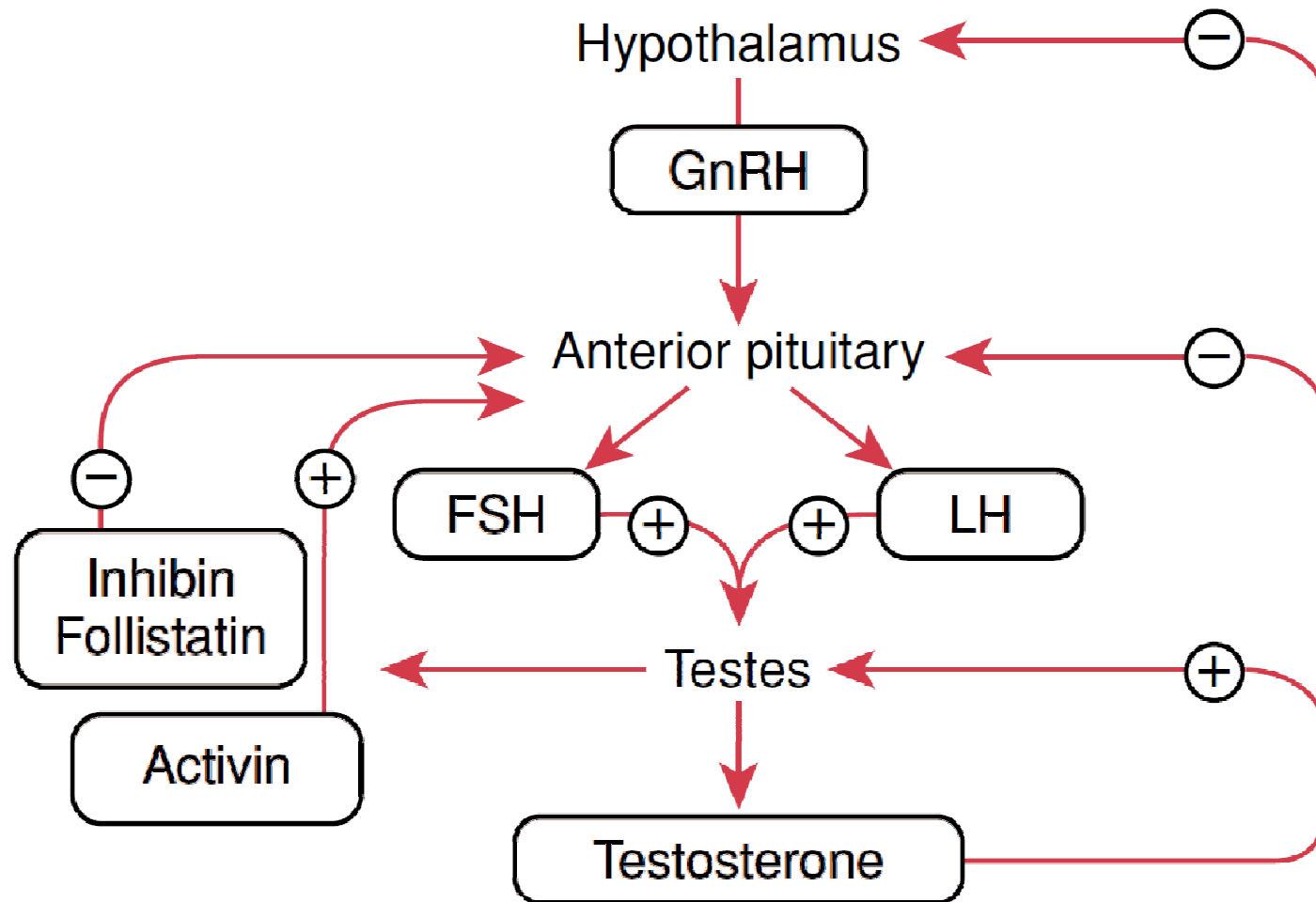


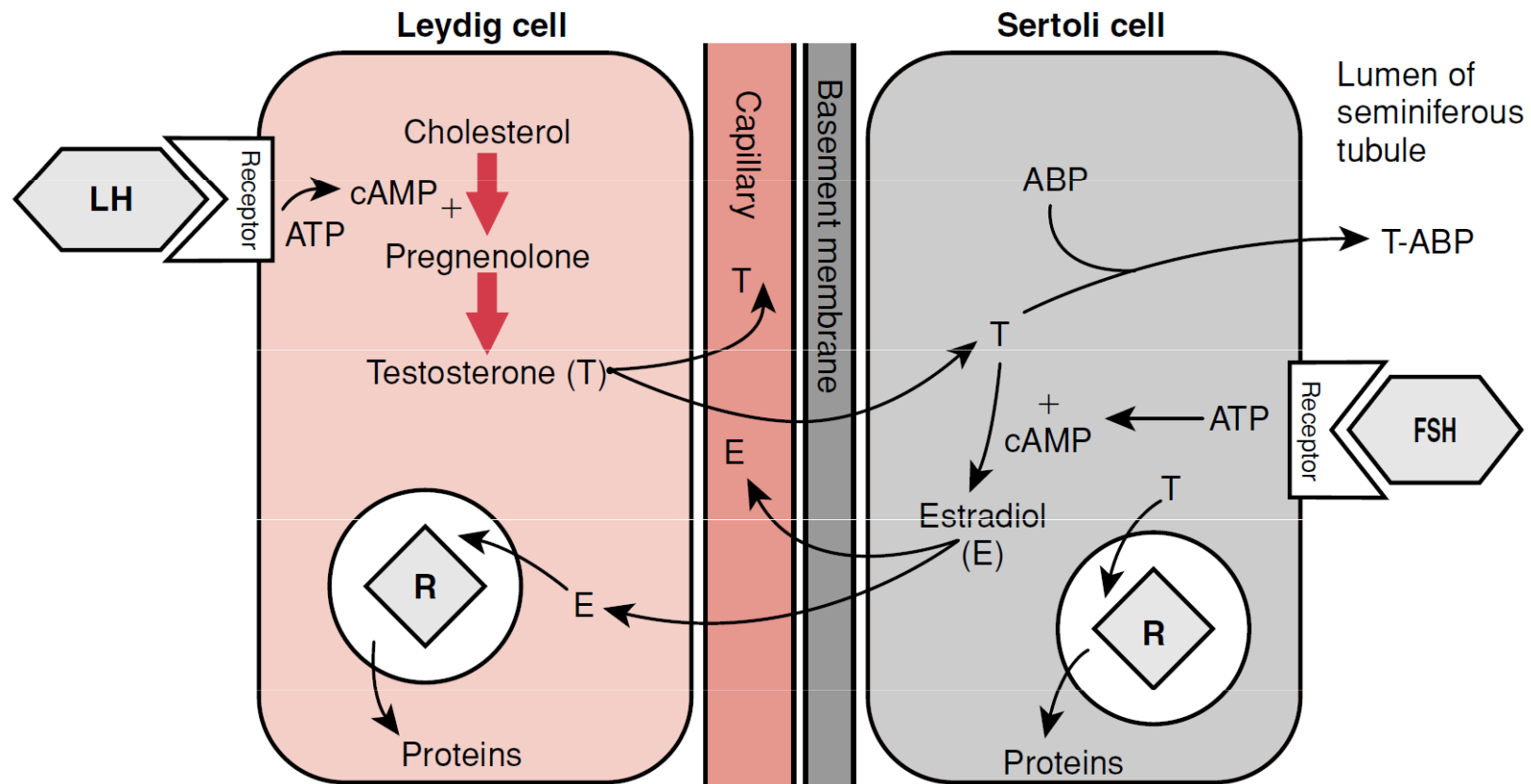
# Physiology of reproduction.



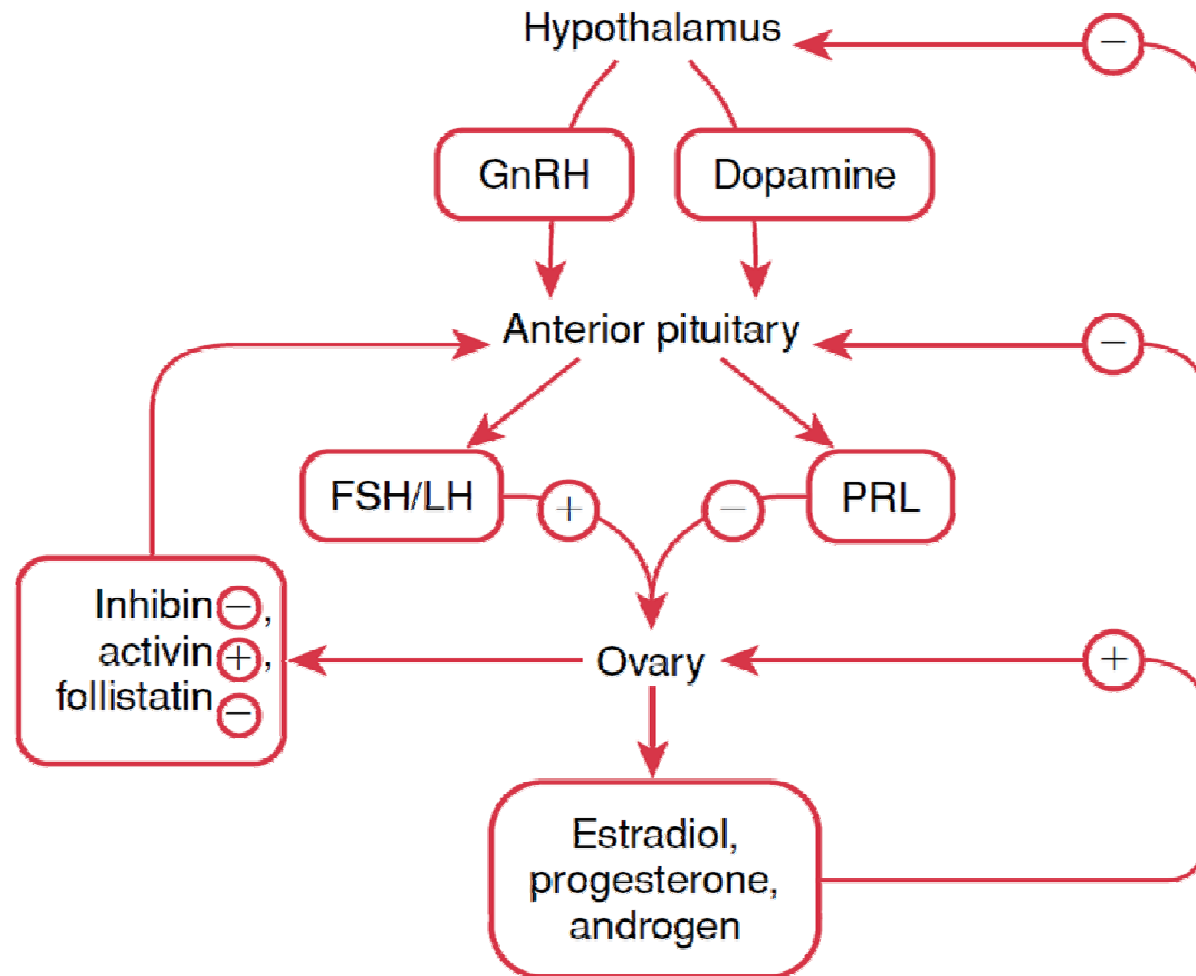
# Hypothalamus – hypophysis – gonads



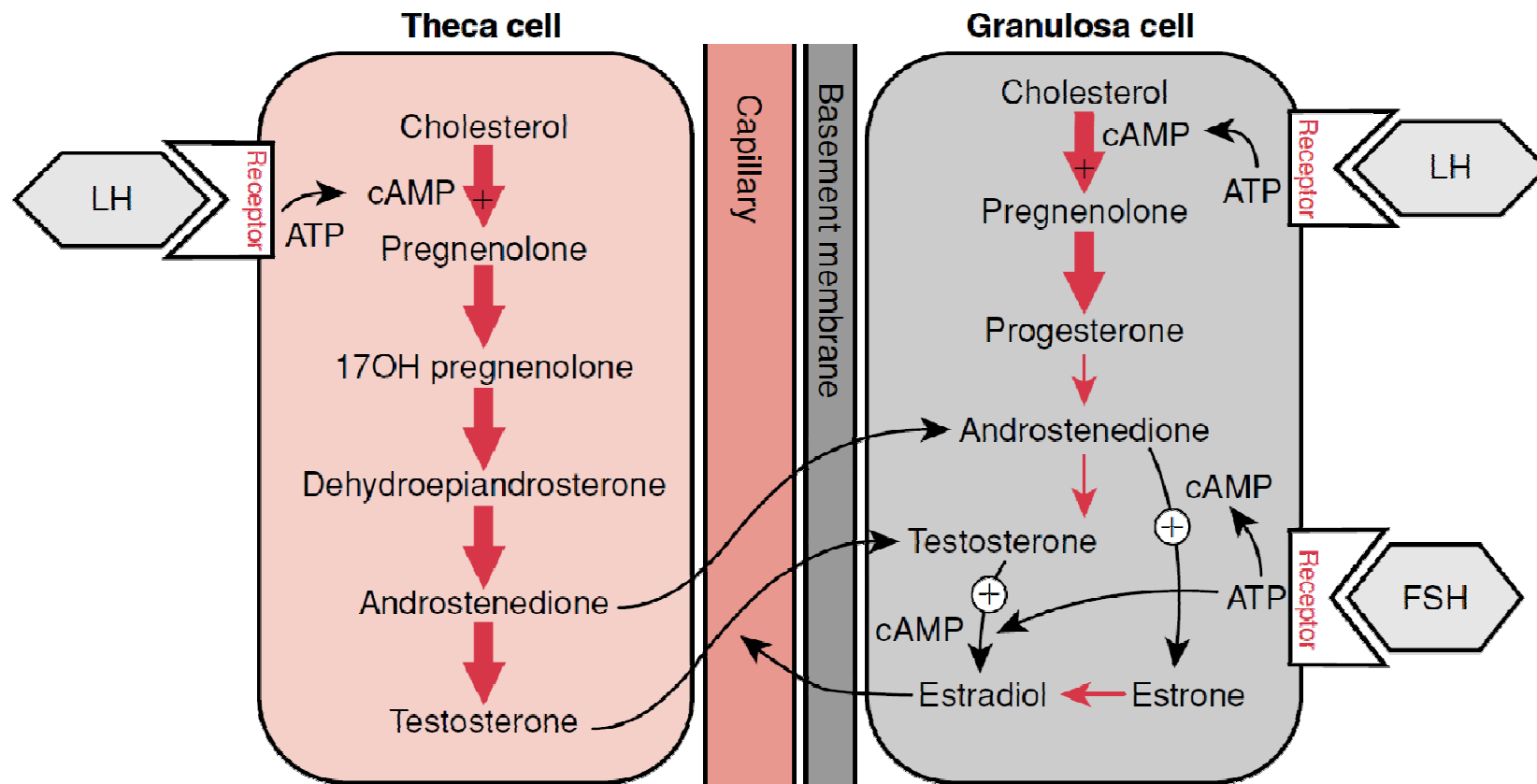
# Hypothalamus – hypophysis – gonads



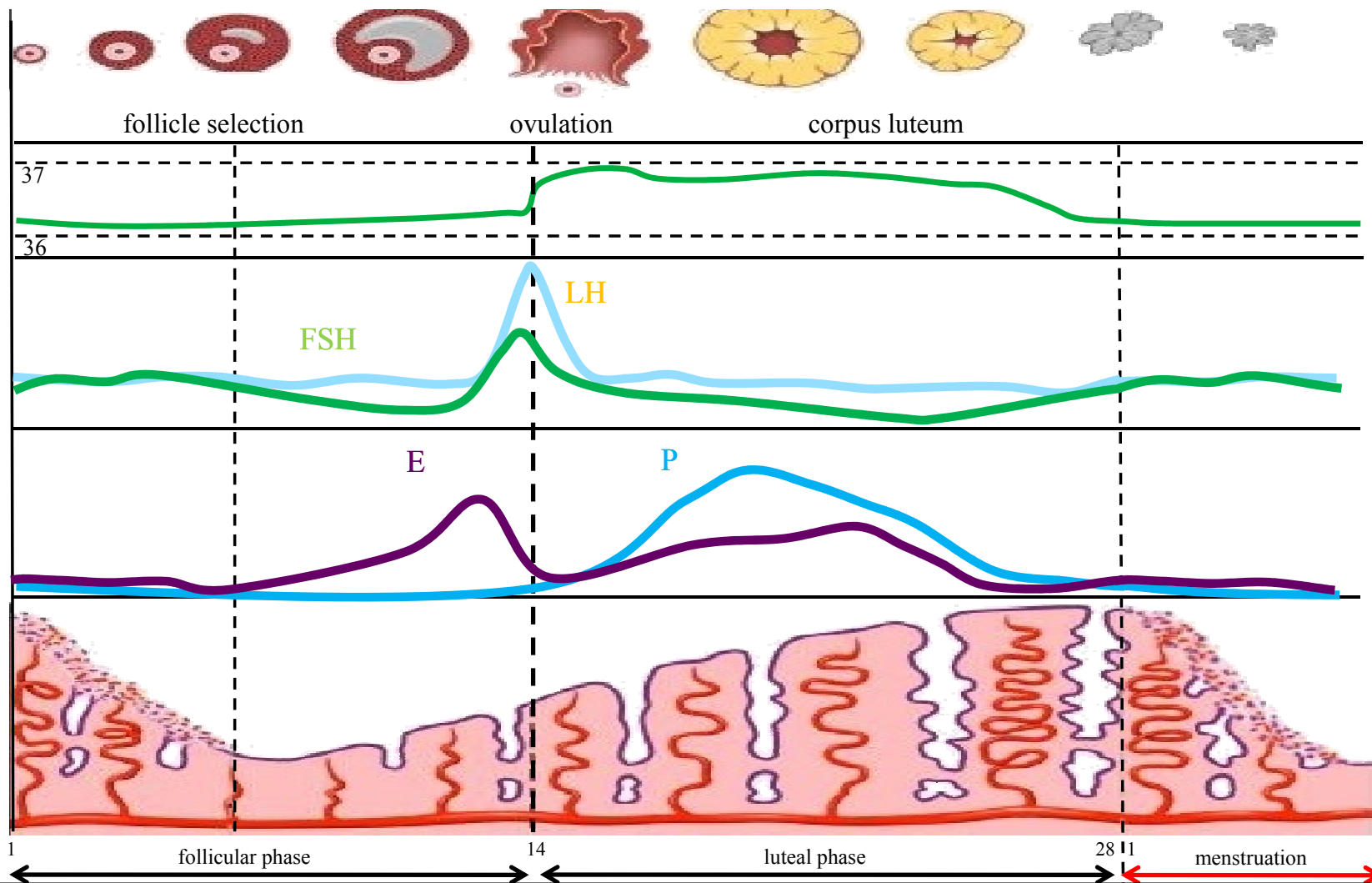
# Hypothalamus – hypophysis – gonads



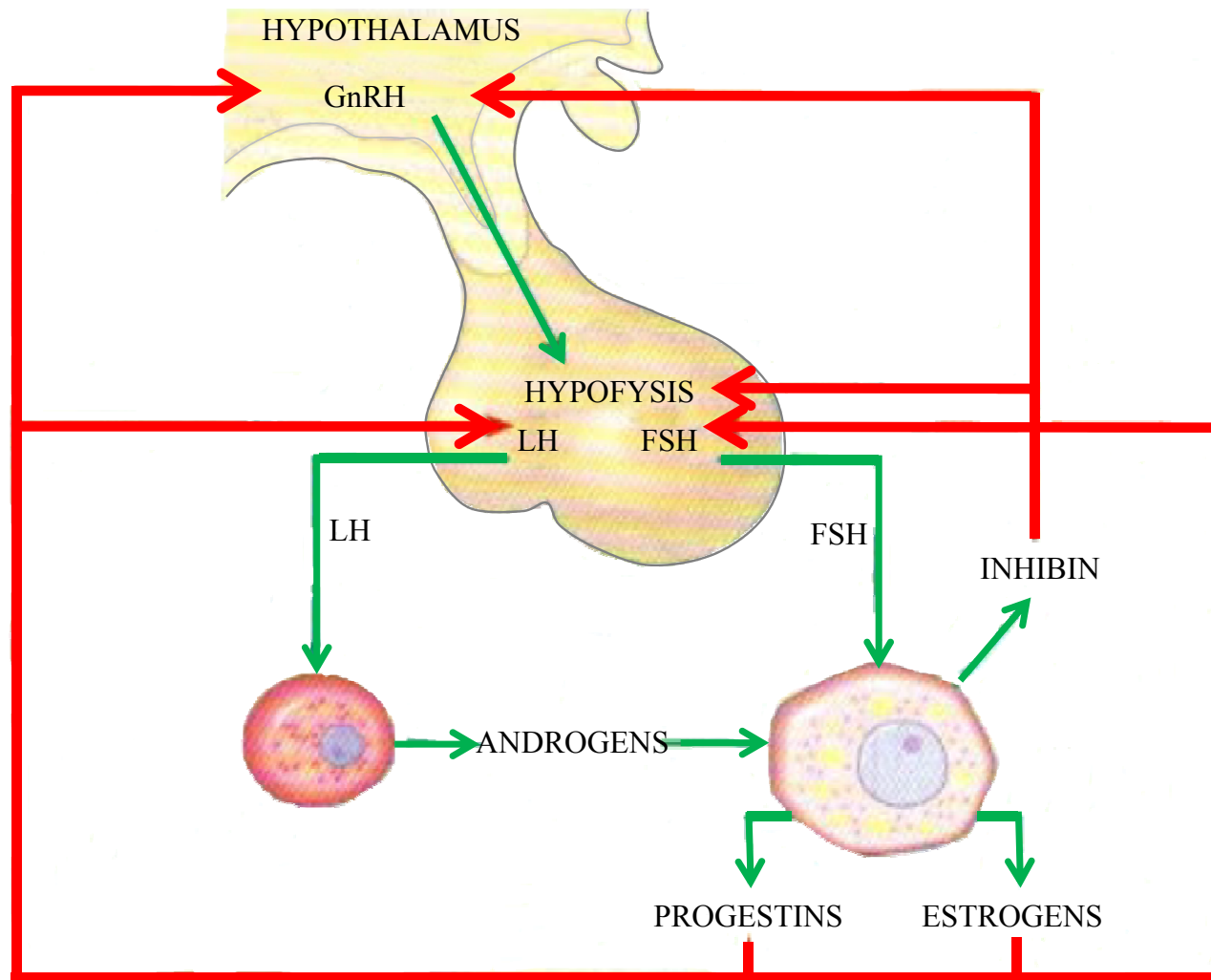
# Hypothalamus – hypophysis – gonads



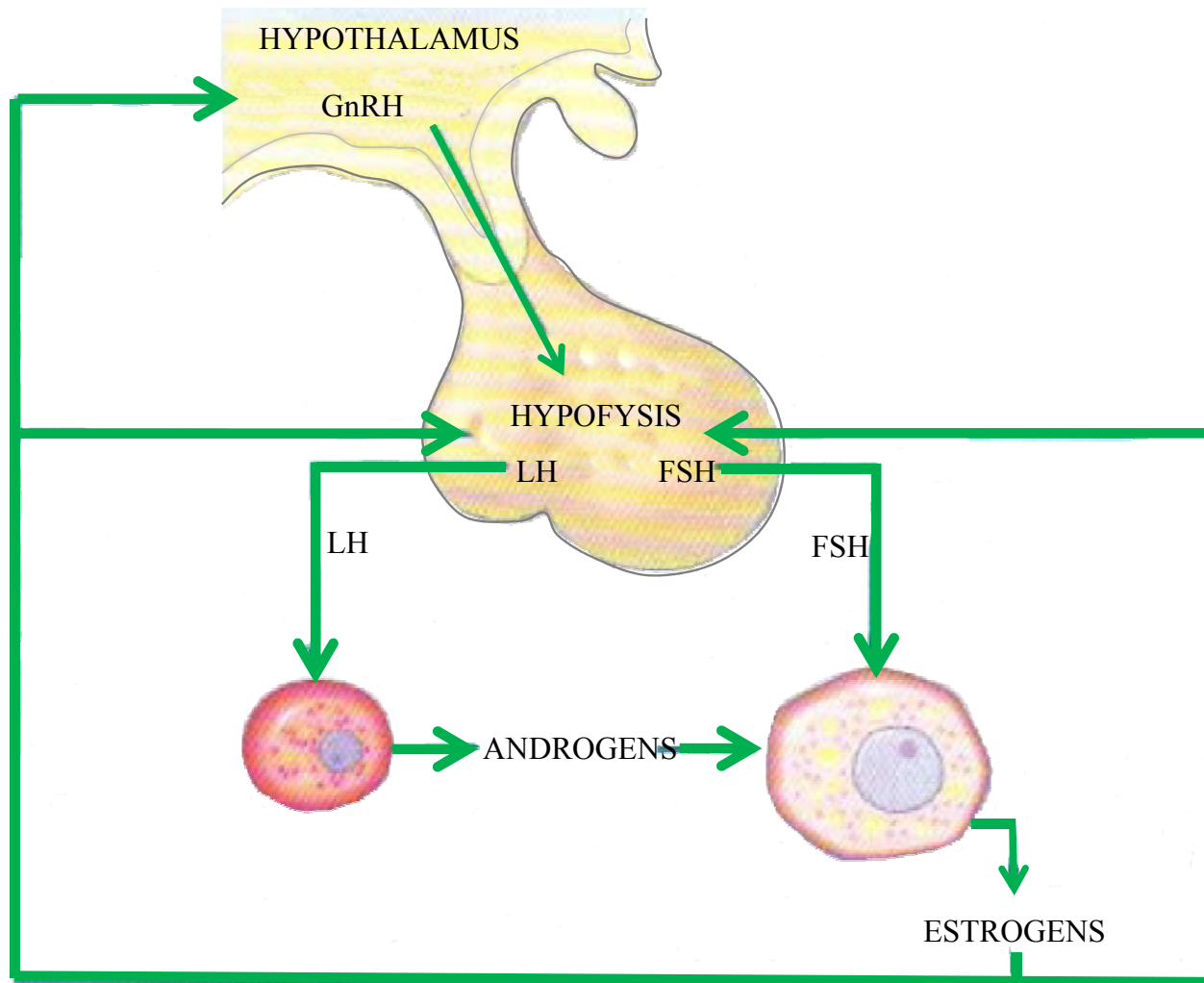
# Menstrual cycle



# Negative feedback

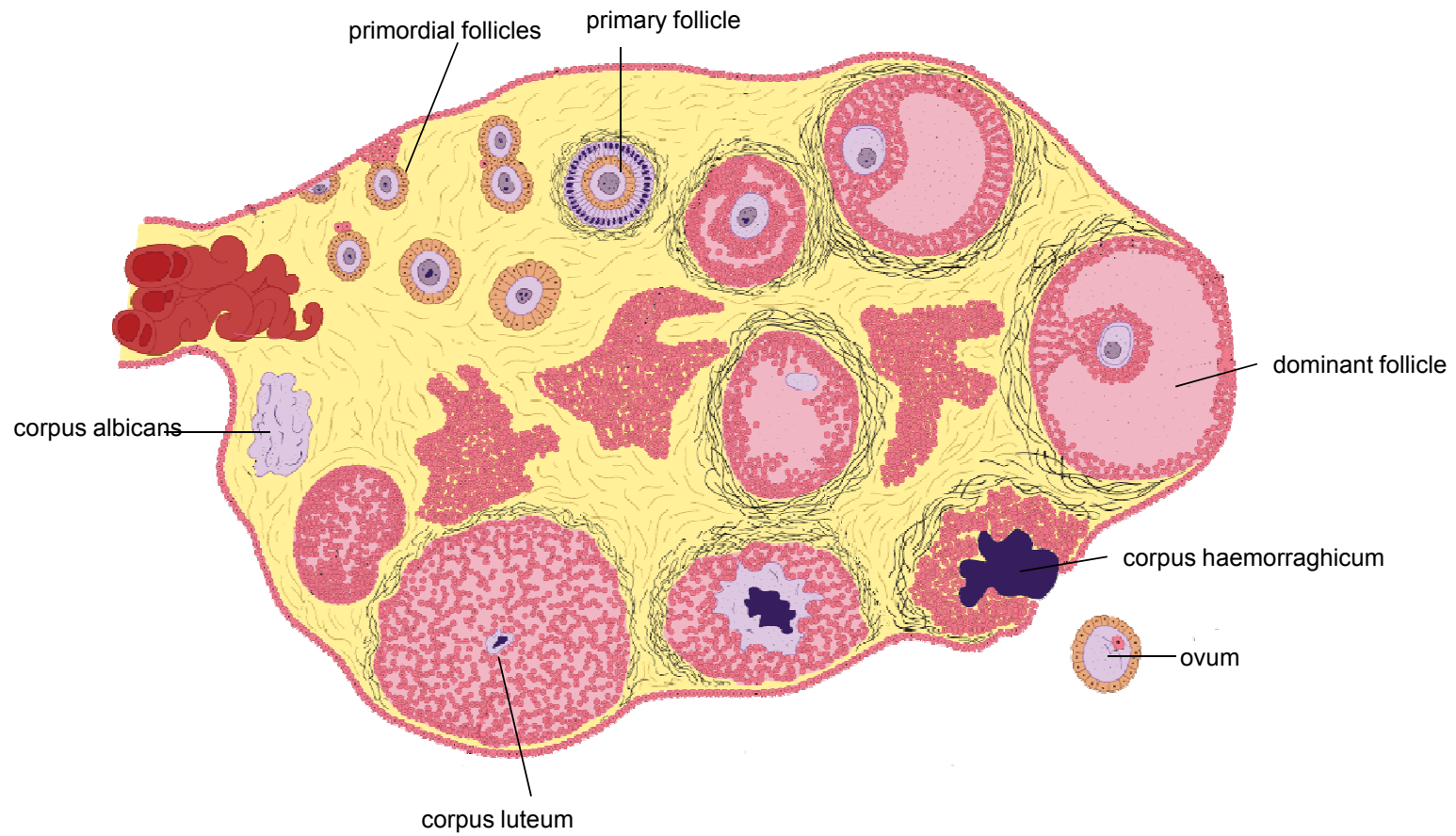


# Positive feedback

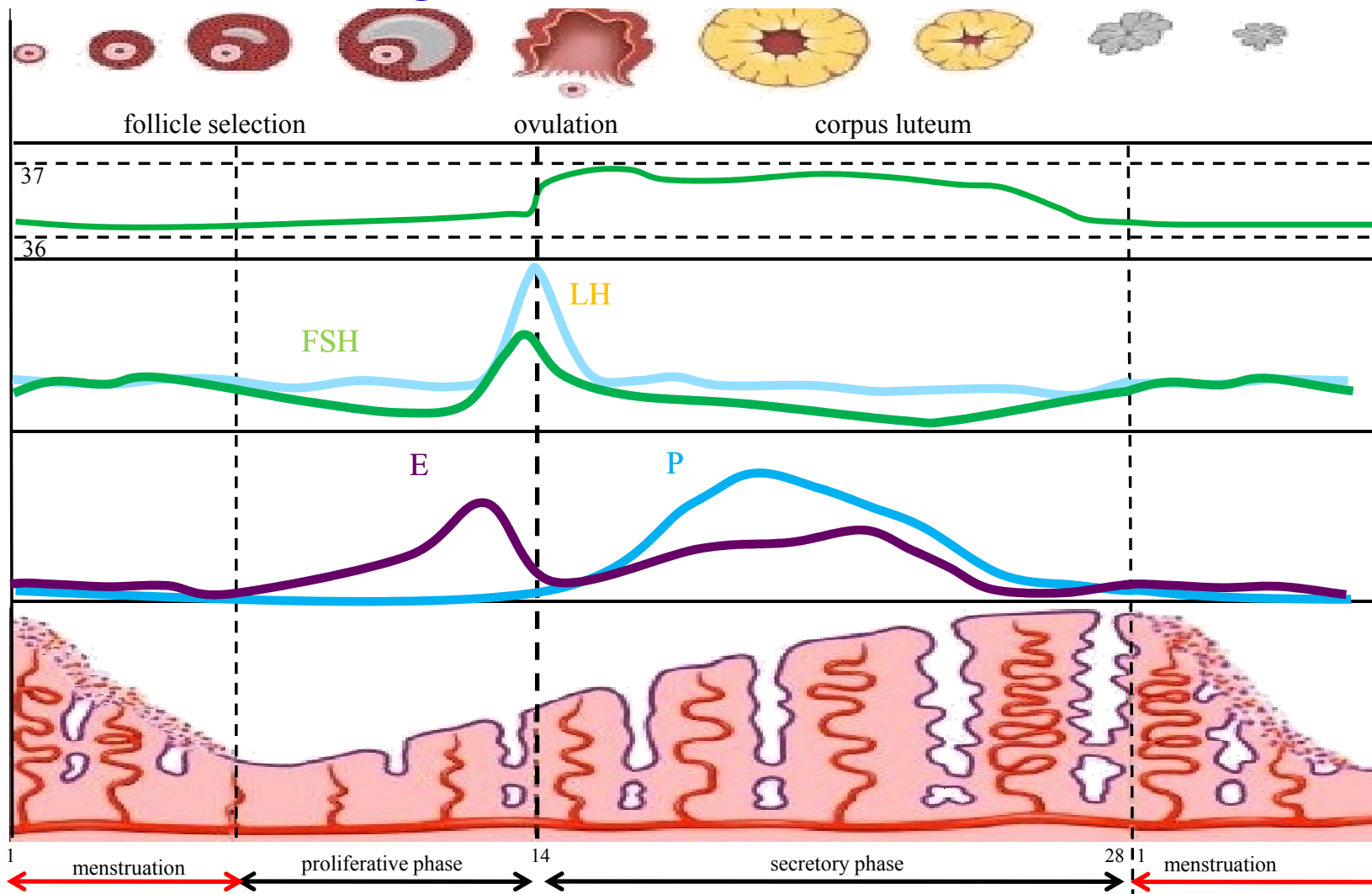




# Ovarian cycle



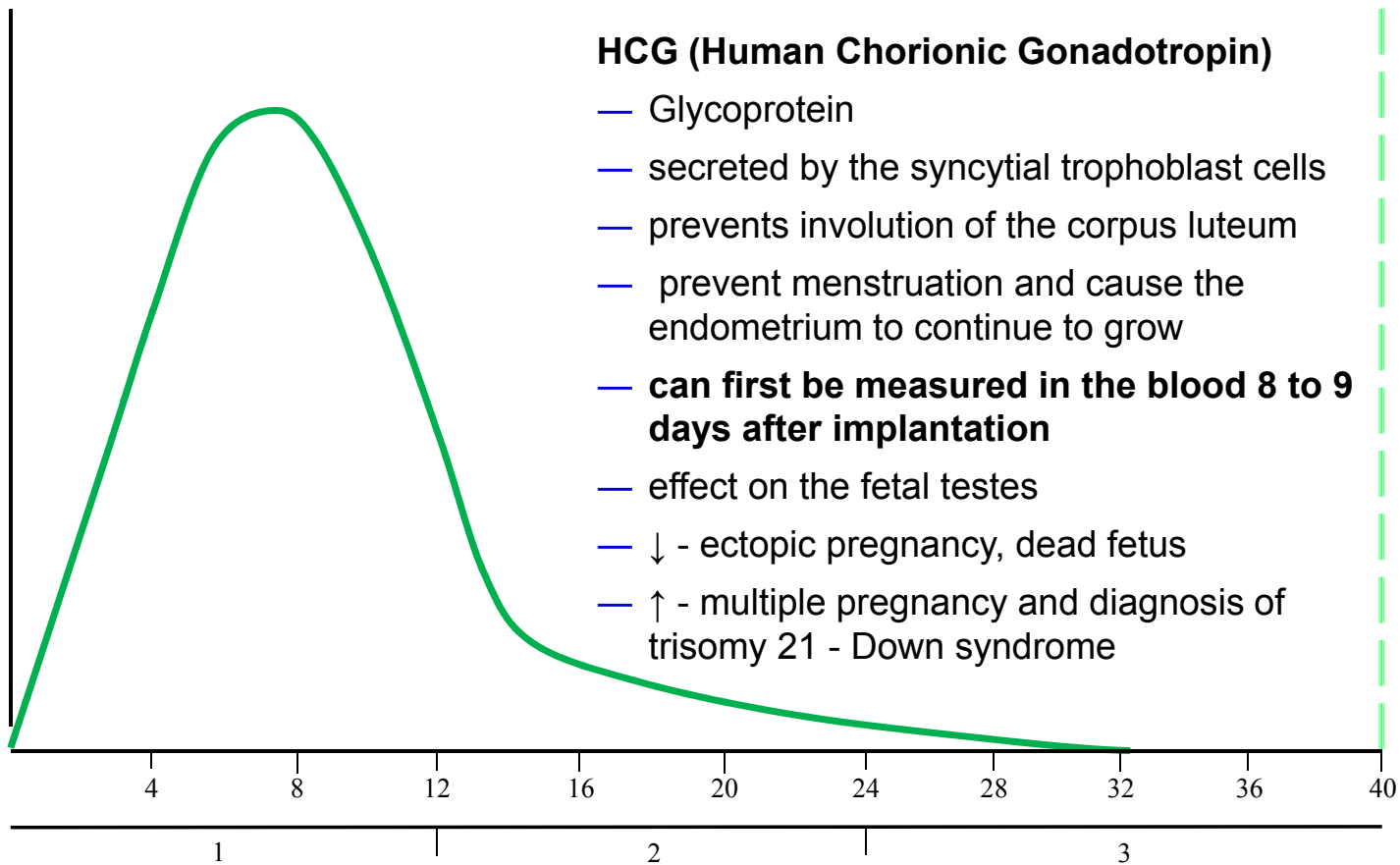
# Menstrual cycle



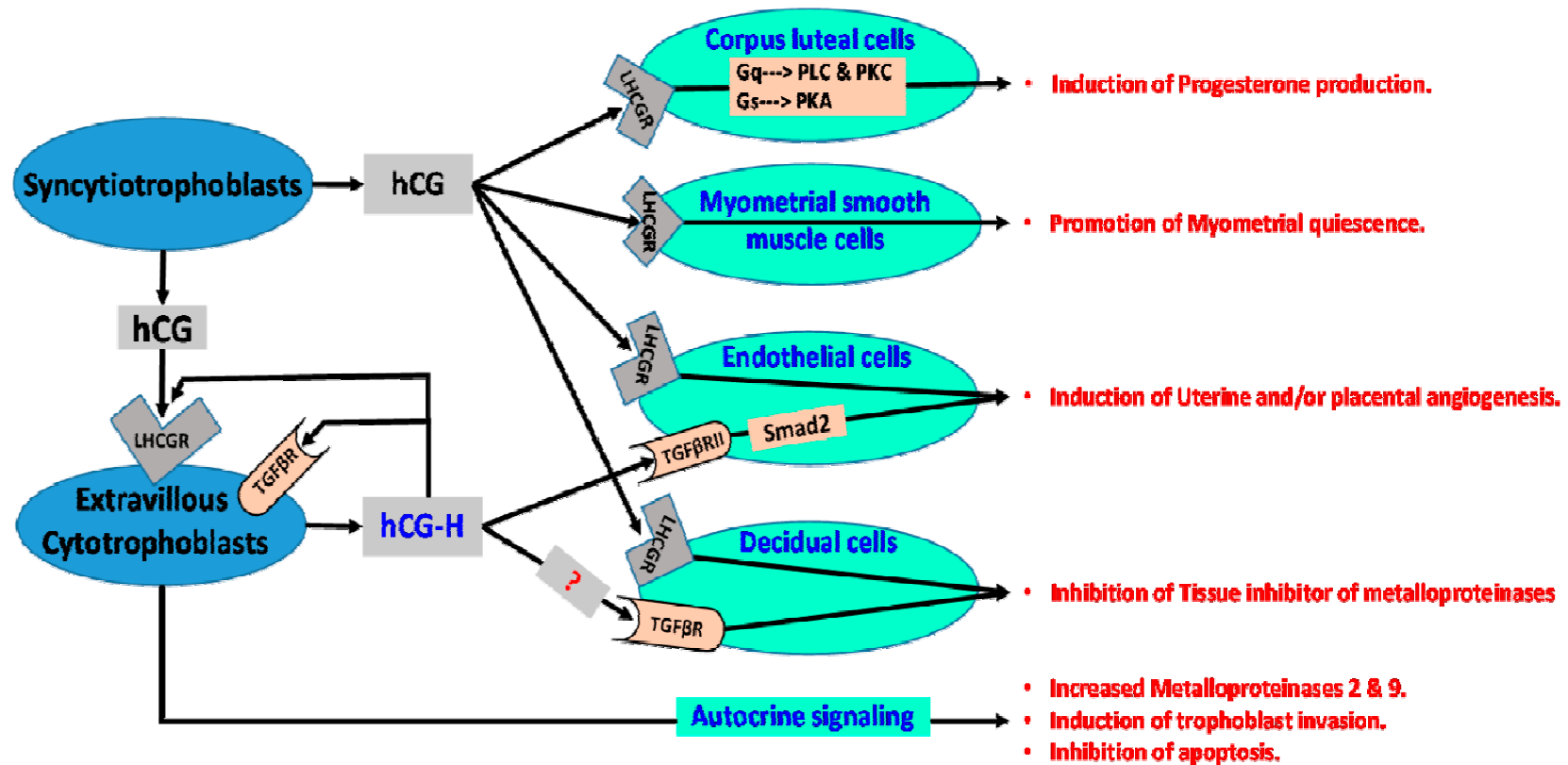
# Functions of the PLACENTA

- TRANSPOR function
  - Respiratory gases
  - transport and metabolism of sacharides
  - transport and metabolism of aminoacods
  - transport and metabolism of fat
  - transport of H<sub>2</sub>O, minerals and vitamines
- ENDOCRIN function
  - Estrogens
  - Progesteron
  - HCG
  - HPL
  - Growth factors (epidermal and insulin-like growth factors)
- PROTECTIV function
  - Cytochrom P450
  - Pinocytosis (IgG)
  - Barrier against bacterias, virus etc.

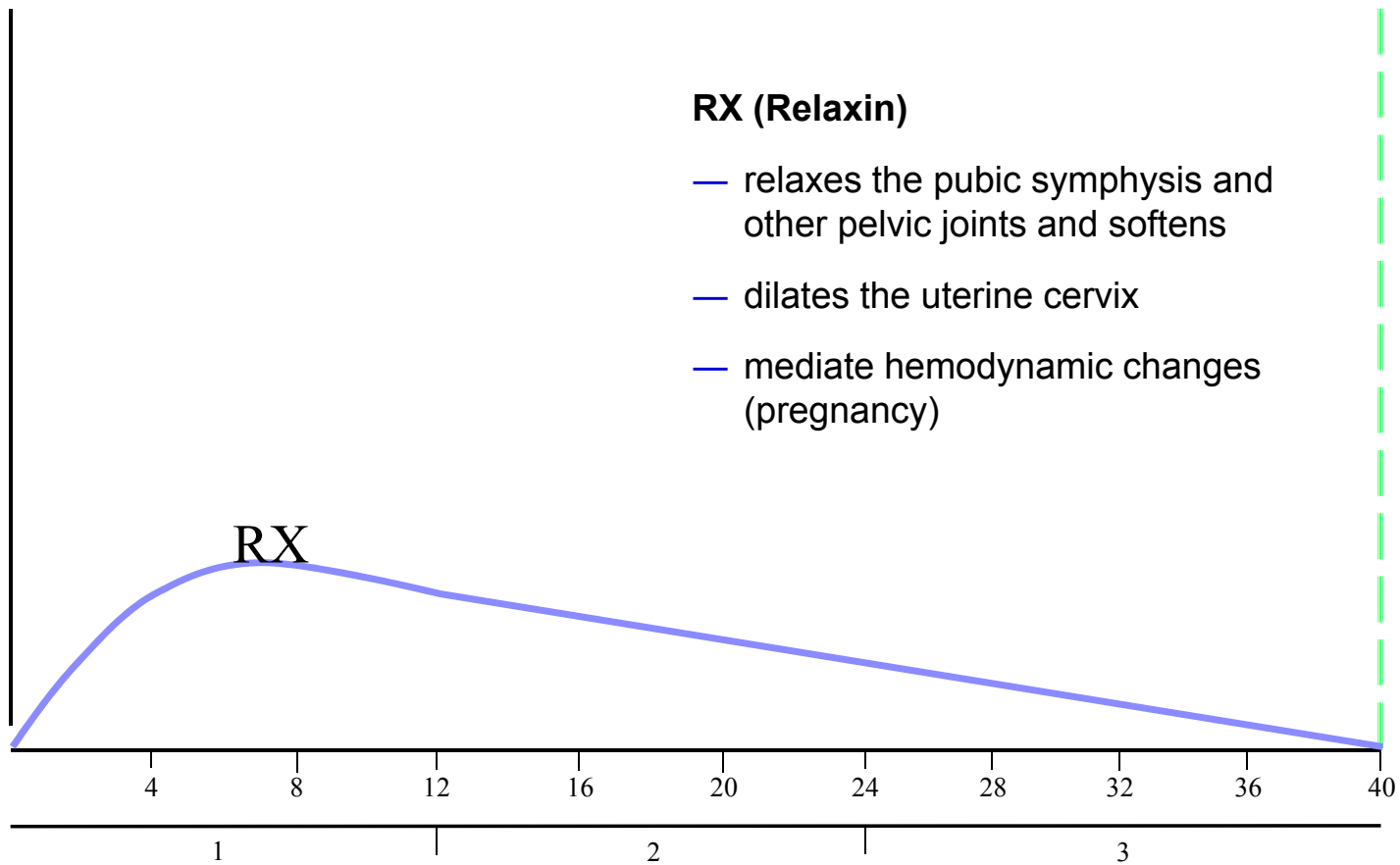
# HCG



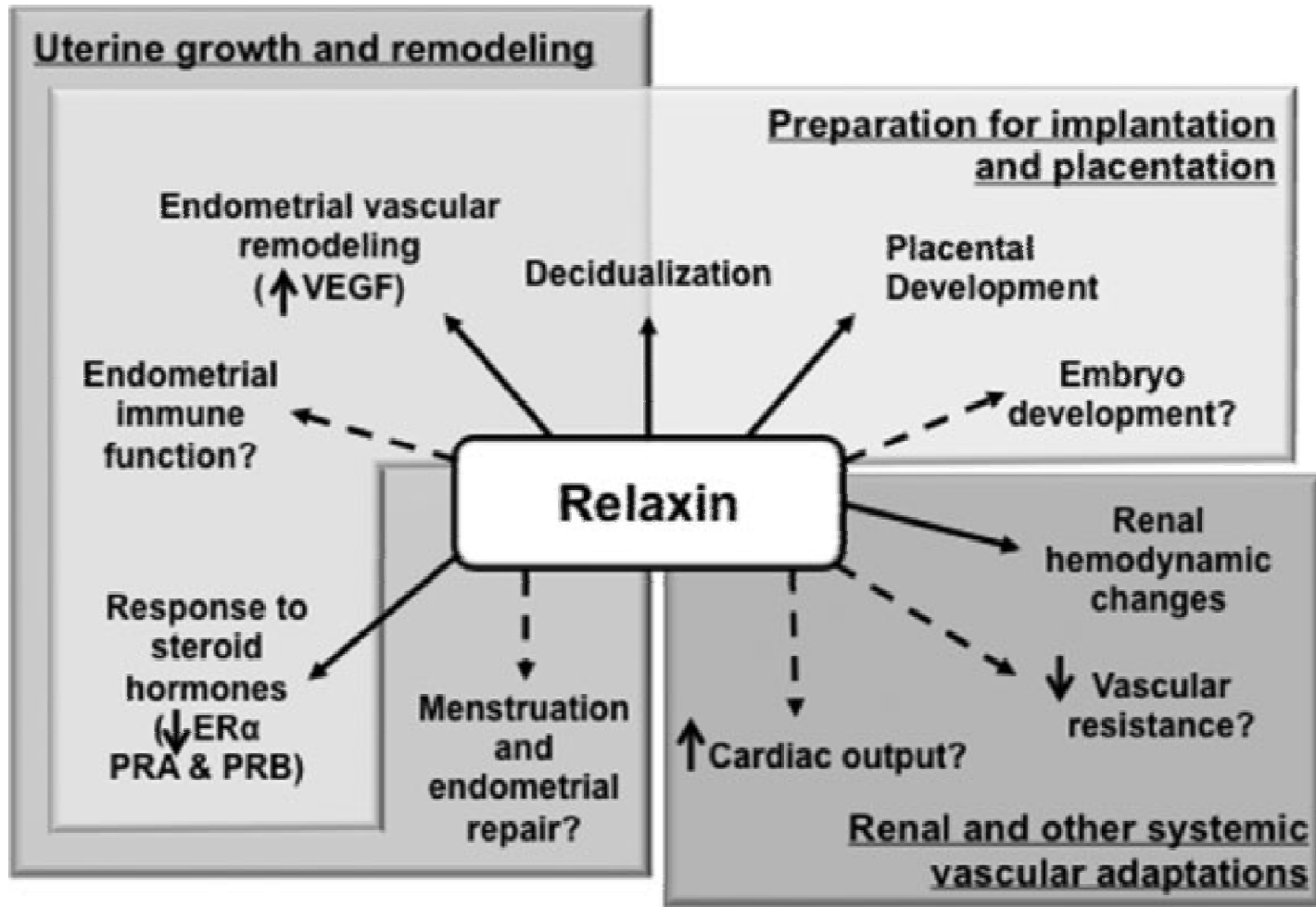
# HCG



# RX



# RX

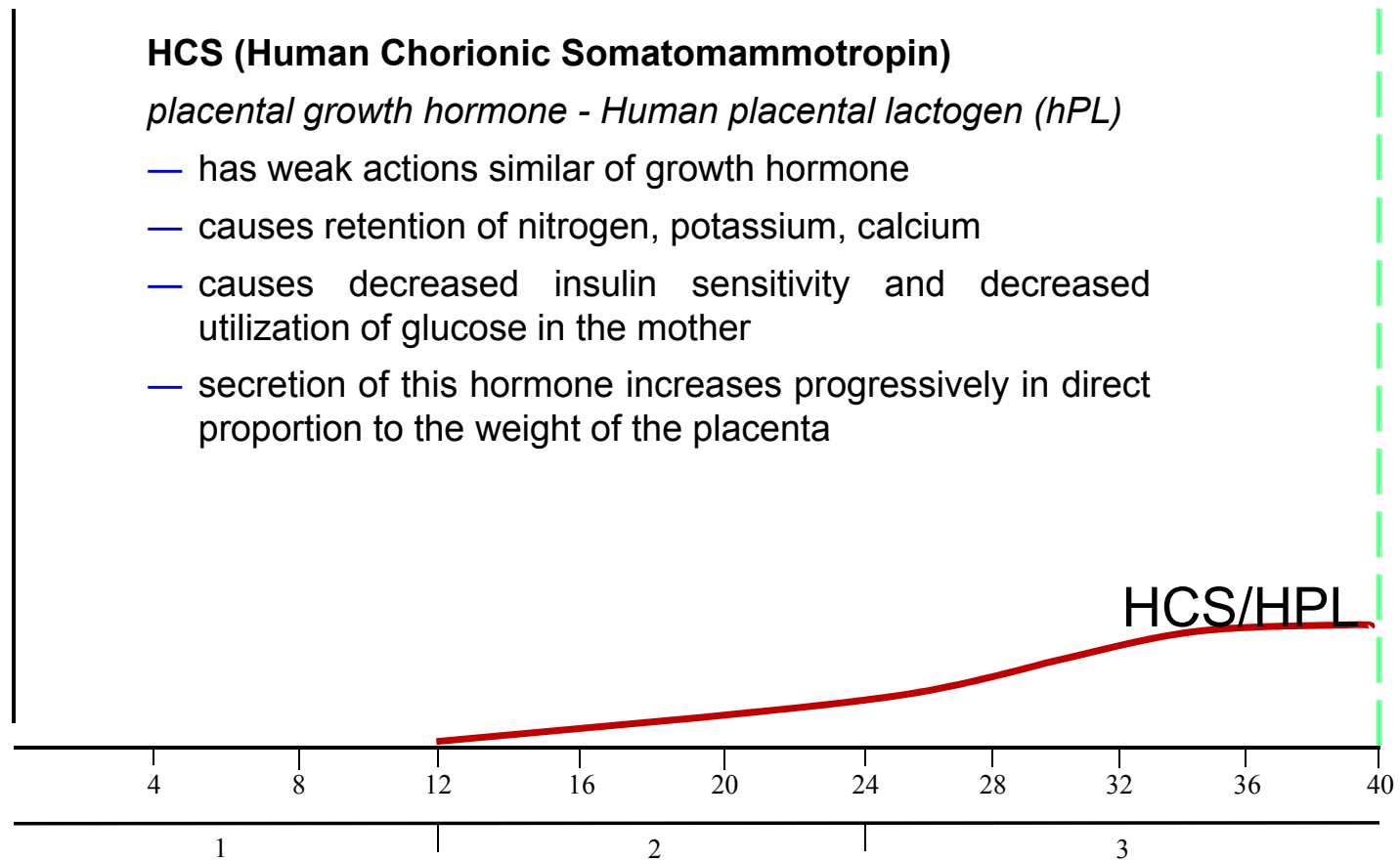


# HCS/HPL

## HCS (Human Chorionic Somatomammotropin)

*placental growth hormone - Human placental lactogen (hPL)*

- has weak actions similar of growth hormone
- causes retention of nitrogen, potassium, calcium
- causes decreased insulin sensitivity and decreased utilization of glucose in the mother
- secretion of this hormone increases progressively in direct proportion to the weight of the placenta



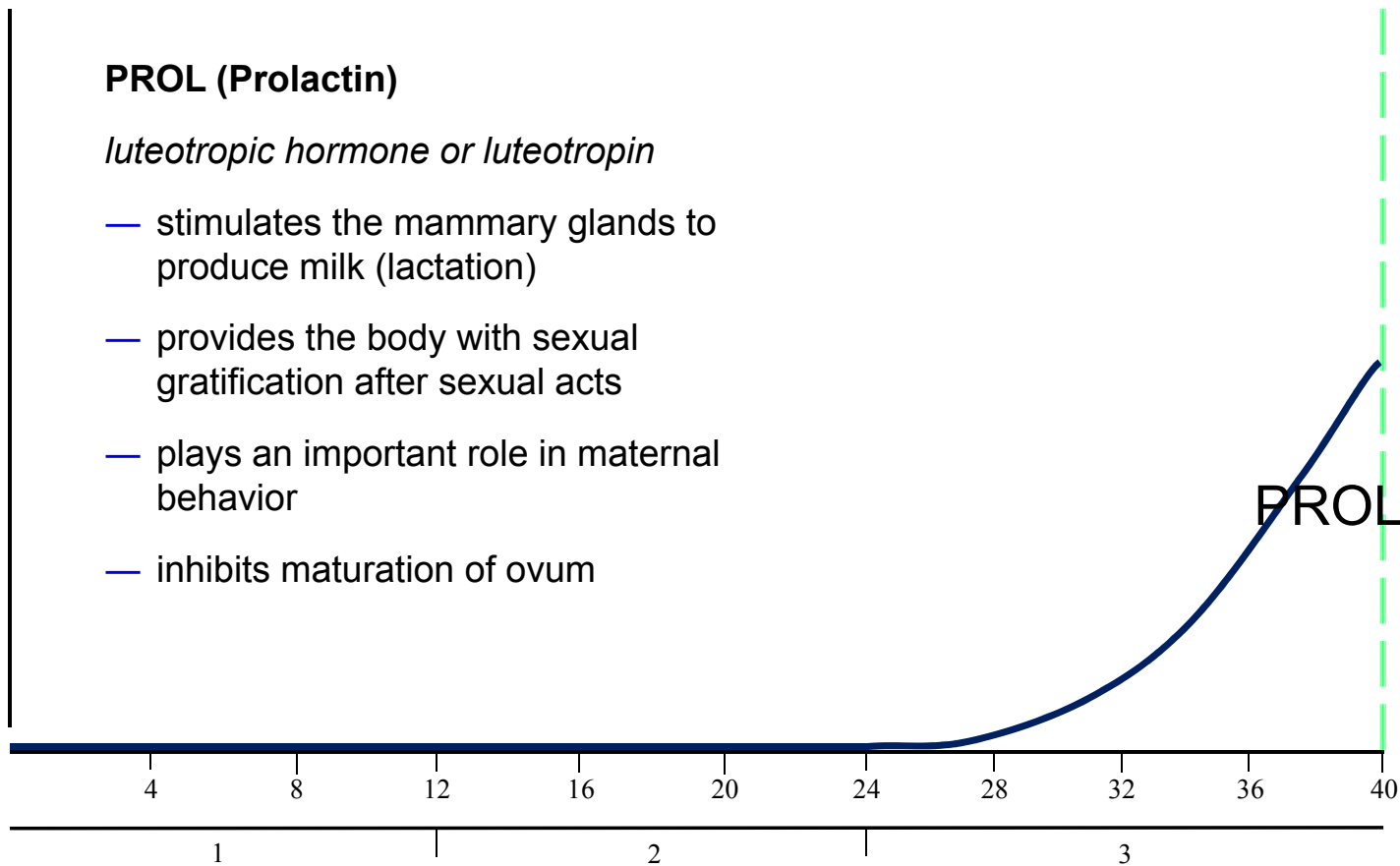


# PROL

## PROL (Prolactin)

*luteotropic hormone or luteotropin*

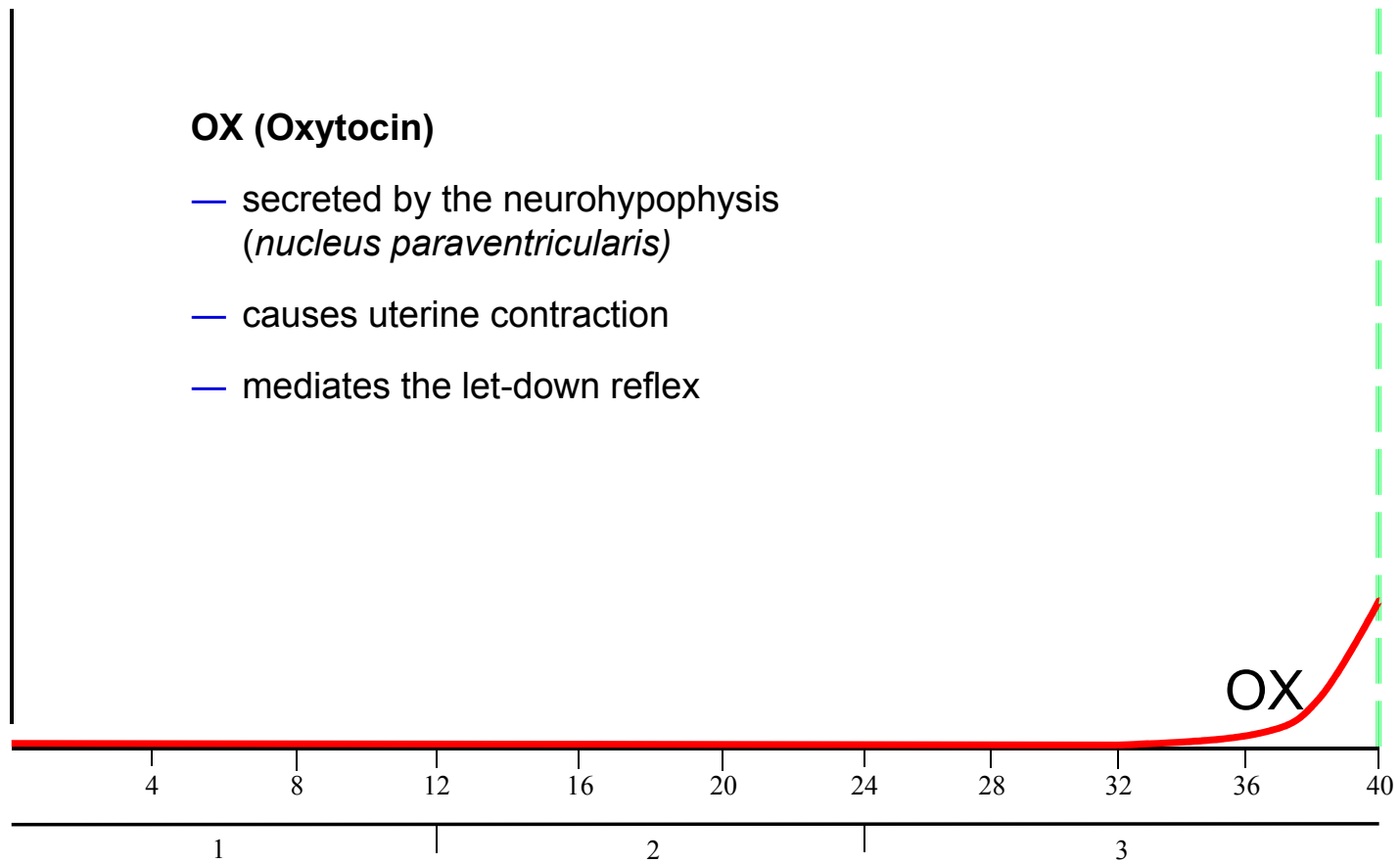
- stimulates the mammary glands to produce milk (lactation)
- provides the body with sexual gratification after sexual acts
- plays an important role in maternal behavior
- inhibits maturation of ovum



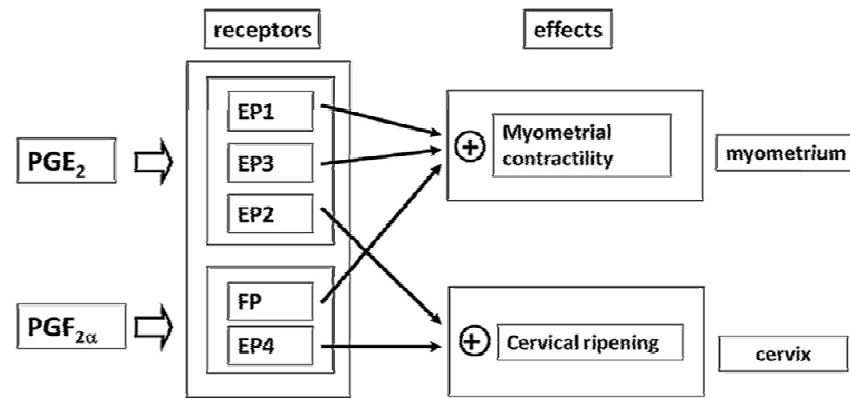
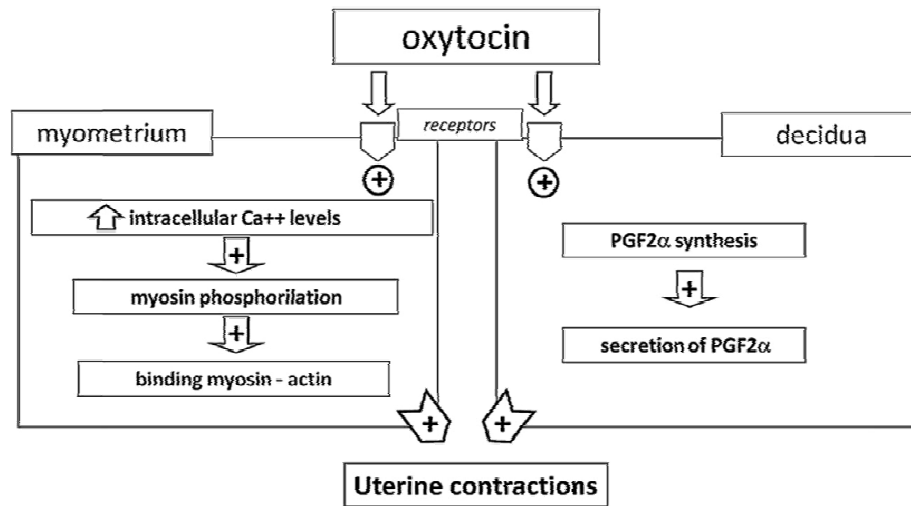
# OX

## OX (Oxytocin)

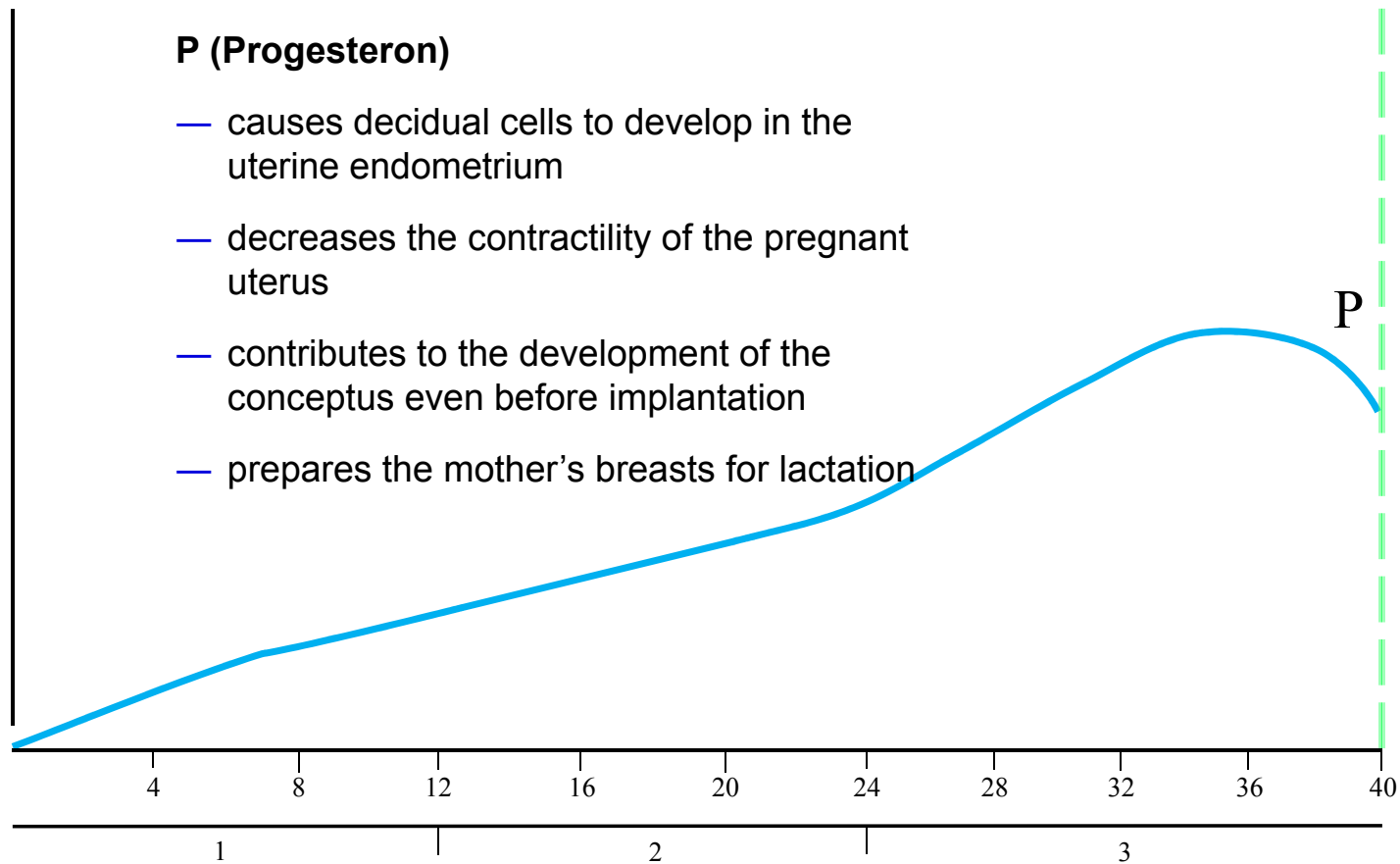
- secreted by the neurohypophysis (*nucleus paraventricularis*)
- causes uterine contraction
- mediates the let-down reflex



# OX



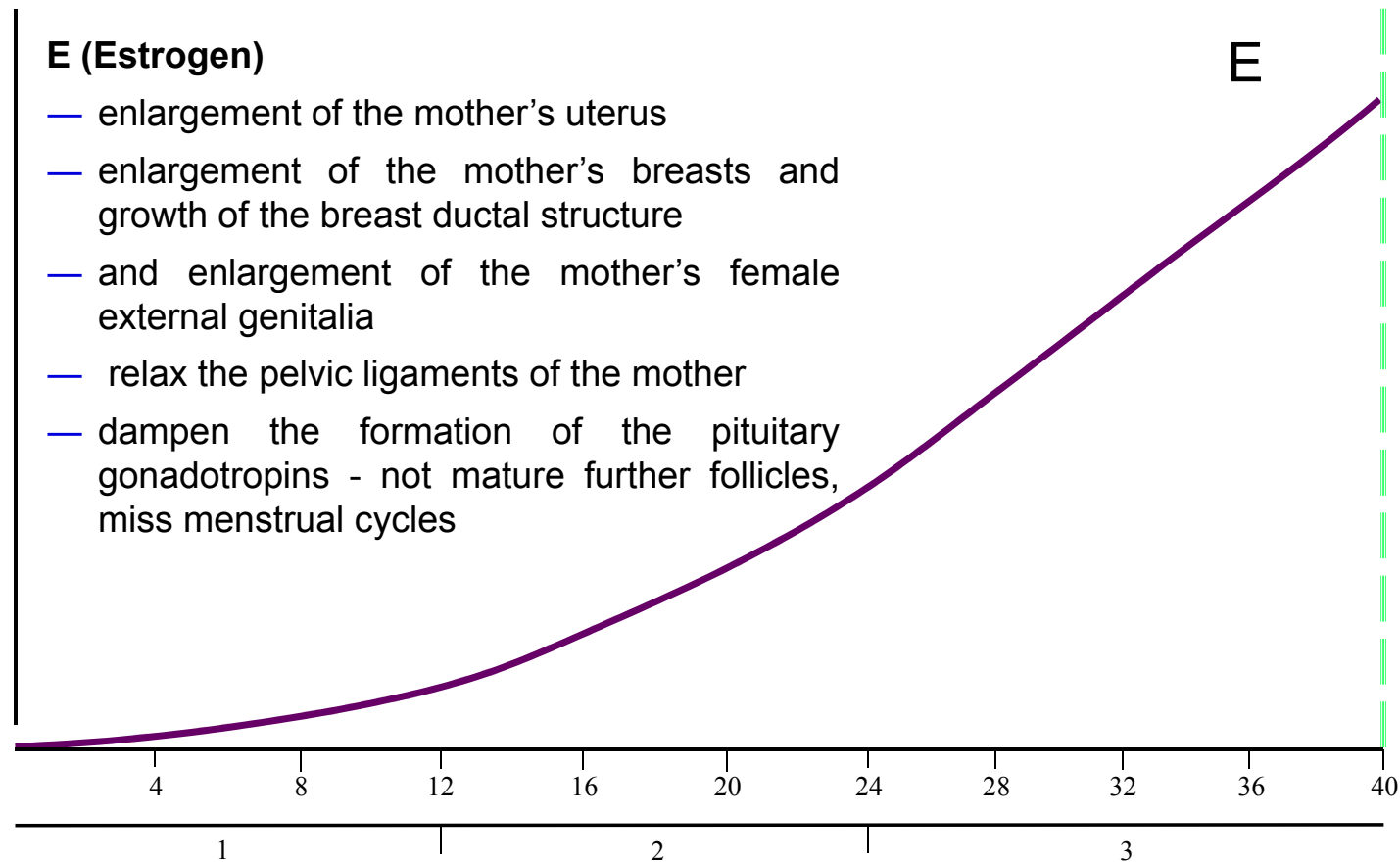
# Progesteron

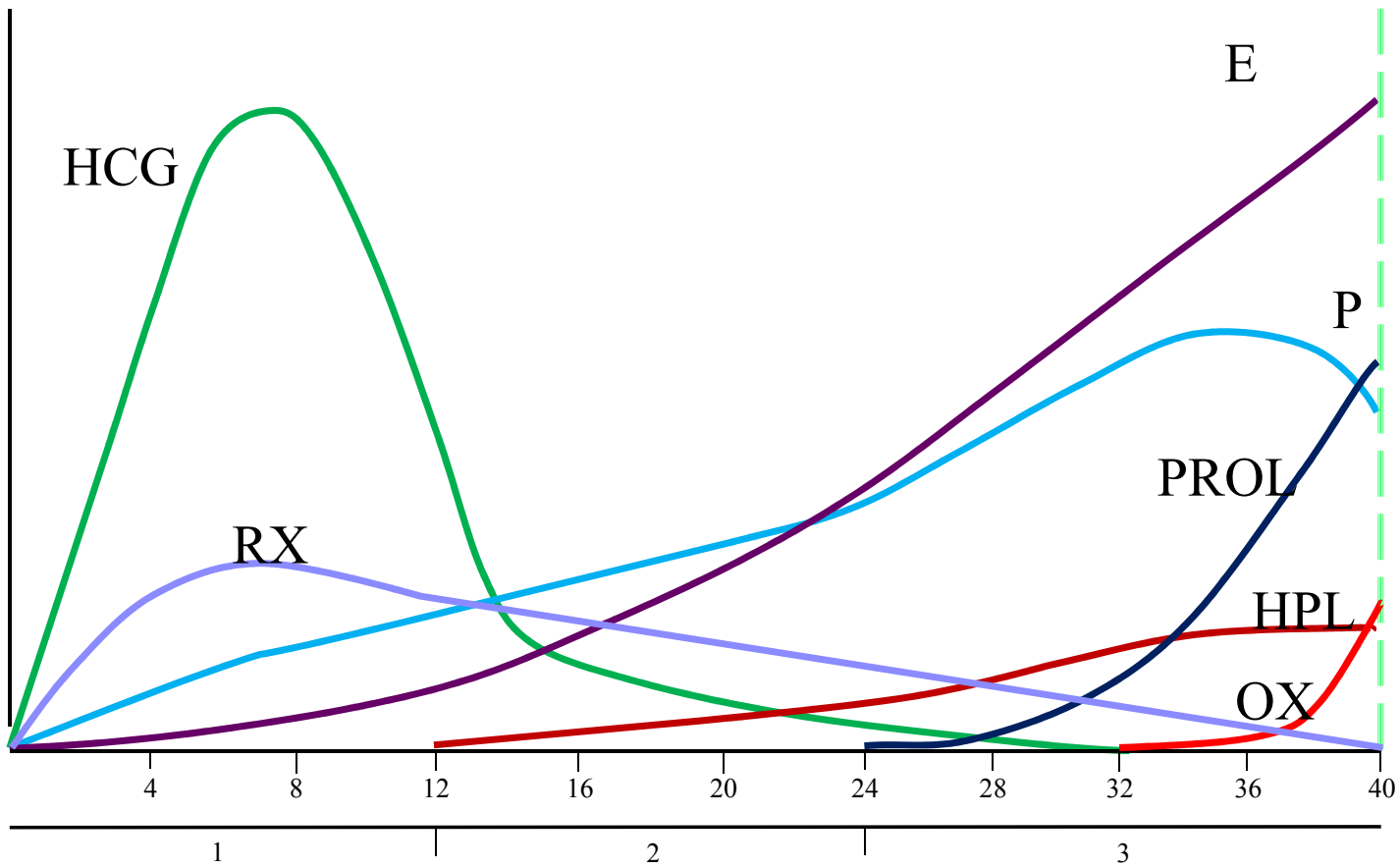


# Estroen

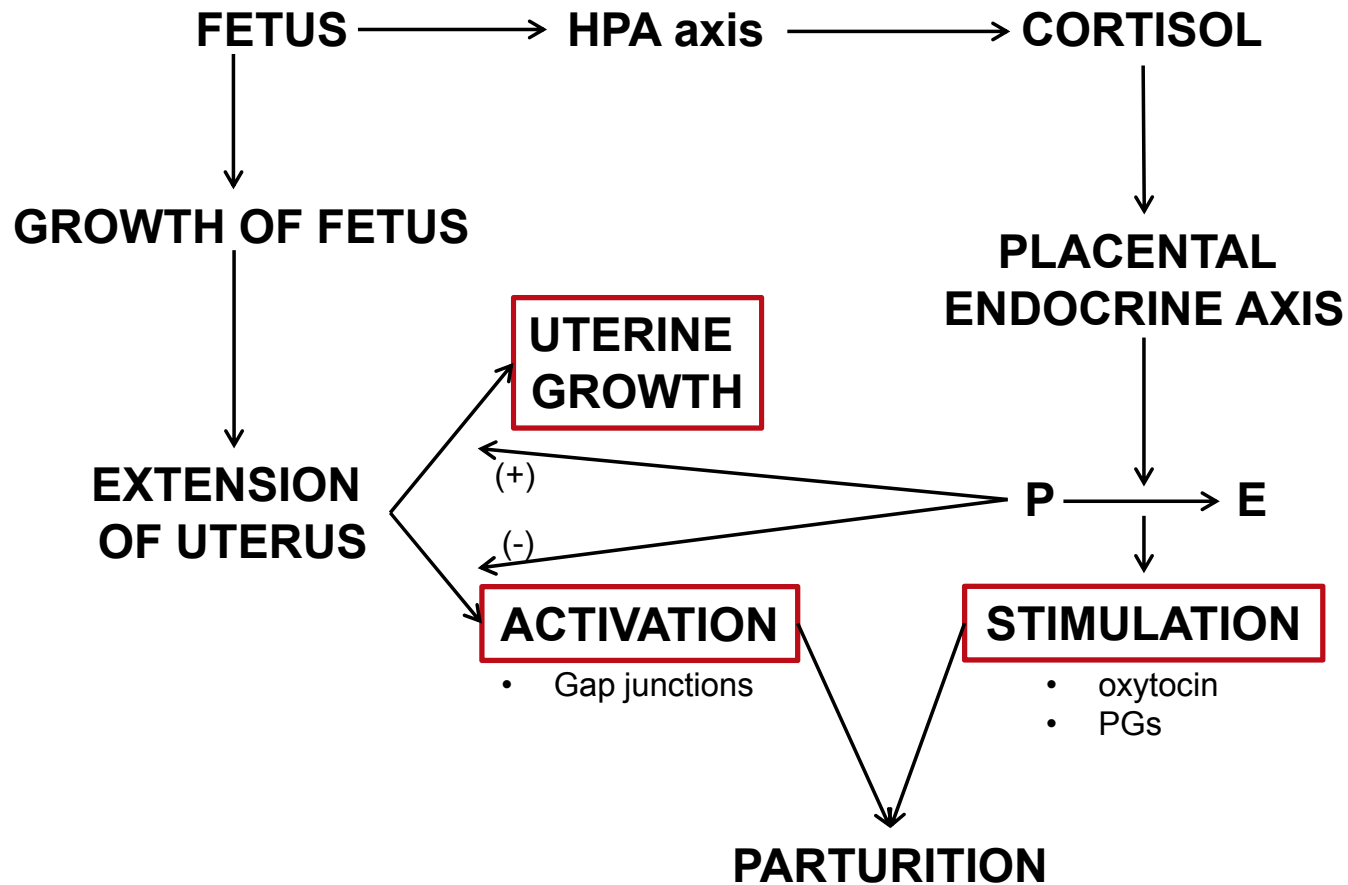
## E (Estrogen)

- enlargement of the mother's uterus
- enlargement of the mother's breasts and growth of the breast ductal structure
- and enlargement of the mother's female external genitalia
- relax the pelvic ligaments of the mother
- dampen the formation of the pituitary gonadotropins - not mature further follicles, miss menstrual cycles

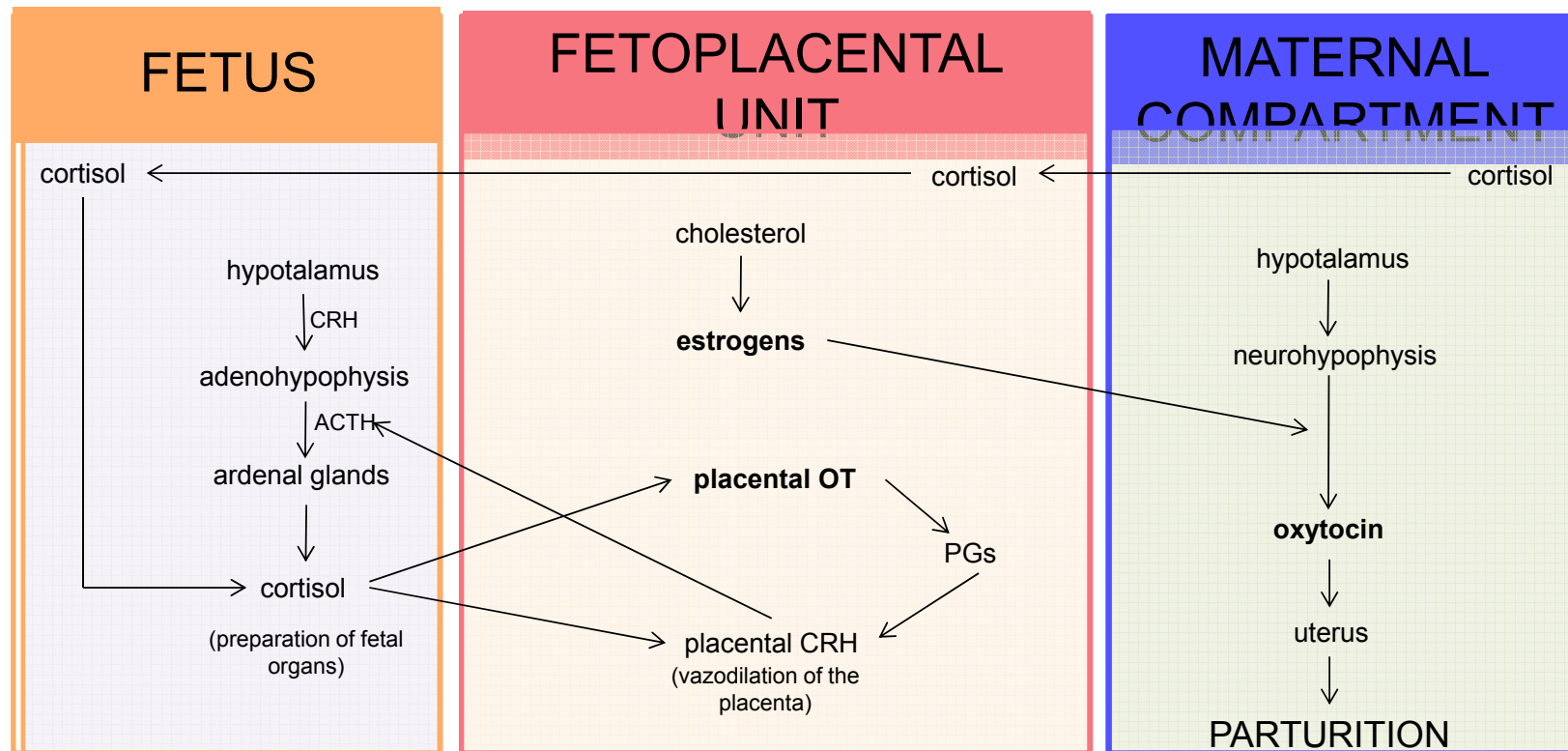




# Fetoplacental unit

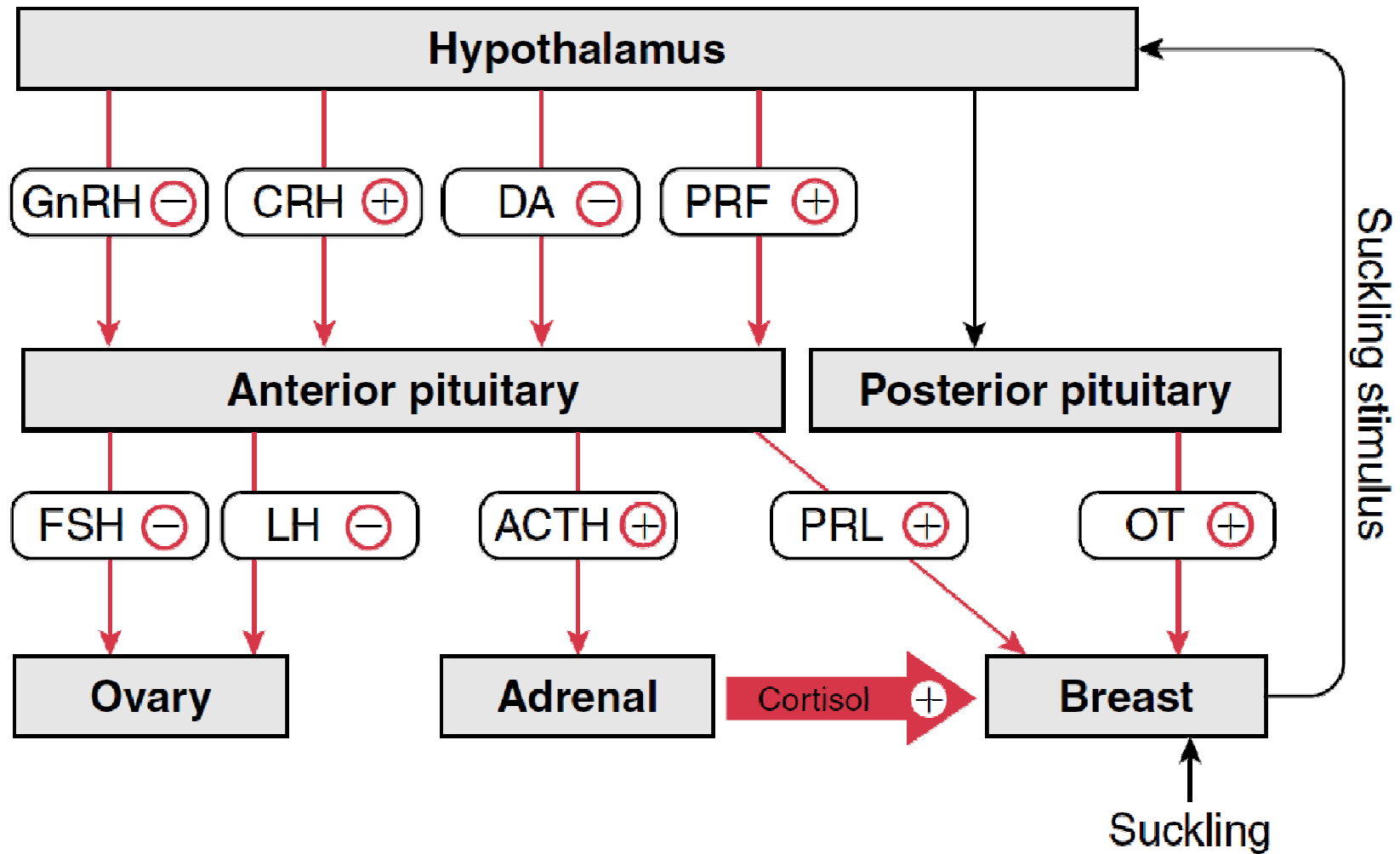


# Fetoplacental unit

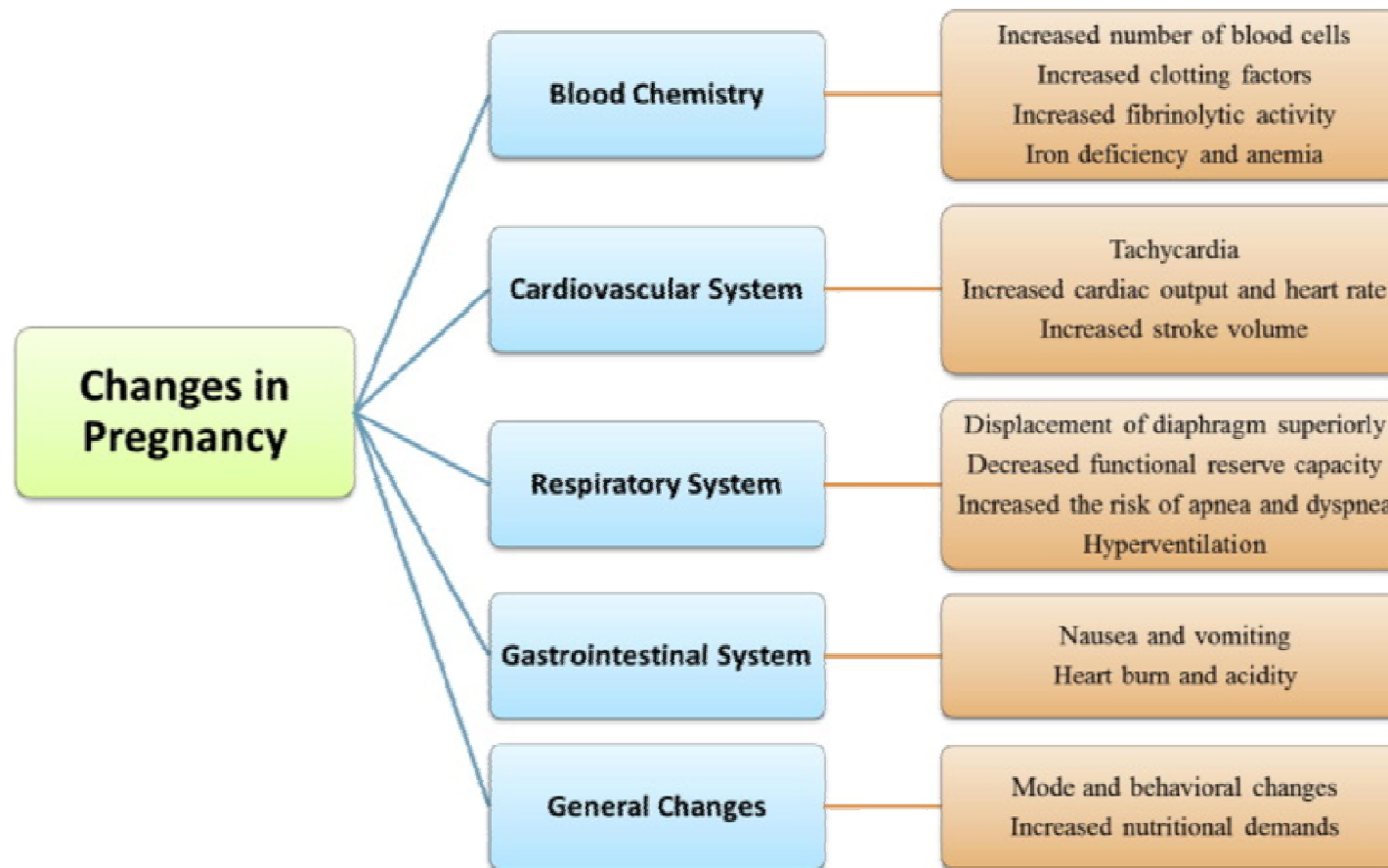




# Lactation



# Physiological changes during pregnancy



THANK YOU FOR YOUR ATENTION