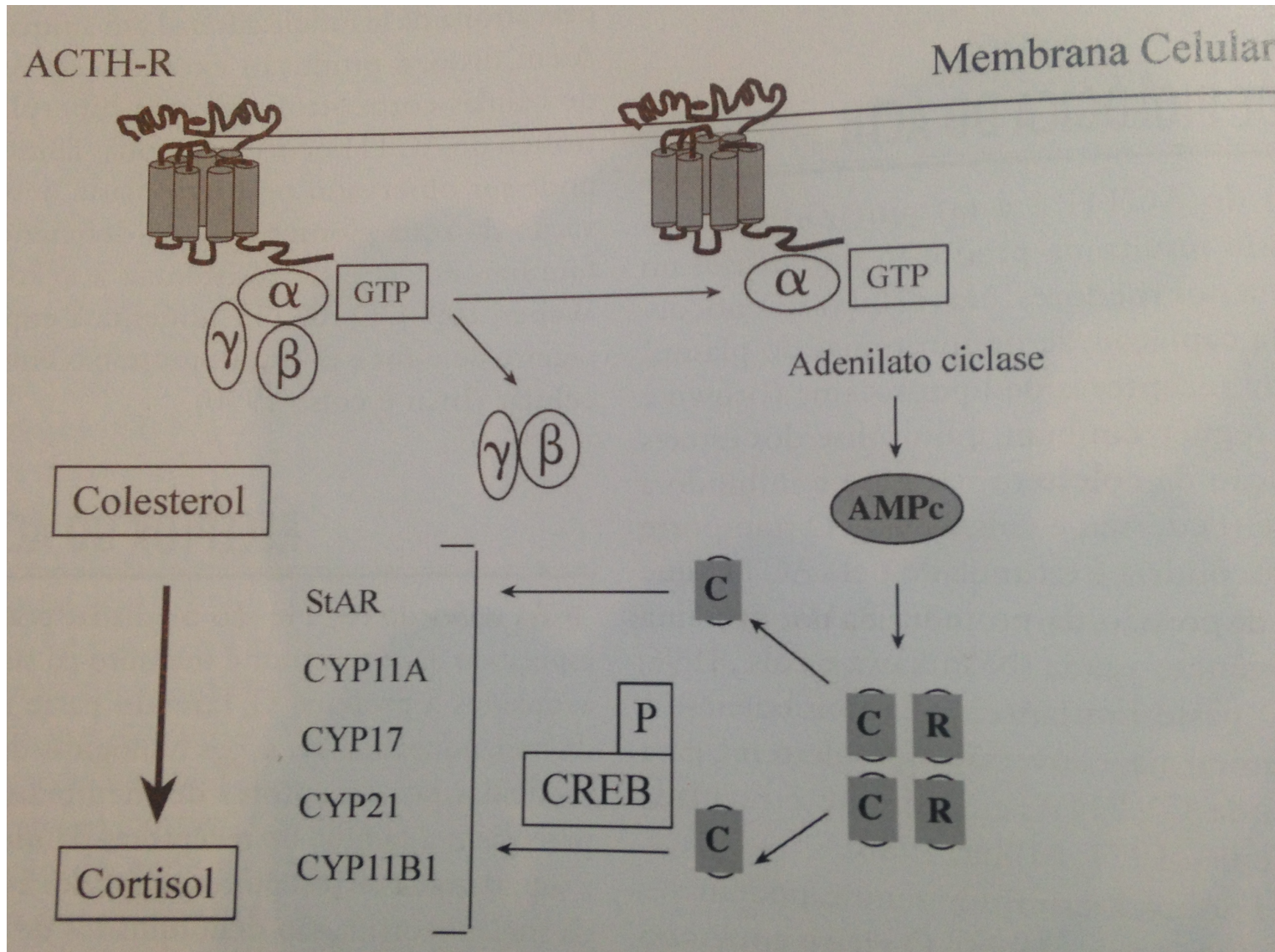




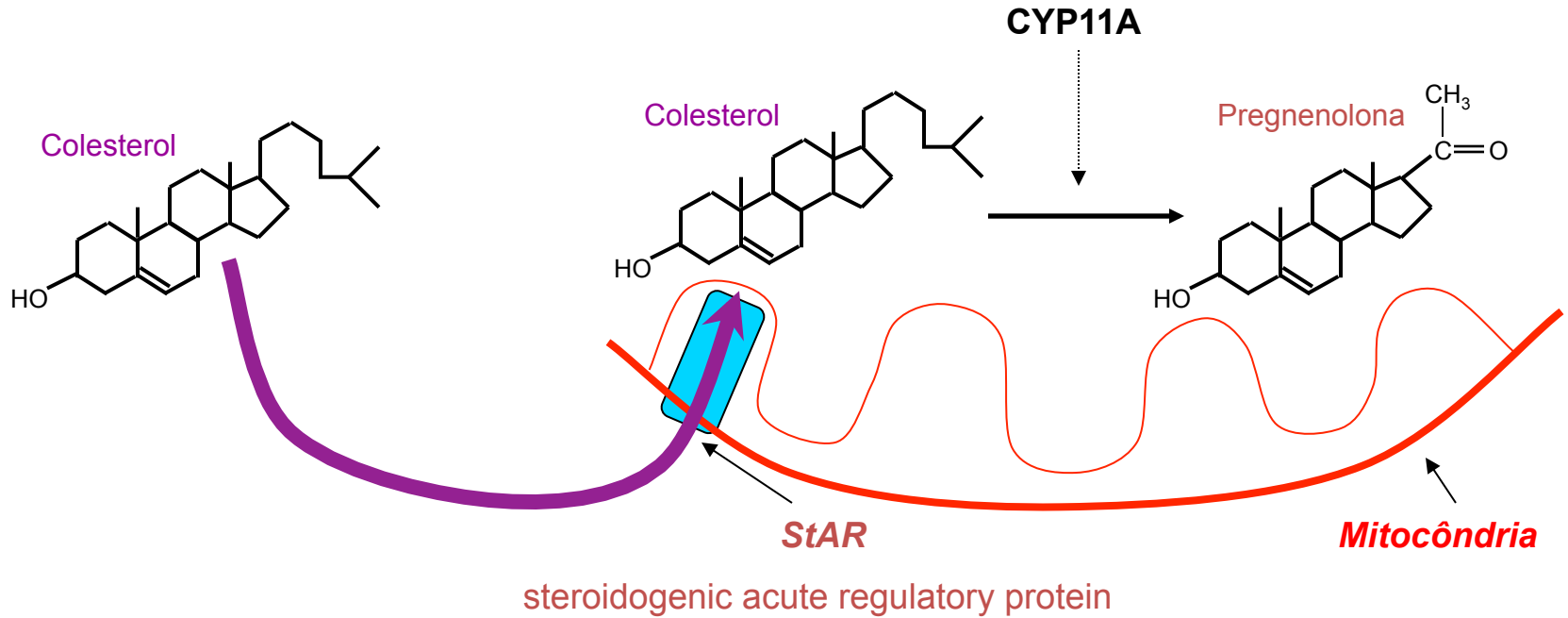
# Glândulas adrenais



# Sinalização do receptor de ACTH na célula adrenocortical



# Liberação do colesterol na membrana da mitocôndria

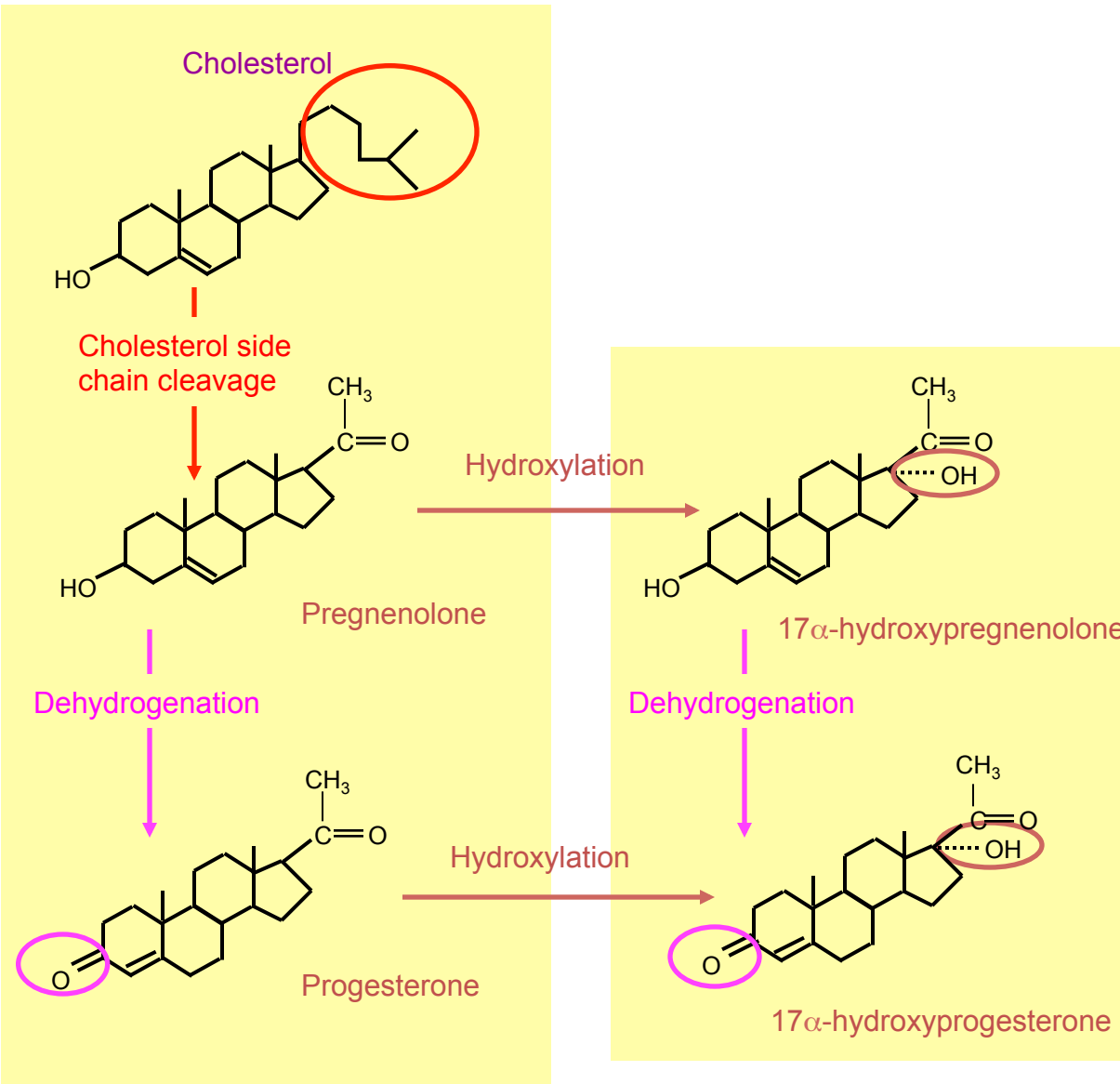


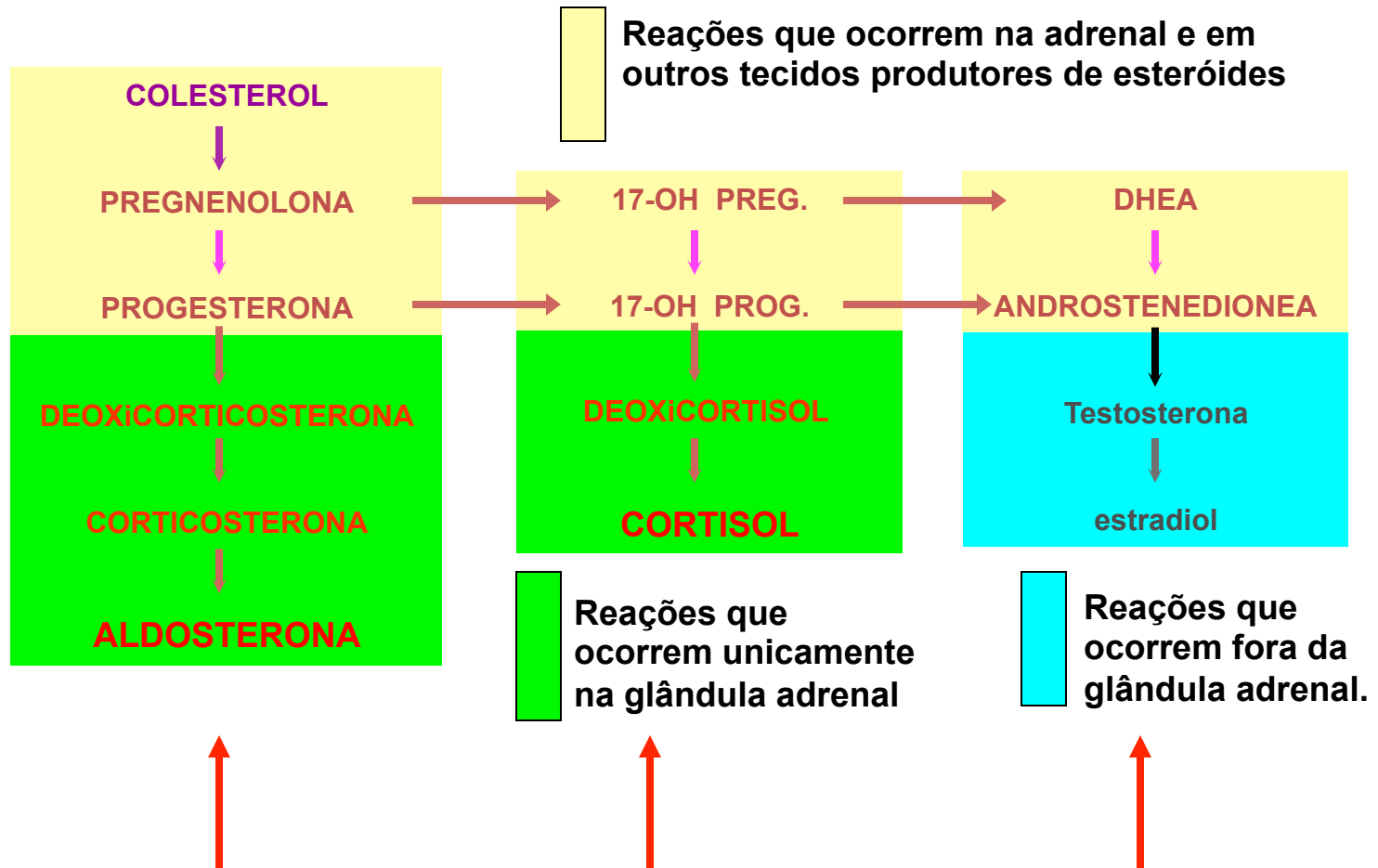
colesterol  $\Rightarrow$  pregnenolona



17- $\alpha$ hidroxiprogesterona

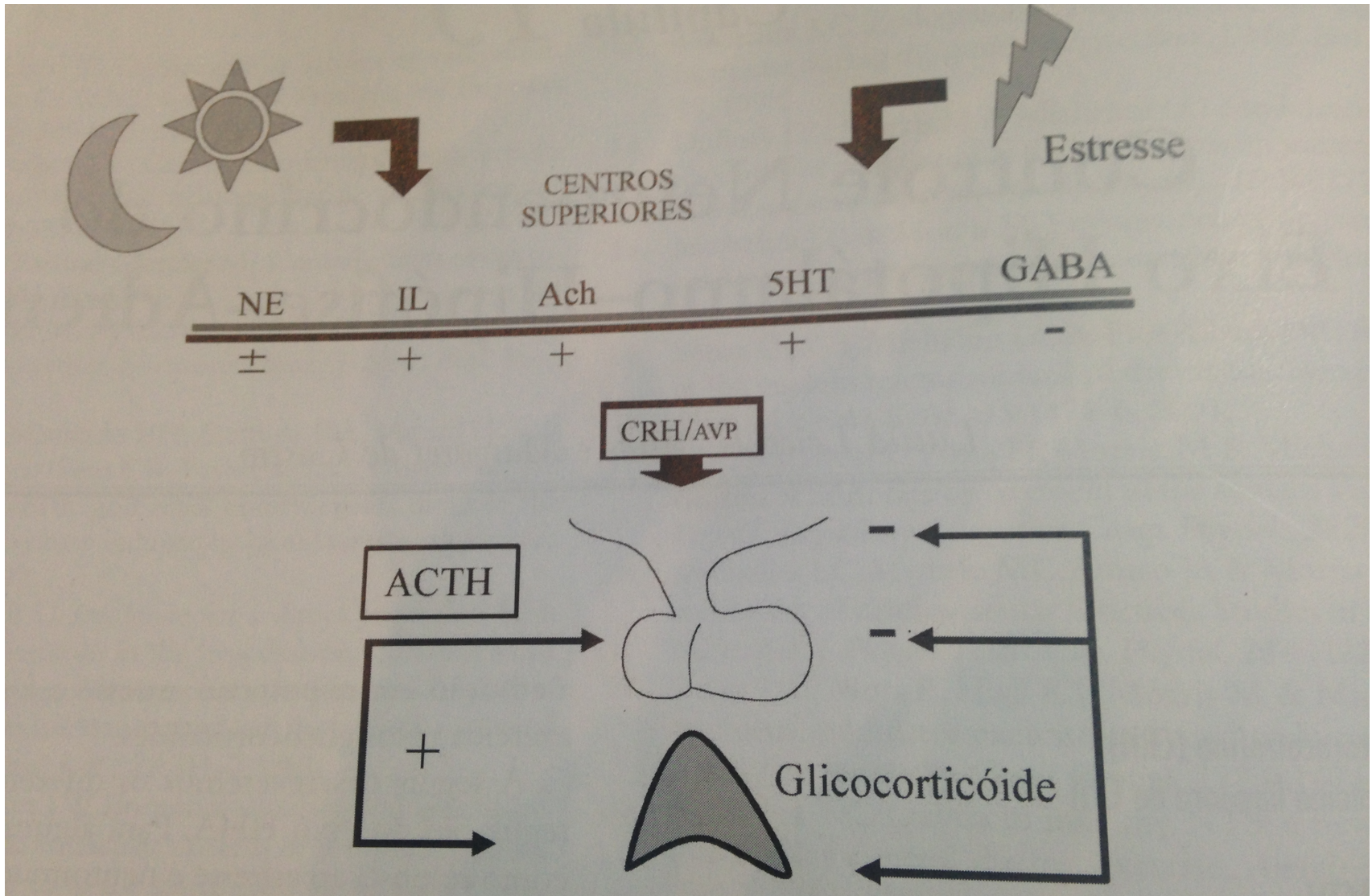
progesterona





Vias biossintéticas distintas para cada hormônio

# Regulação do eixo Hipotálamo-Hipófise-Adrenal



# Glicocorticóides - Funções

## Metabolismo energético

- Aumento de disponibilidade energética
- Quebra de proteínas para serem transformadas em glicose no fígado;
- Quebra de gordura corporal – disponibilização de energia par o corpo

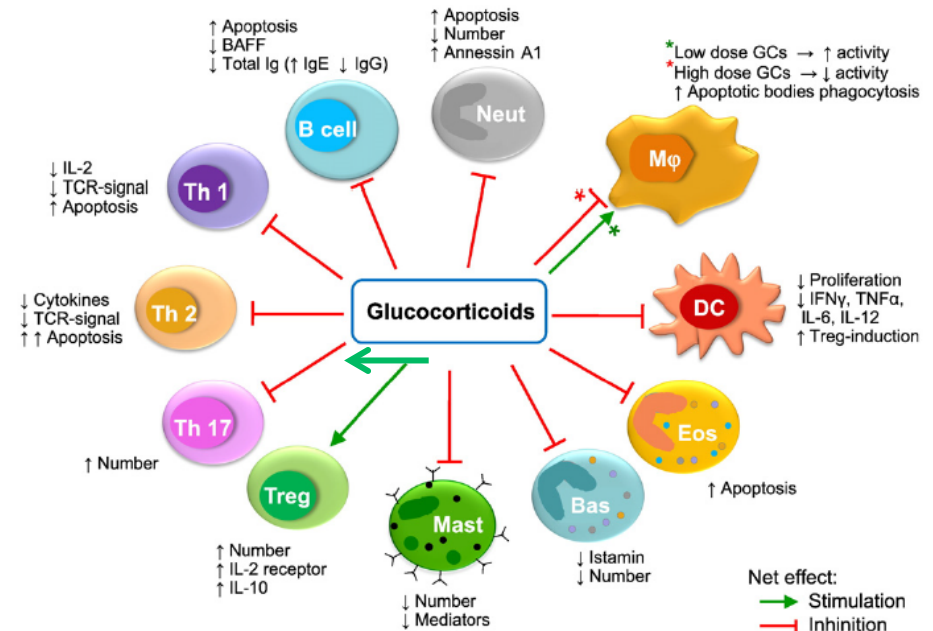
## Balanço hídrico

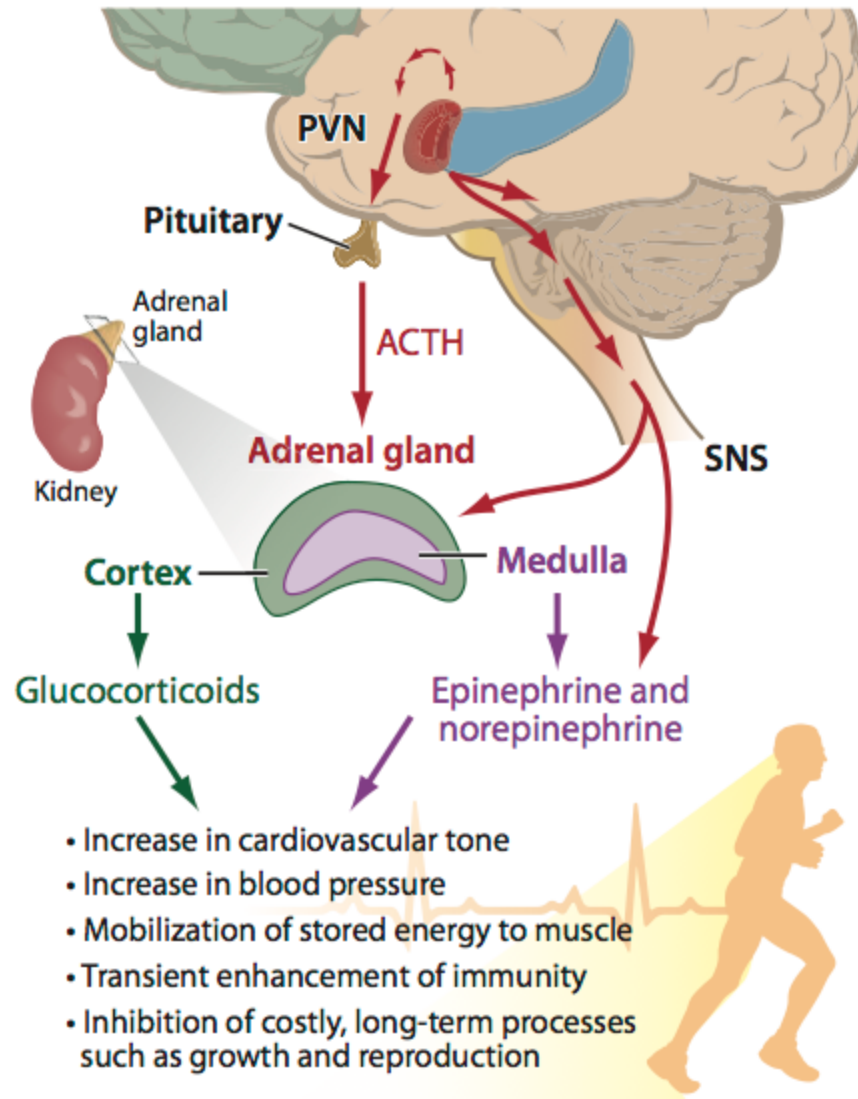
- Aumenta a reabsorção de sódio e água pelos rins . Atua em sinergismo com a aldosterona.

## Manutenção do tônus muscular dos vasos sanguíneos

- Melhor circulação sanguínea

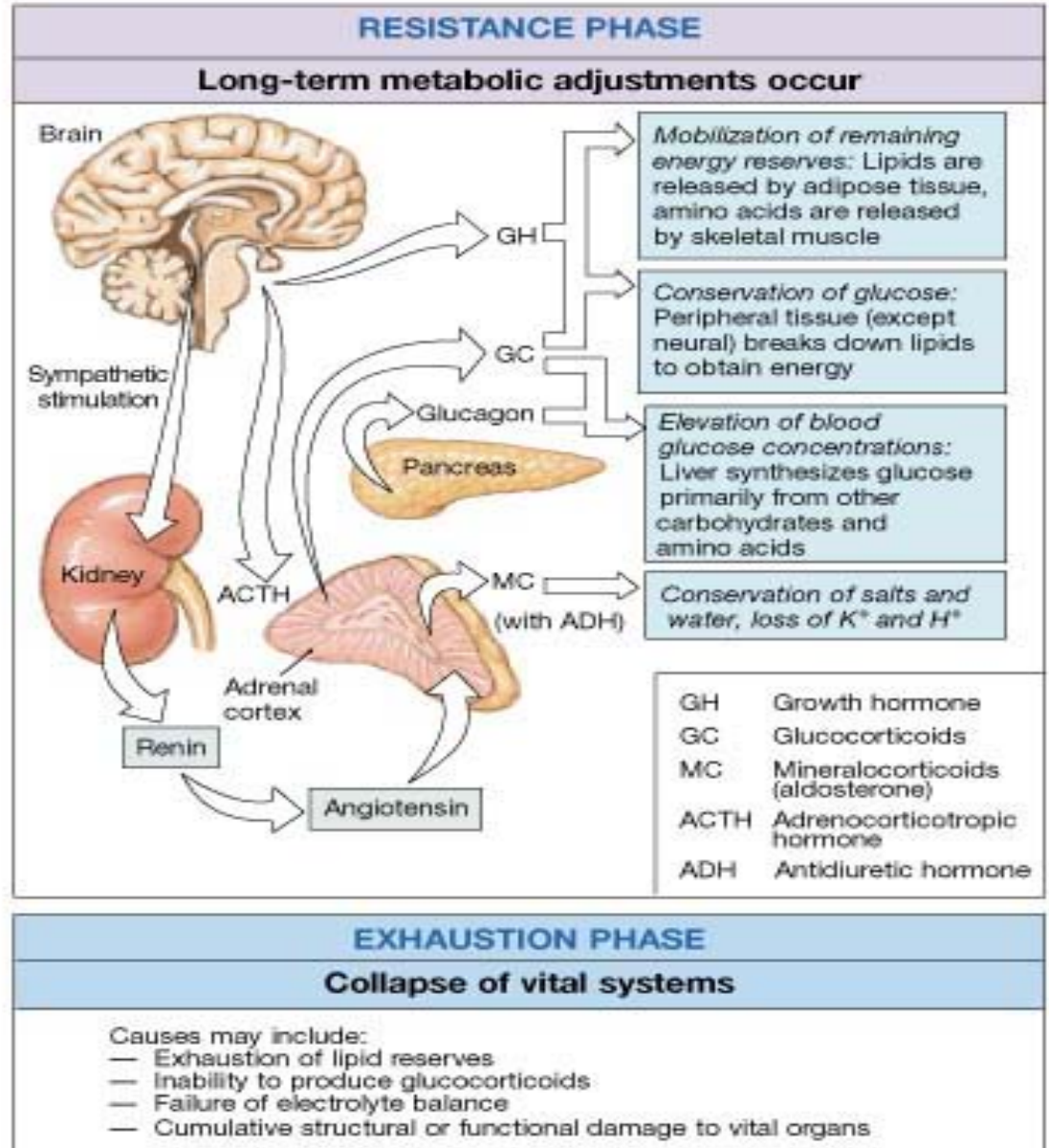
## • CONTROLE IMUNOLÓGICO







# Ações Biológicas de Glicocorticóides durante períodos de estresse

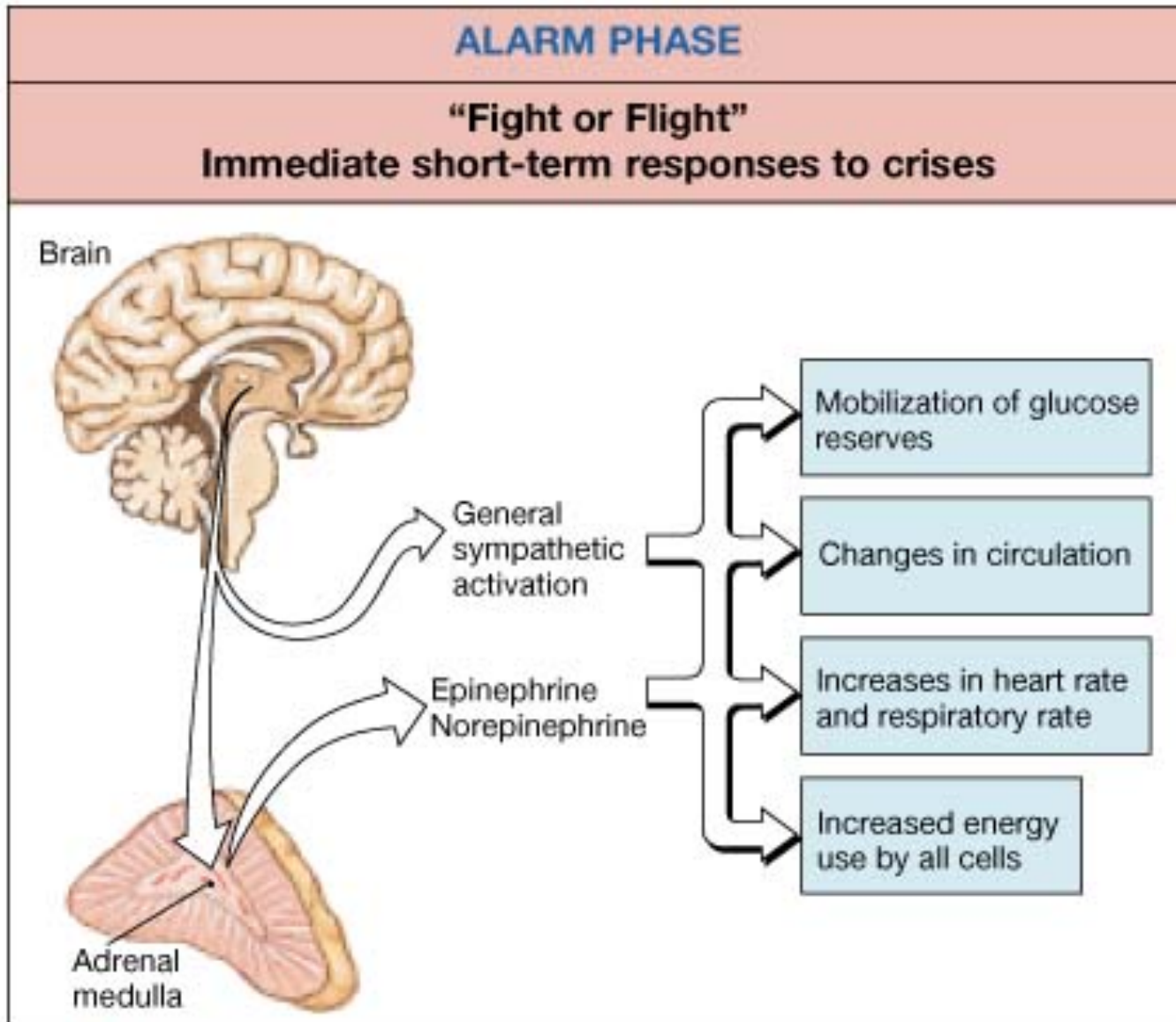


Mobilização de estoques de energia

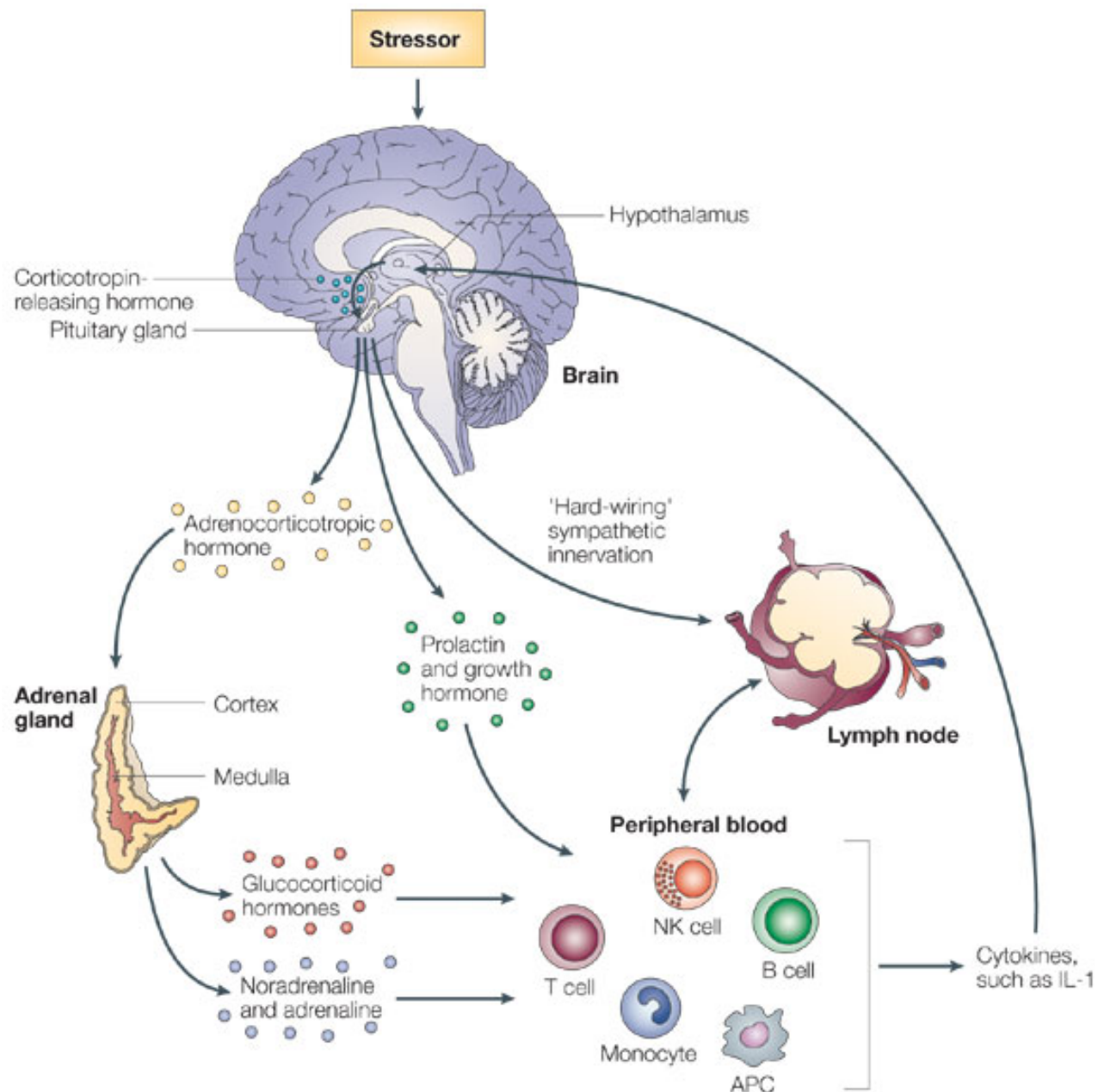
↓  
por estimular gliconeogênese lipólise

# Ações Biológicas dos Hormônios da Medula da adrenal

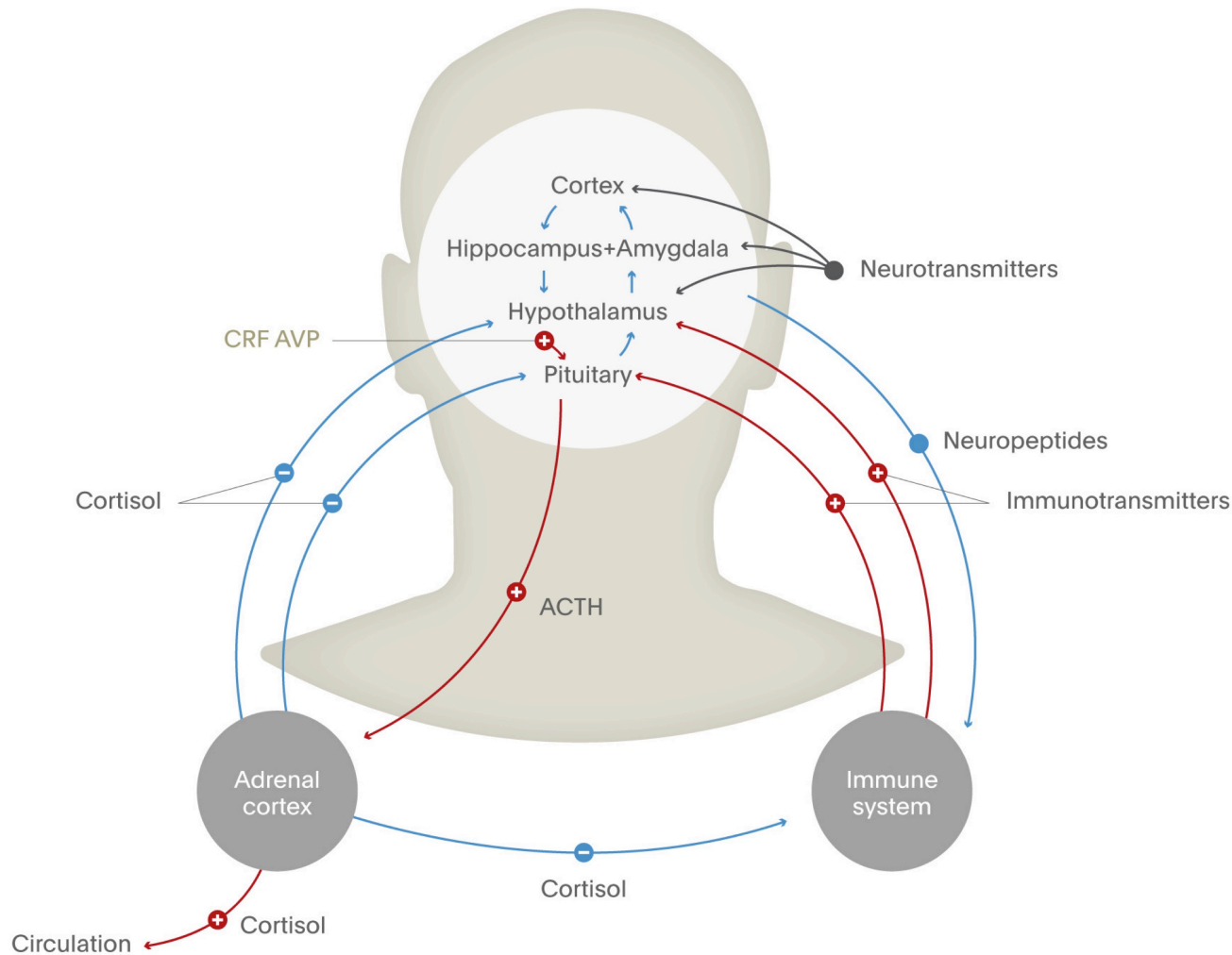
## Resposta imediata ao estresse



**The General Adaptation Syndrome**



# Funcionamento normal do eixo HPA



# Alteração do funcionamento do eixo HPA

