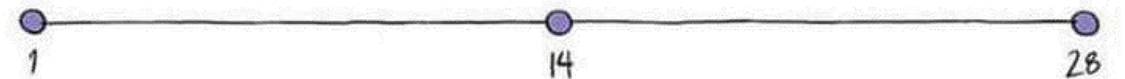
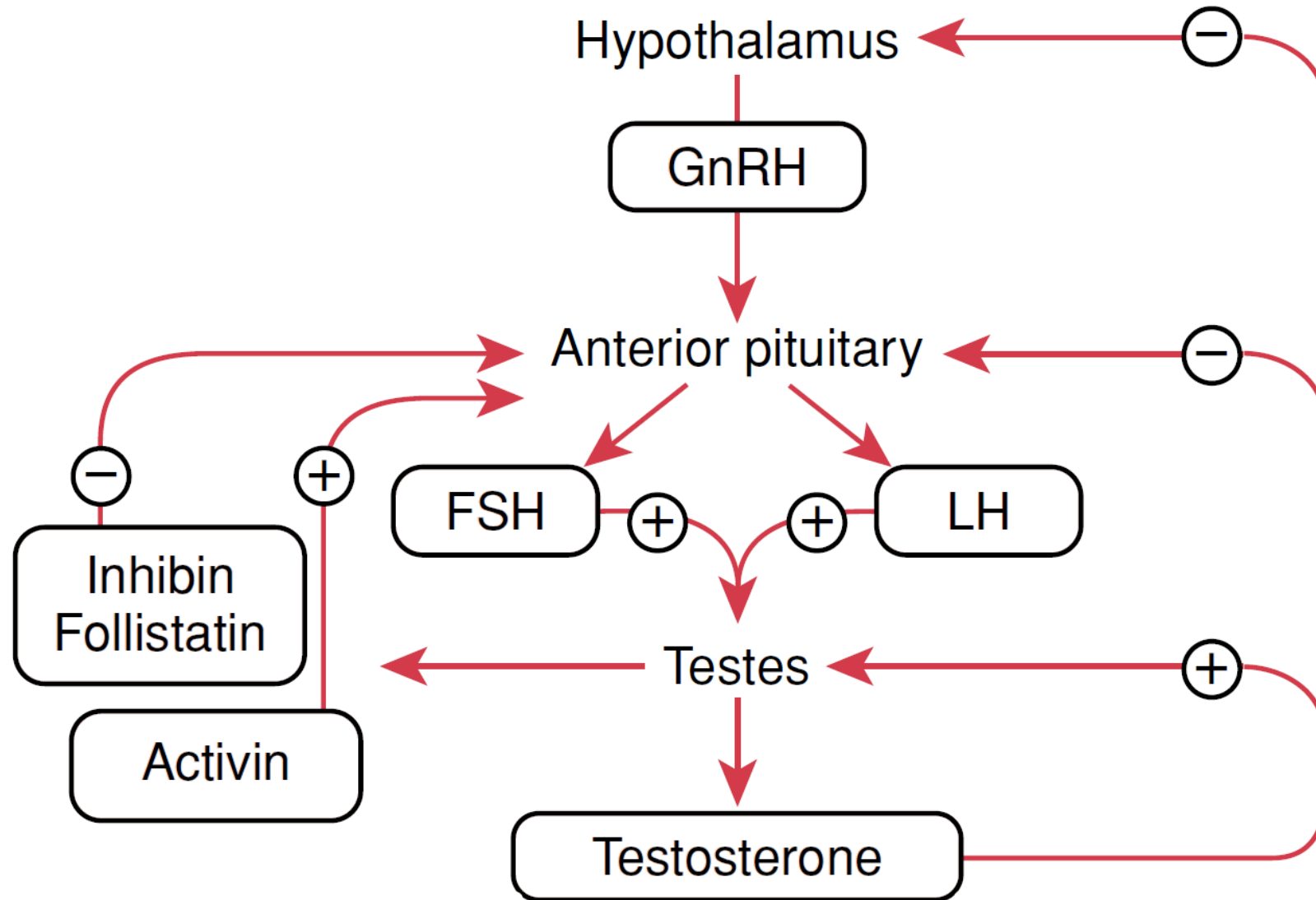


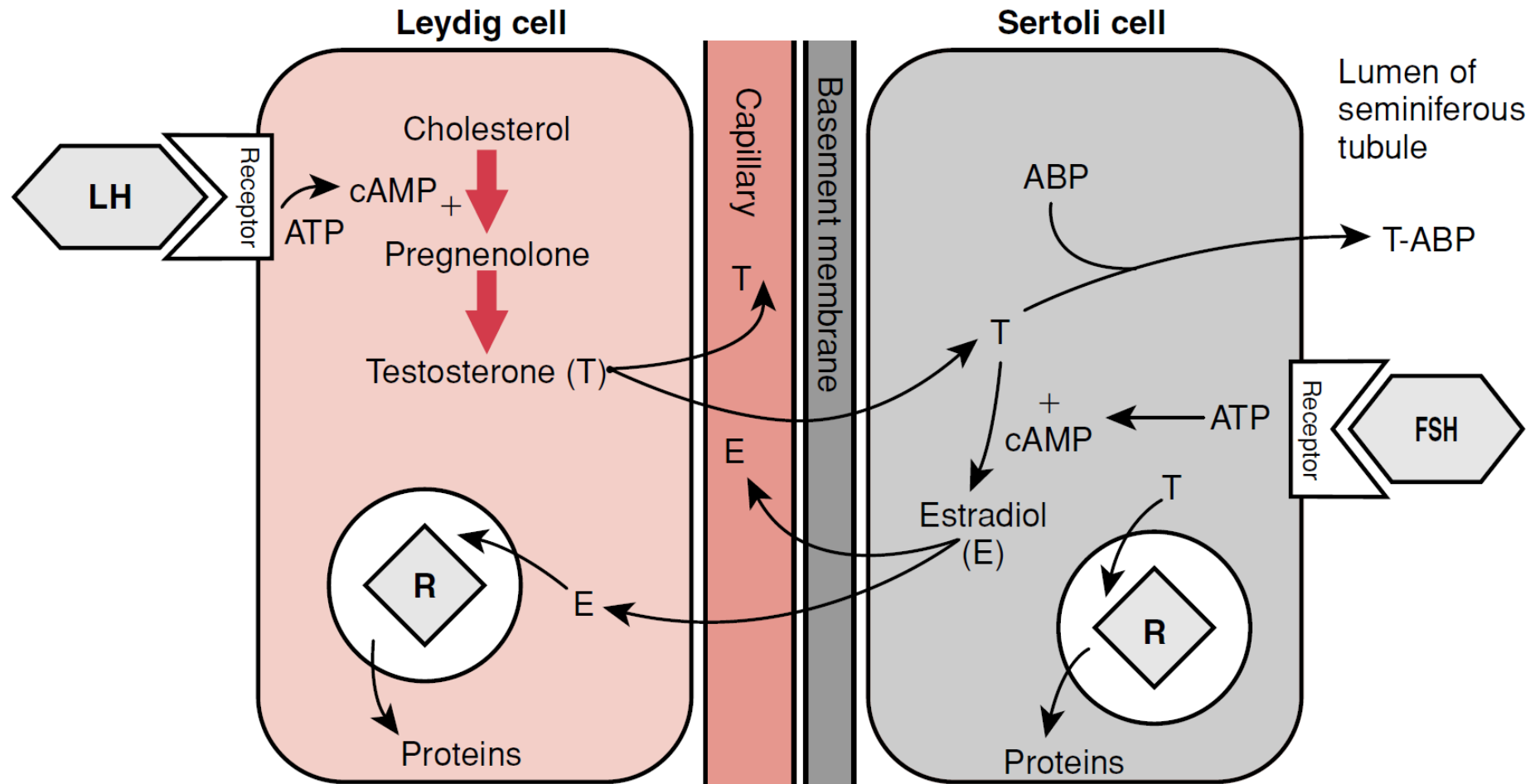
# Physiology of reproduction.



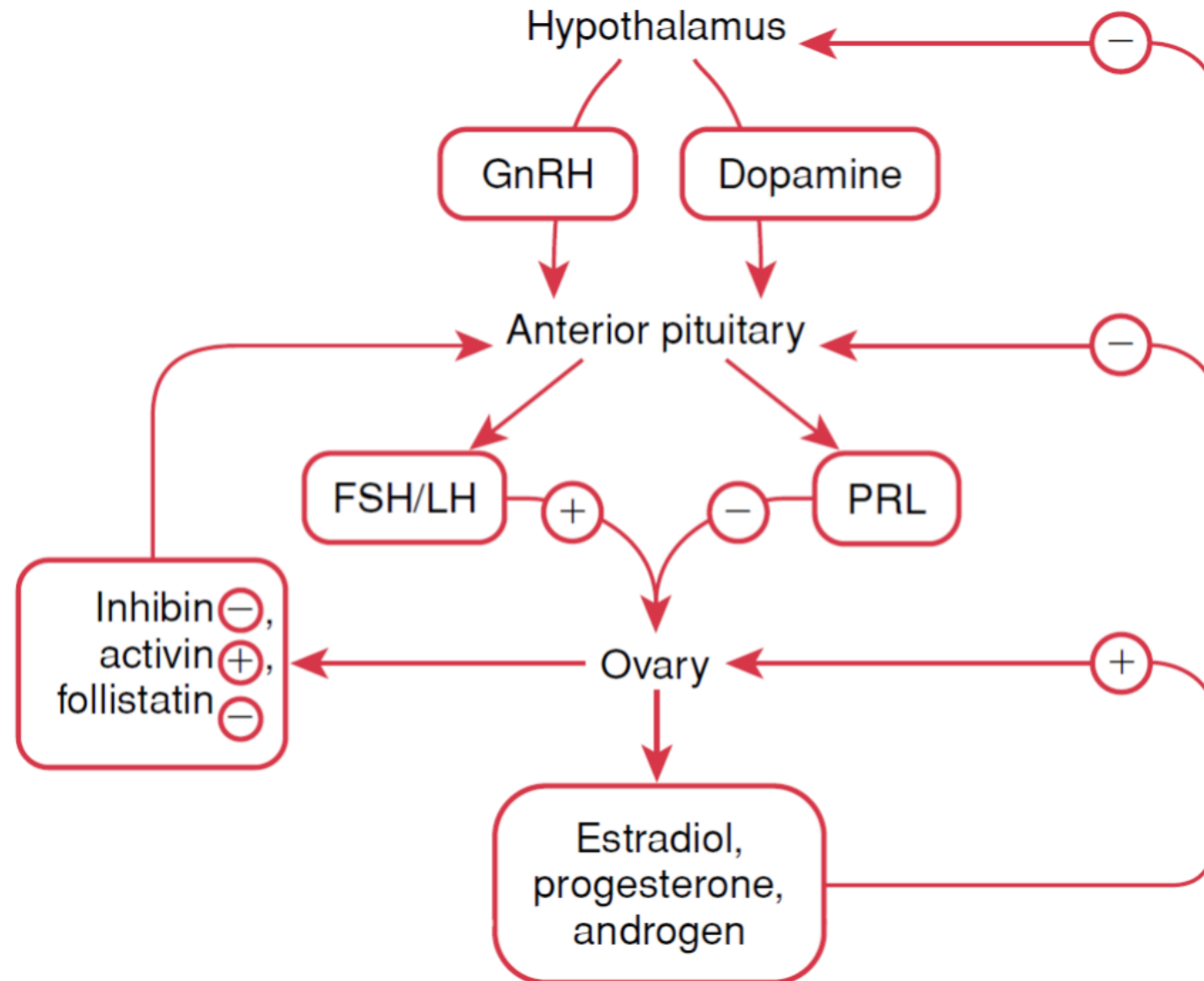
# Hypothalamus – hypophysis – gonads



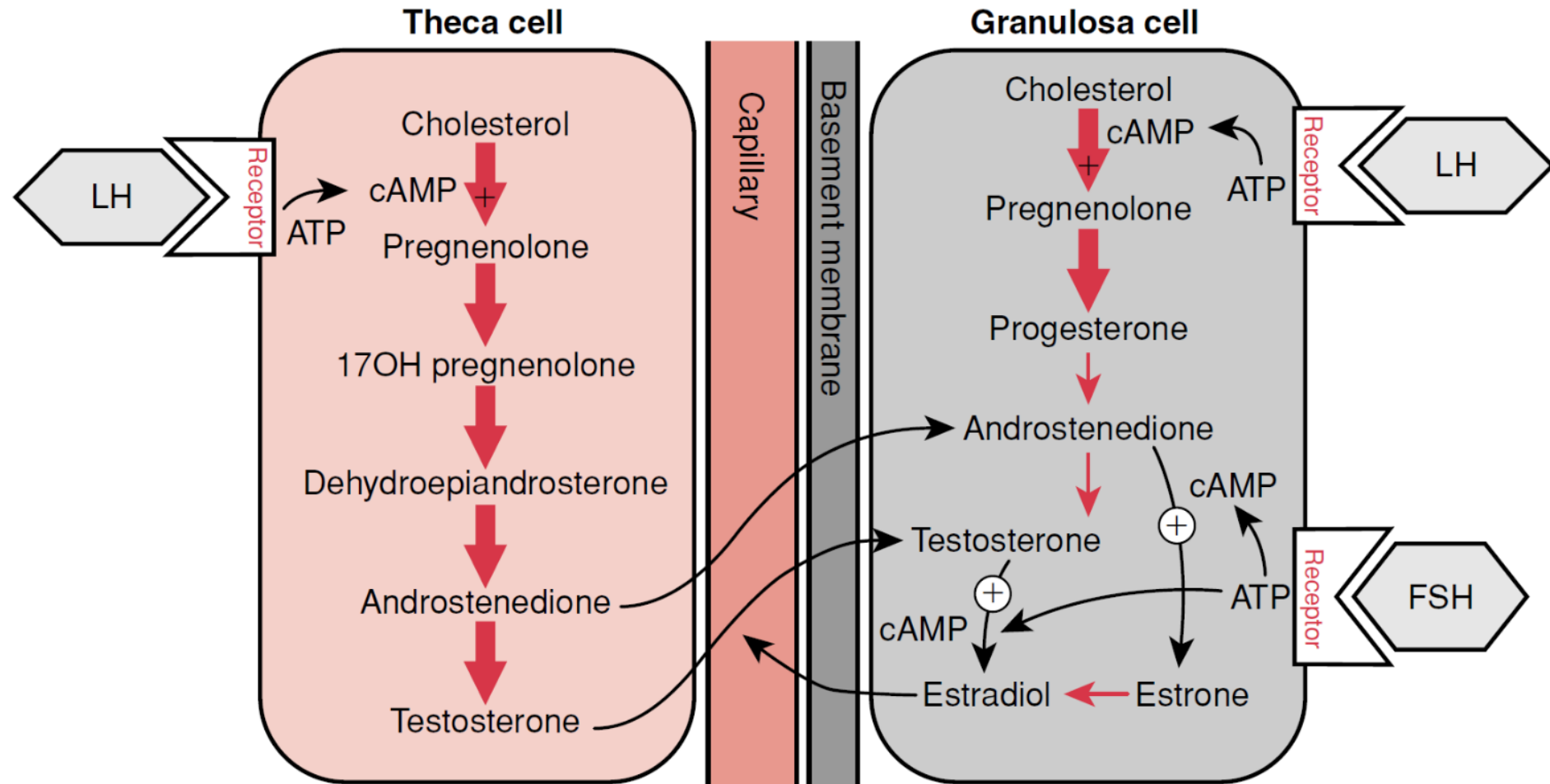
# Hypothalamus – hypophysis – gonads



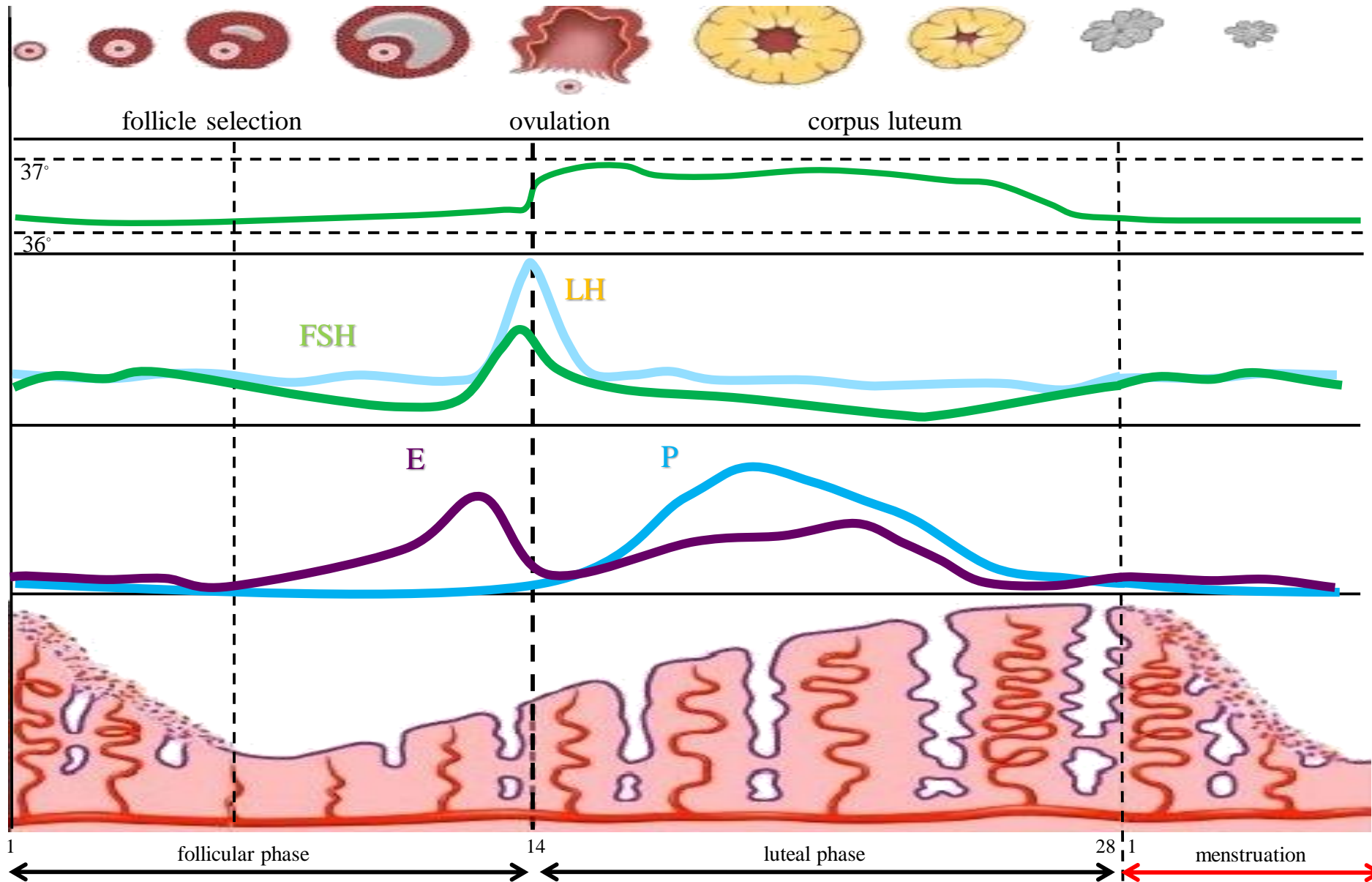
# Hypothalamus – hypophysis – gonads



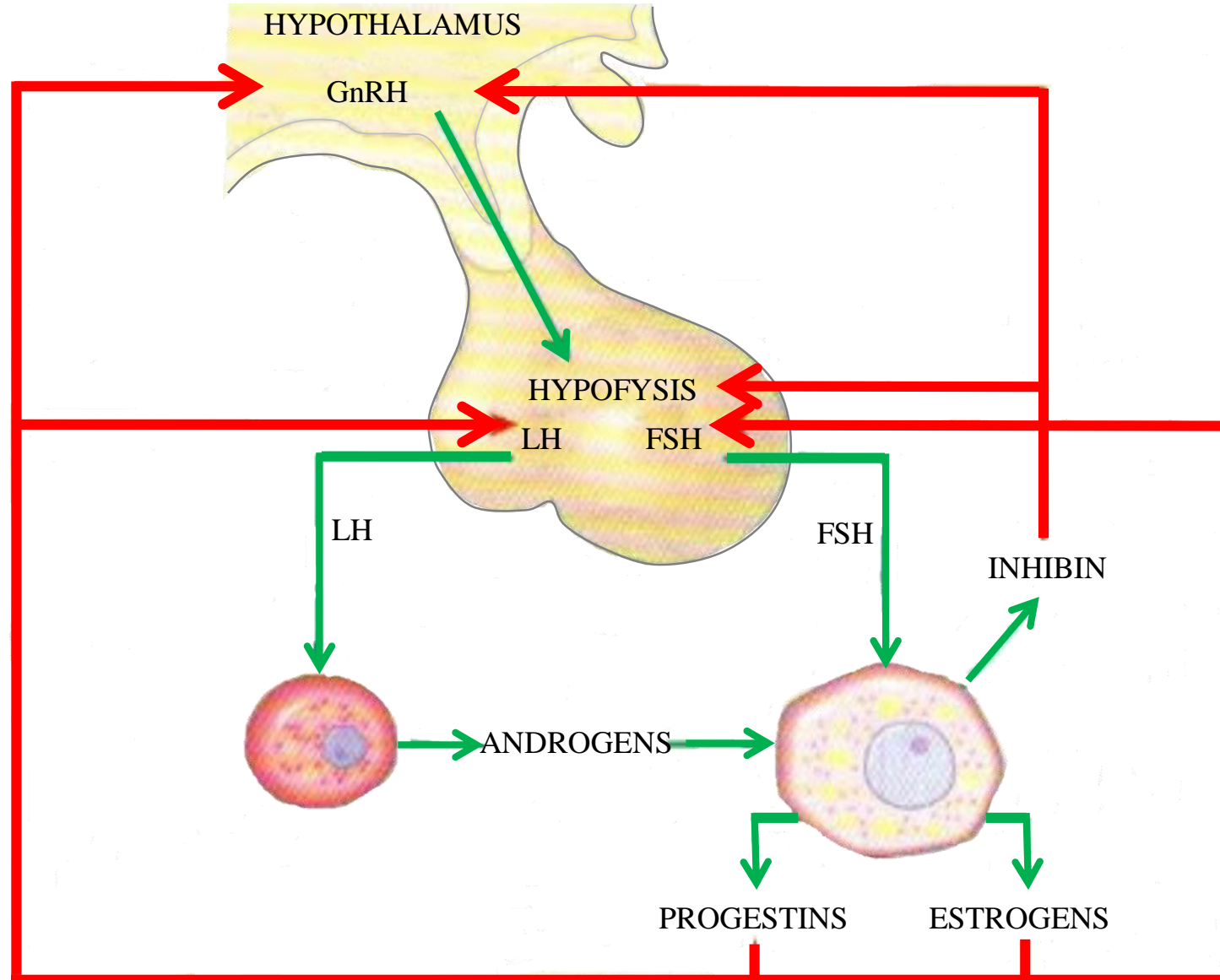
# Hypothalamus – hypophysis – gonads



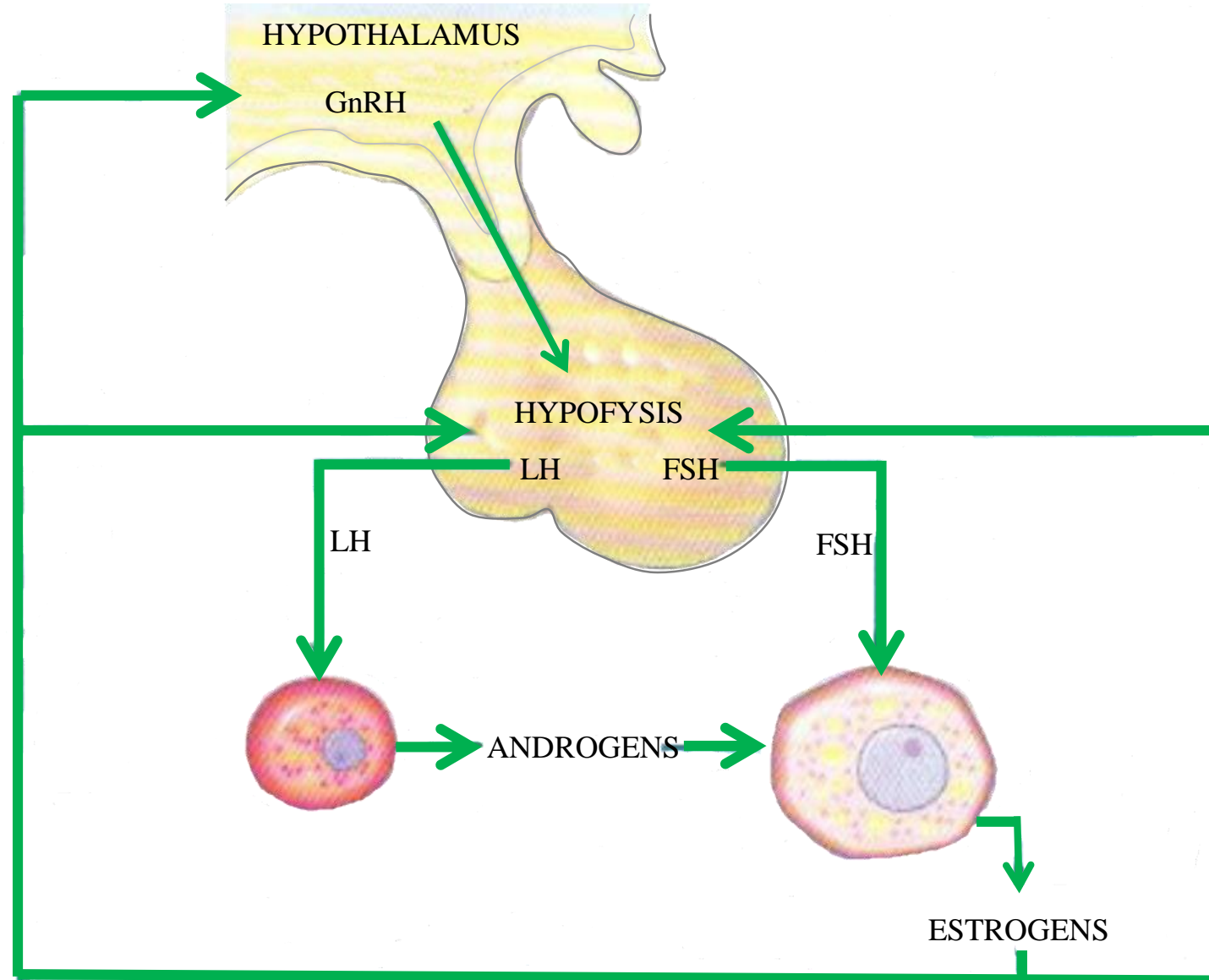
# Menstrual cycle



# Negative feedback

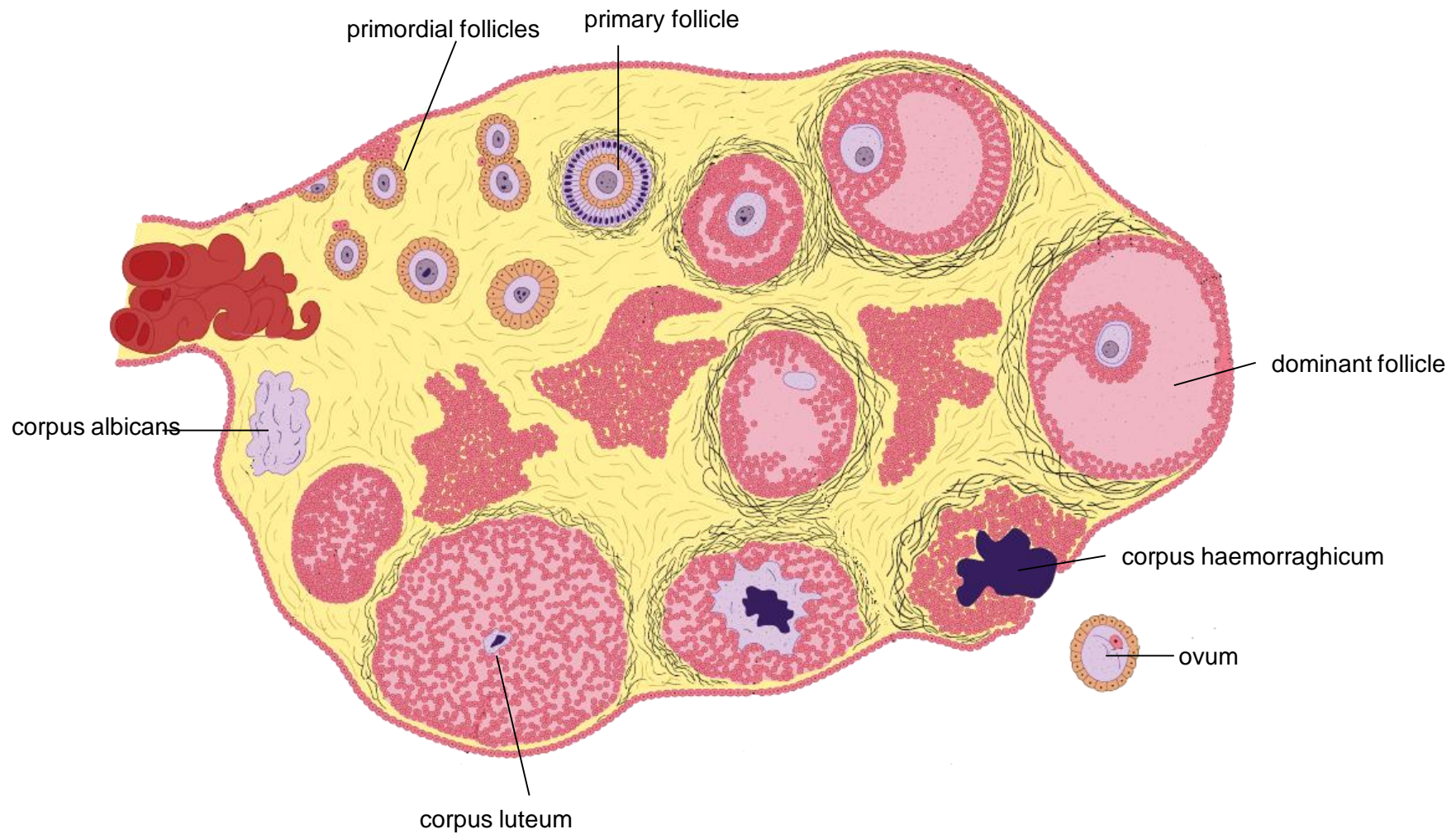


# Positive feedback

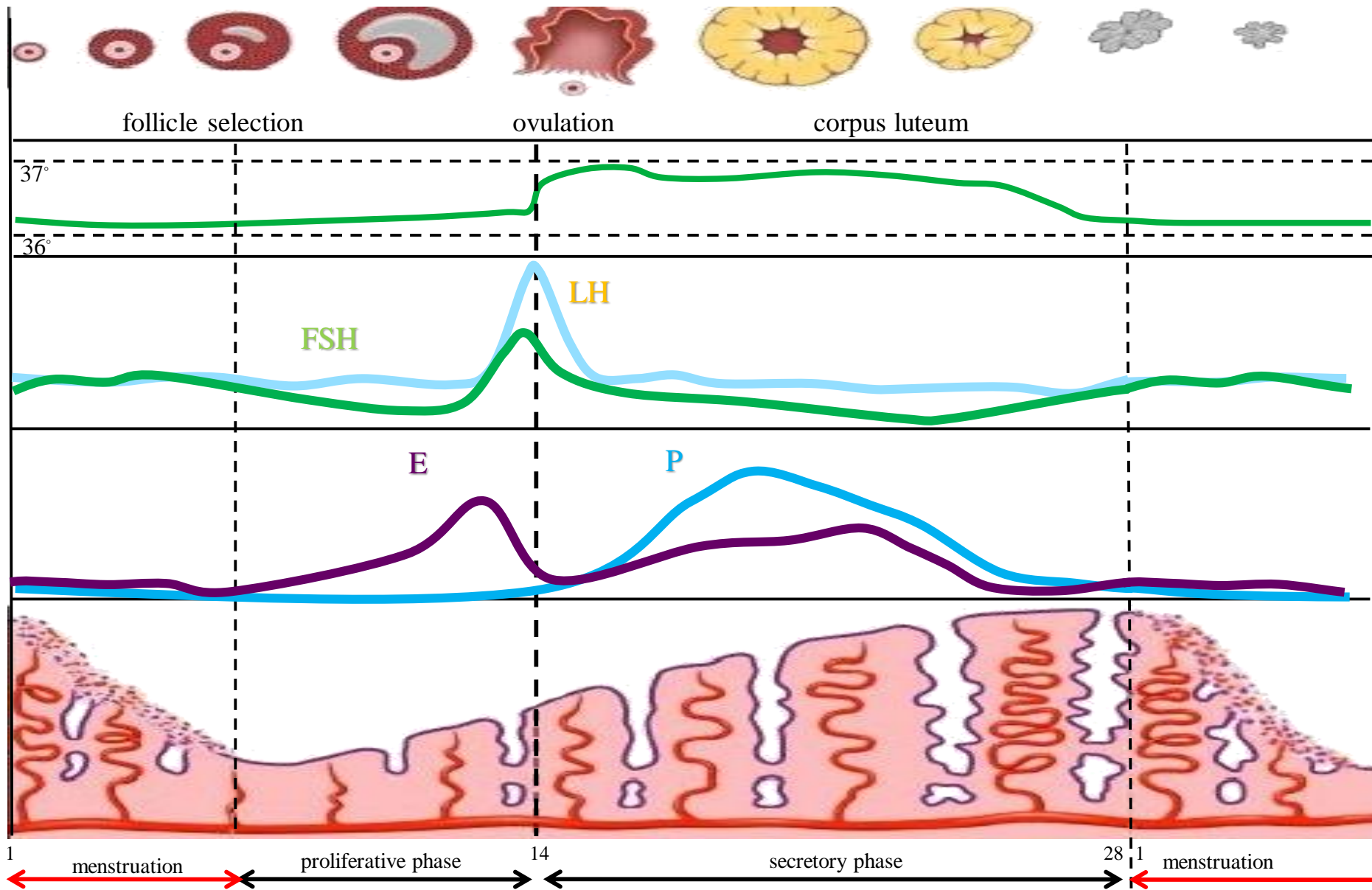




# Ovarian cycle



# Menstrual cycle



# Contraceptives

## BARRIER CONTRACEPTIVES:

- condoms
- contraceptive sponges with spermicide
- diaphragms
- cervical caps

## HORMONAL:

- oral pills
- implants under the skin
- injections
- patches
- IUDs
- vaginal ring

## INTRAUTERINE DEVICES:

- copper IUDs
- IUD with levonorgestrel

## BEHAVIORAL:

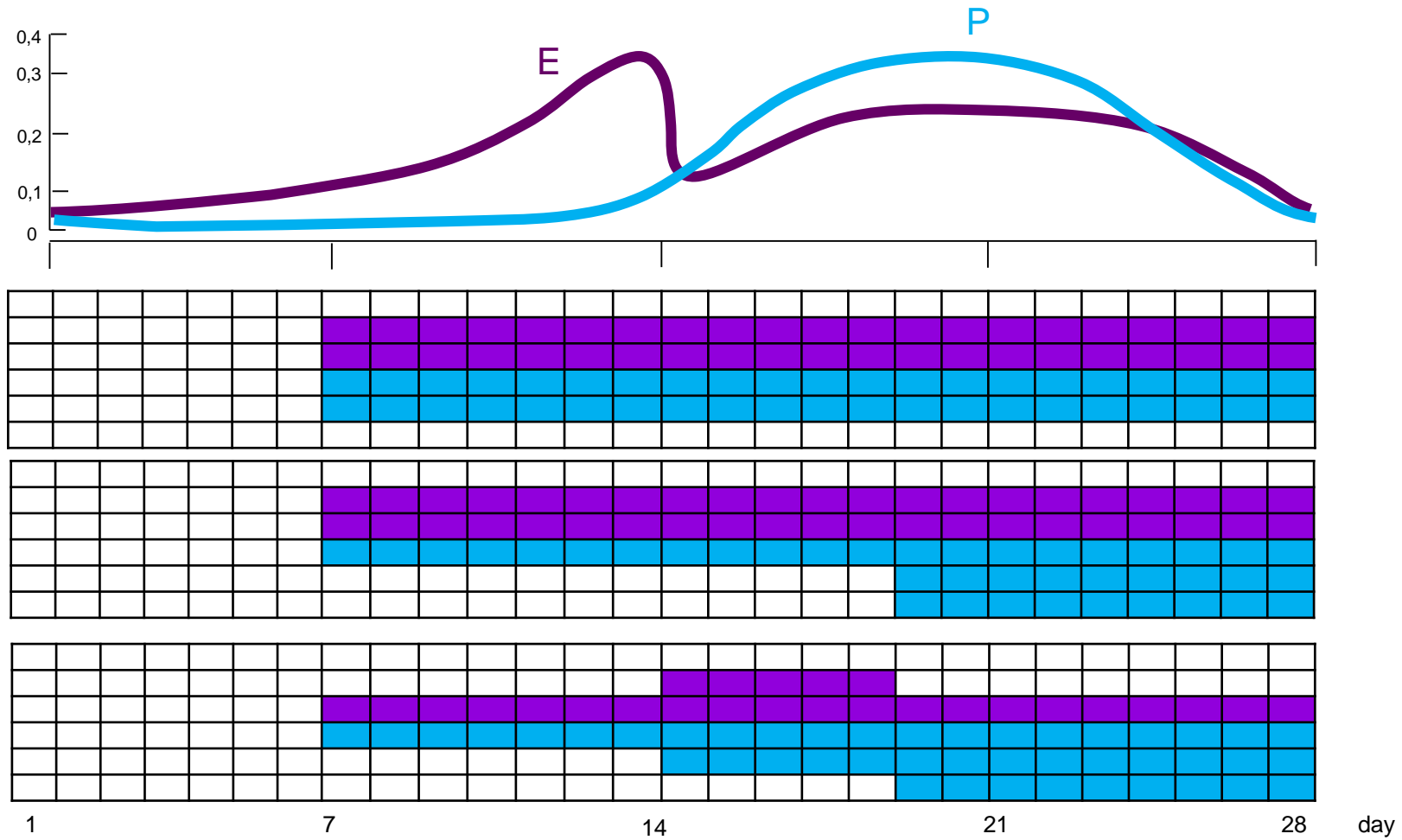
- fertility awareness methods
- coitus interruptus
- lactation



## STERILIZATION:

- tubal ligation
- vasectomy

# Oral pills



# Oral pills

## – Progestational effects include:

- Inhibition of ovulation by suppressing luteinizing hormone (LH);
- Thickening of cervical mucus, thus hampering the transport of sperm;
- Possible inhibition of sperm capacitation;
- Hampered implantation by the production of decidualized endometrium with exhausted and atrophic glands

## – Estrogenic effects include:

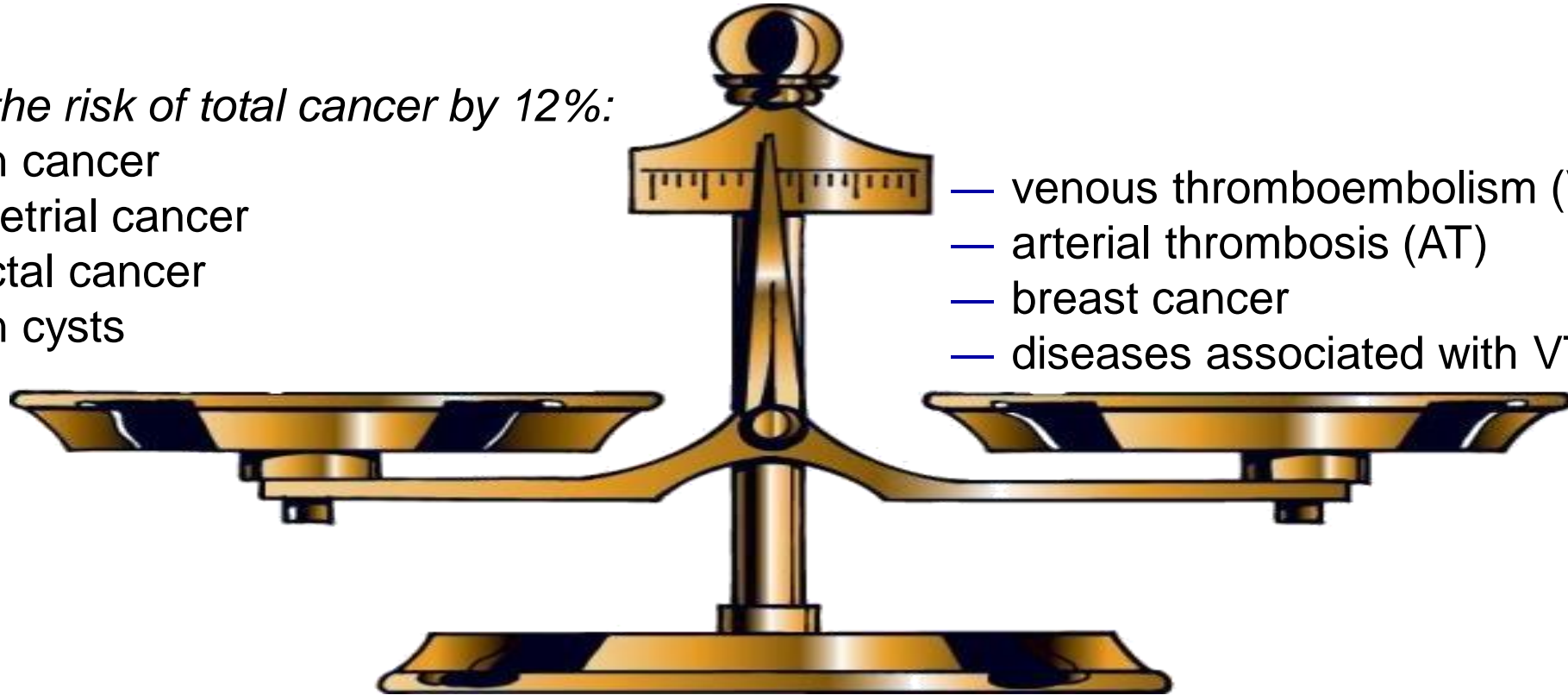
- Partial inhibition of ovulation in part by the suppression of follicle-stimulating hormone (FSH) and luteinizing hormone (LH), depending on dose;
- Alteration of secretions and cellular structures of the endometrium within the uterus

# Benefits and risks of HC

*reducing the risk of total cancer by 12%:*

- ovarian cancer
- endometrial cancer
- colorectal cancer
- ovarian cysts

*acne*



- venous thromboembolism (VTE)
- arterial thrombosis (AT)
- breast cancer
- diseases associated with VTE and AT



# 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

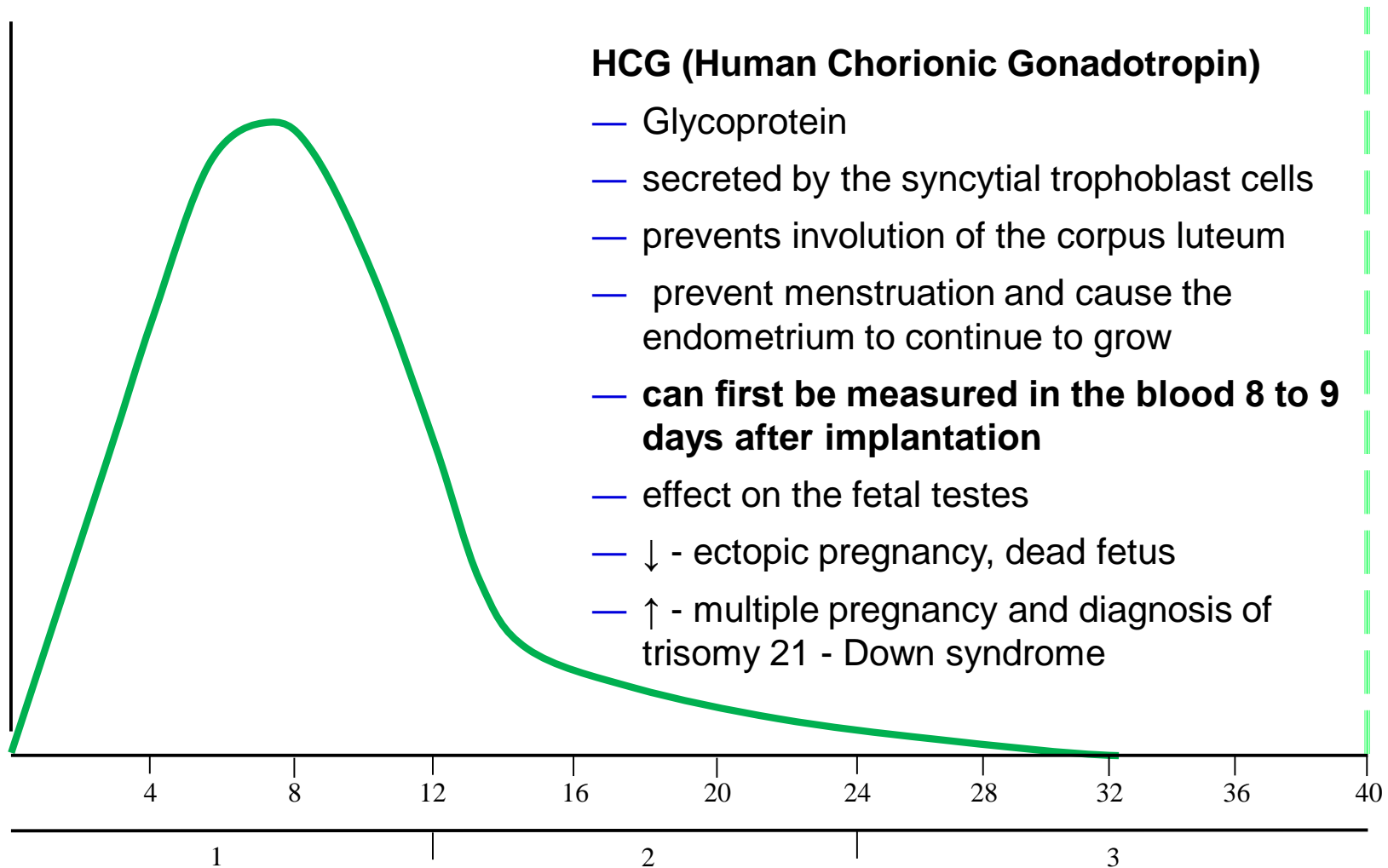
## – ENDOCRIN function

- Estrogens
- Progesteron
- HCG
- HPL
- Growth factors (epidermal and insulin-like growth factors)

## – PROTECTIV function

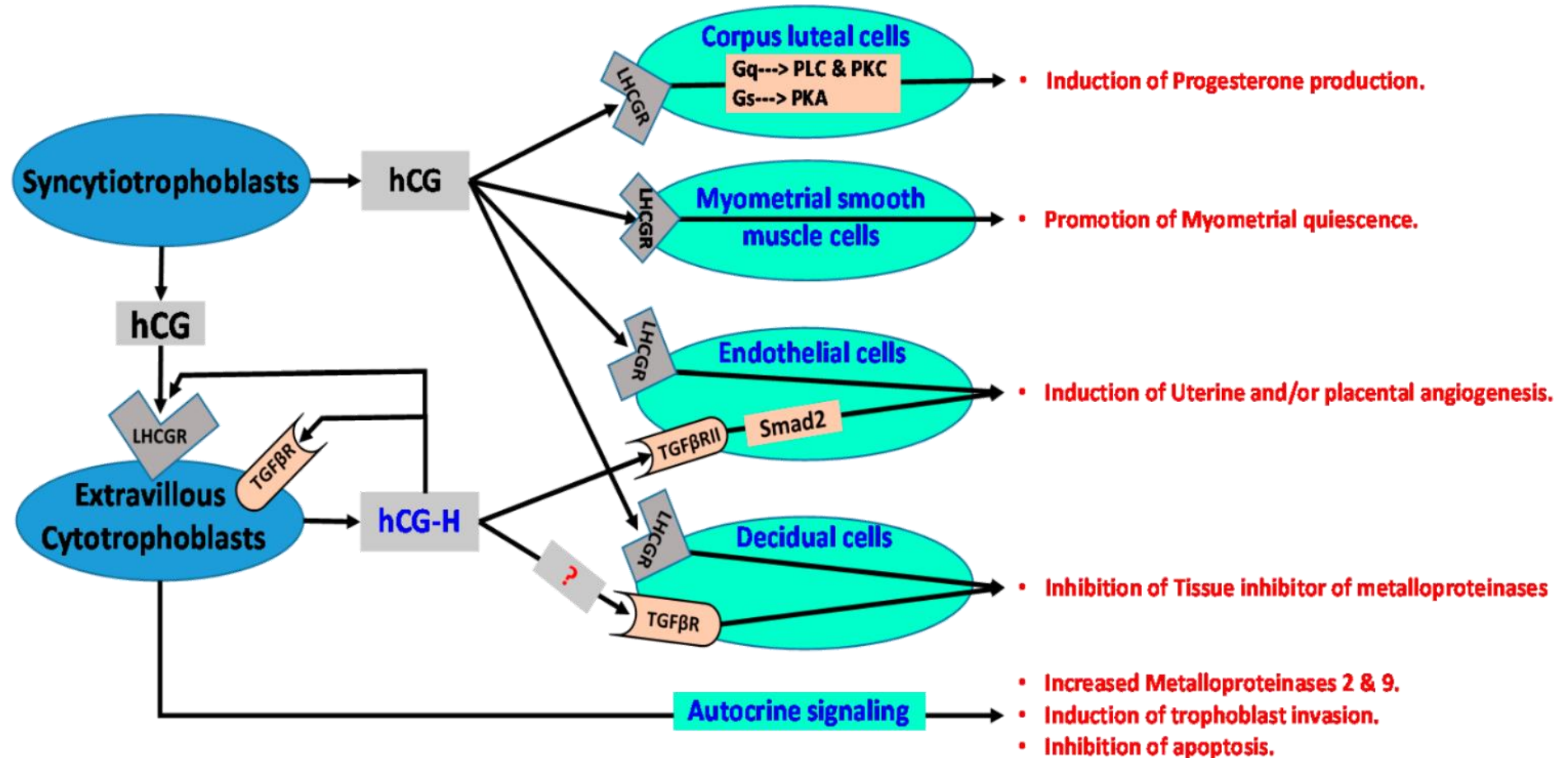
- Cytochrom P450
- Pinocytosis (IgG)
- Barrier against bacterias, virus etc.

# HCG

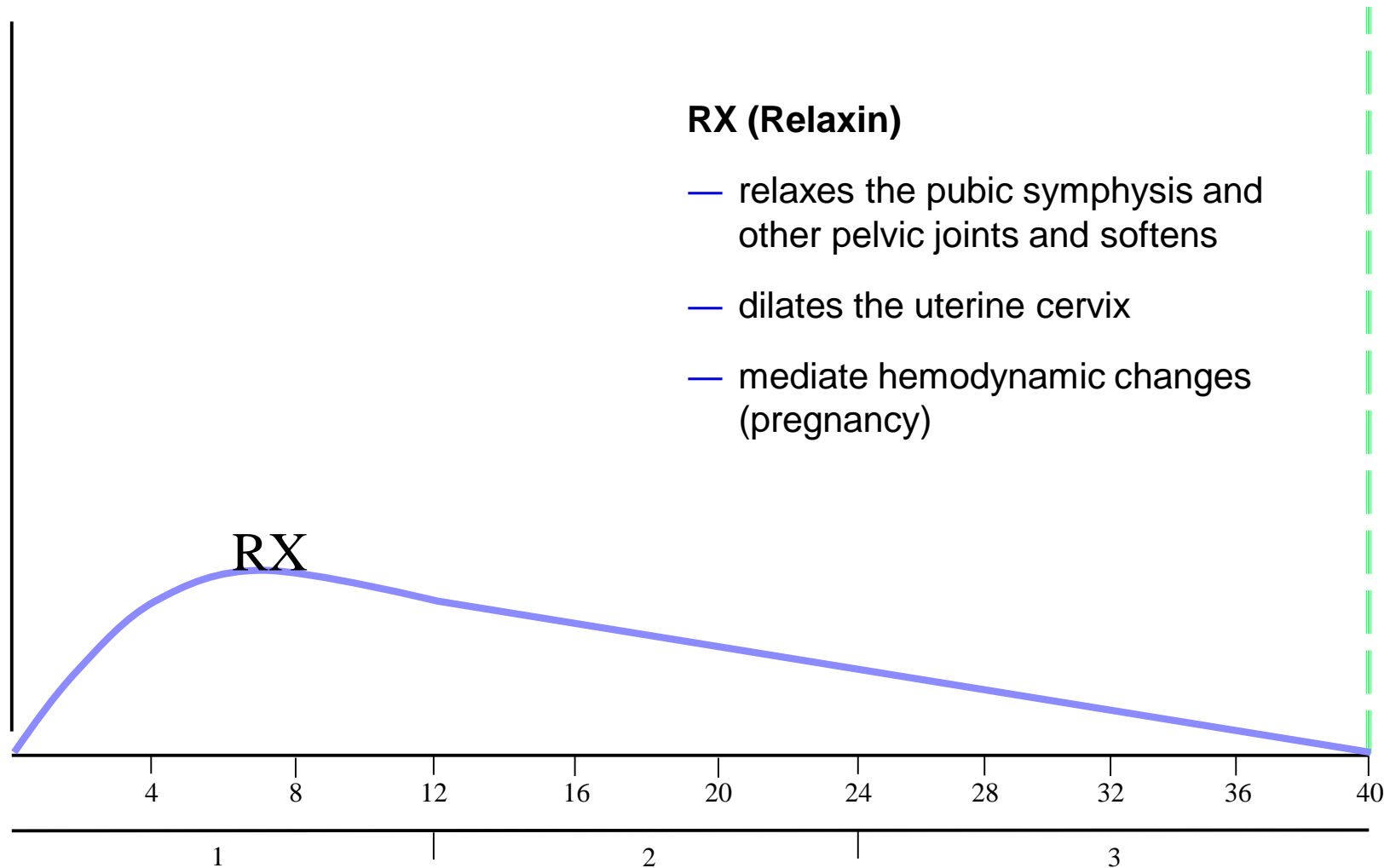




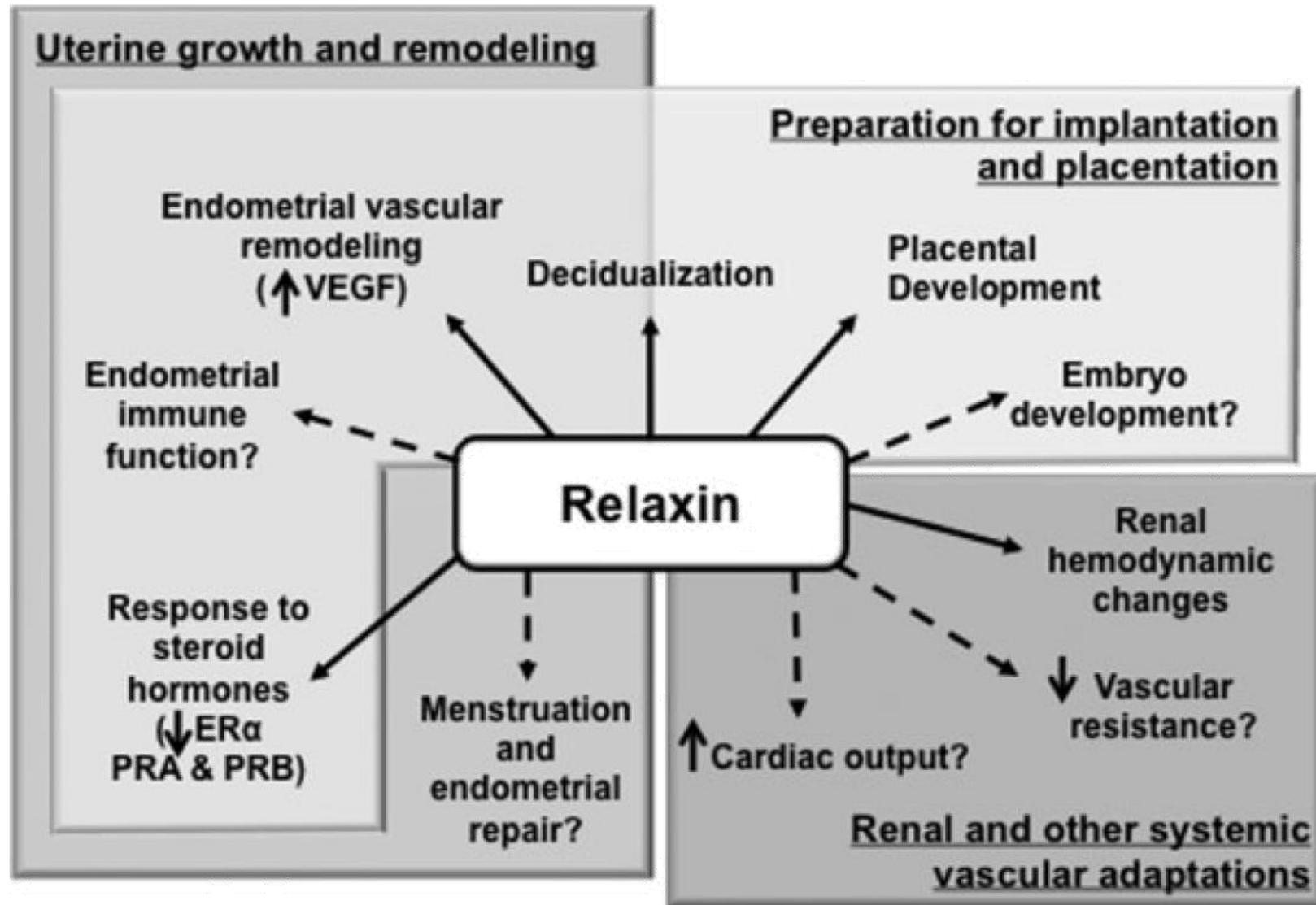
# HCG



# RX



# RX

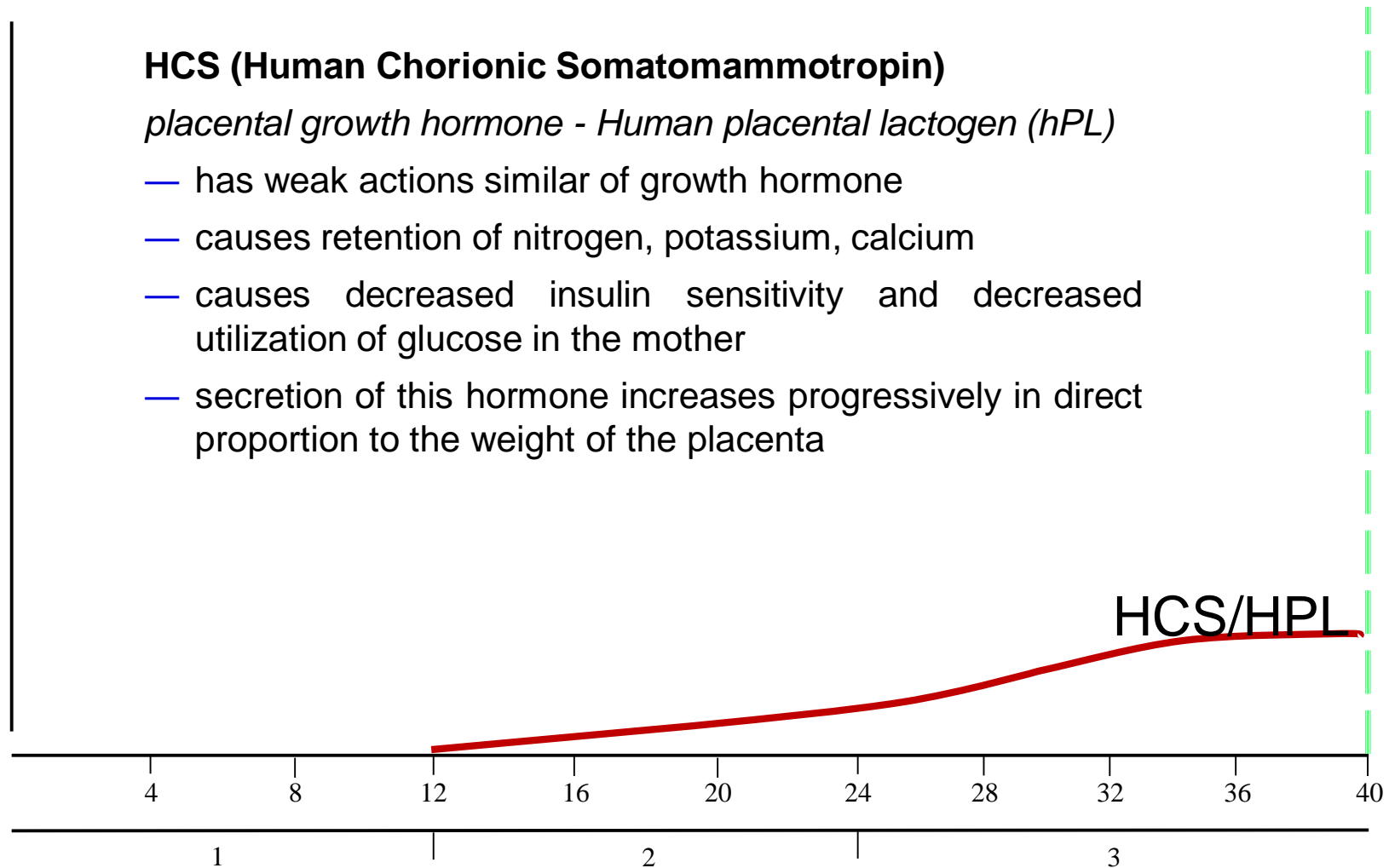


# HCS/HPL

## 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

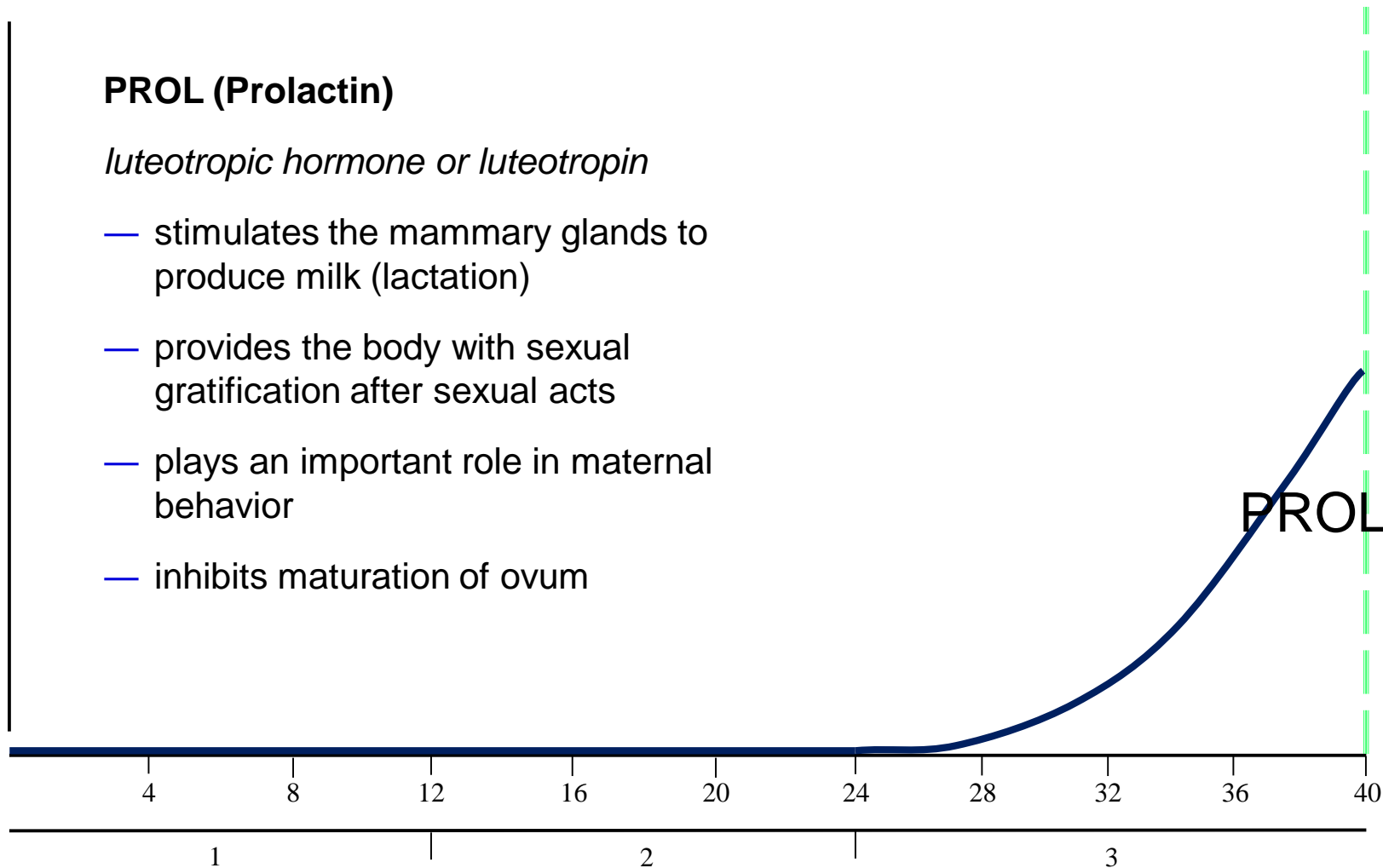


# PROL

## PROL (Prolactin)

*luteotropic hormone or luteotropin*

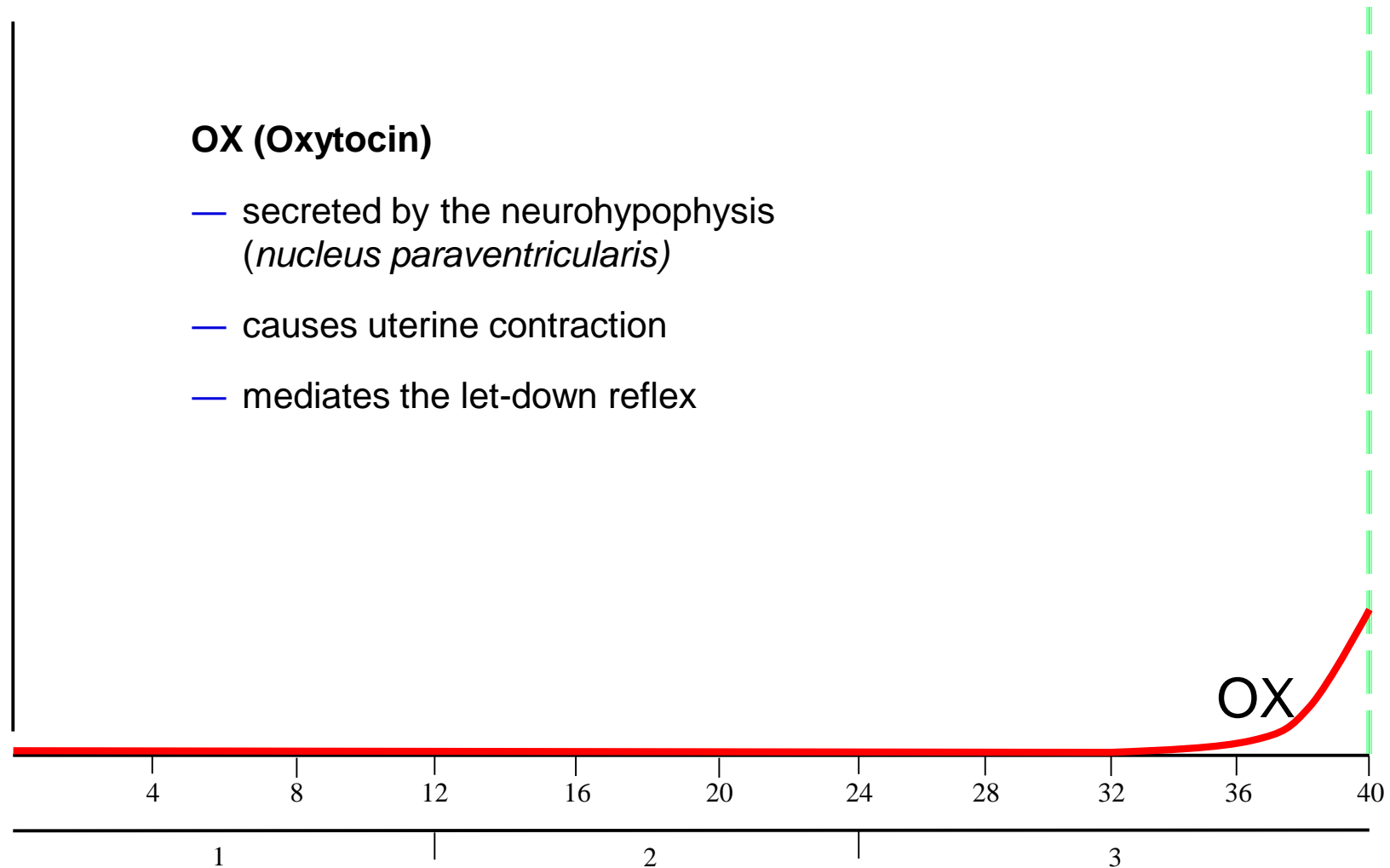
- stimulates the mammary glands to produce milk (lactation)
- provides the body with sexual gratification after sexual acts
- plays an important role in maternal behavior
- inhibits maturation of ovum



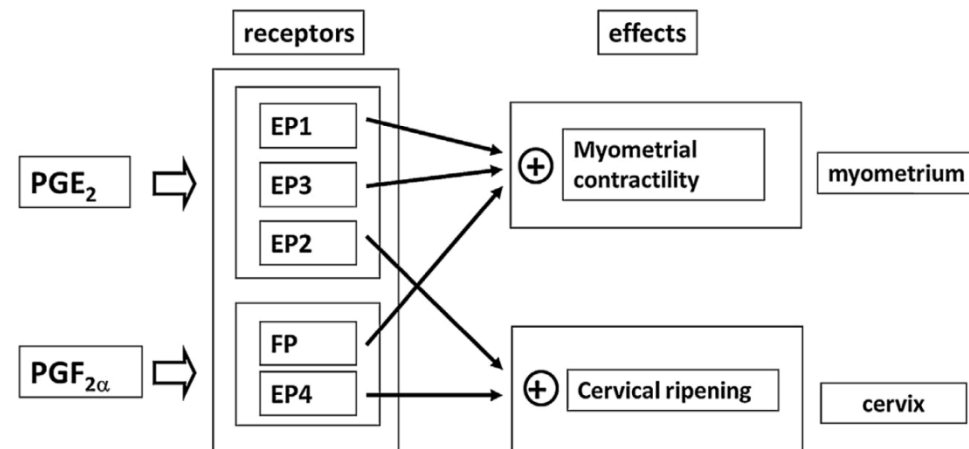
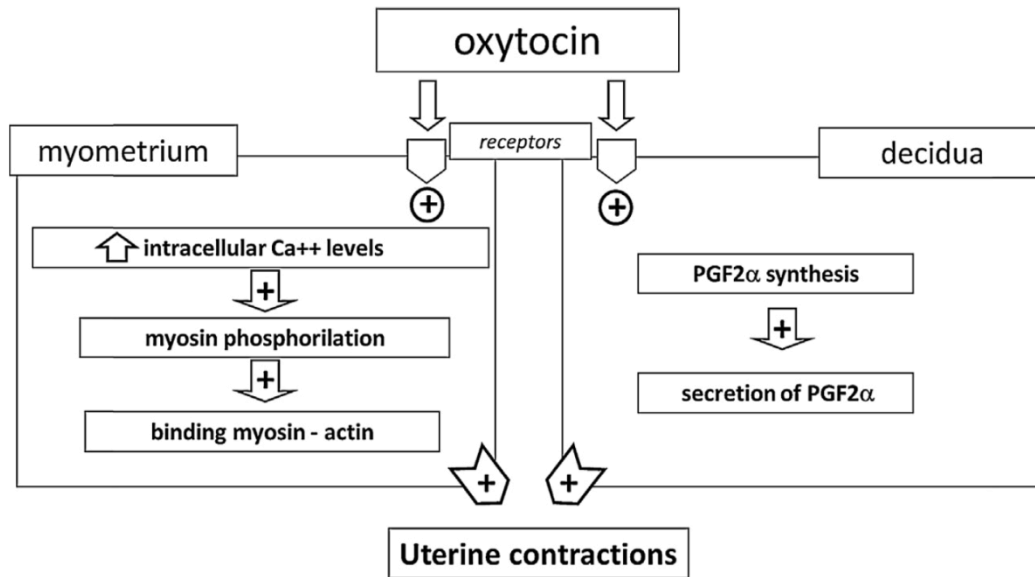
# OX

## OX (Oxytocin)

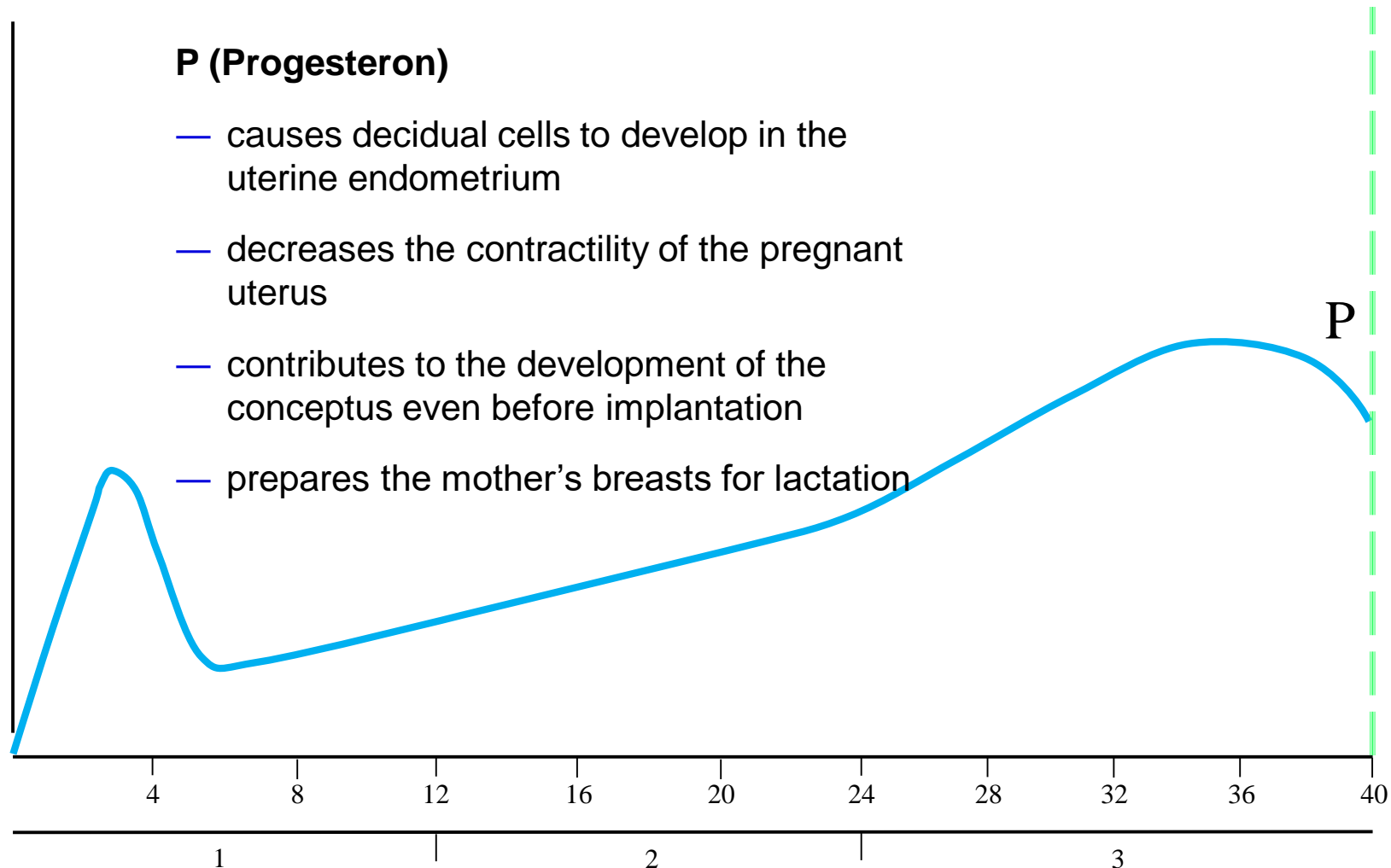
- secreted by the neurohypophysis (*nucleus paraventricularis*)
- causes uterine contraction
- mediates the let-down reflex



# OX

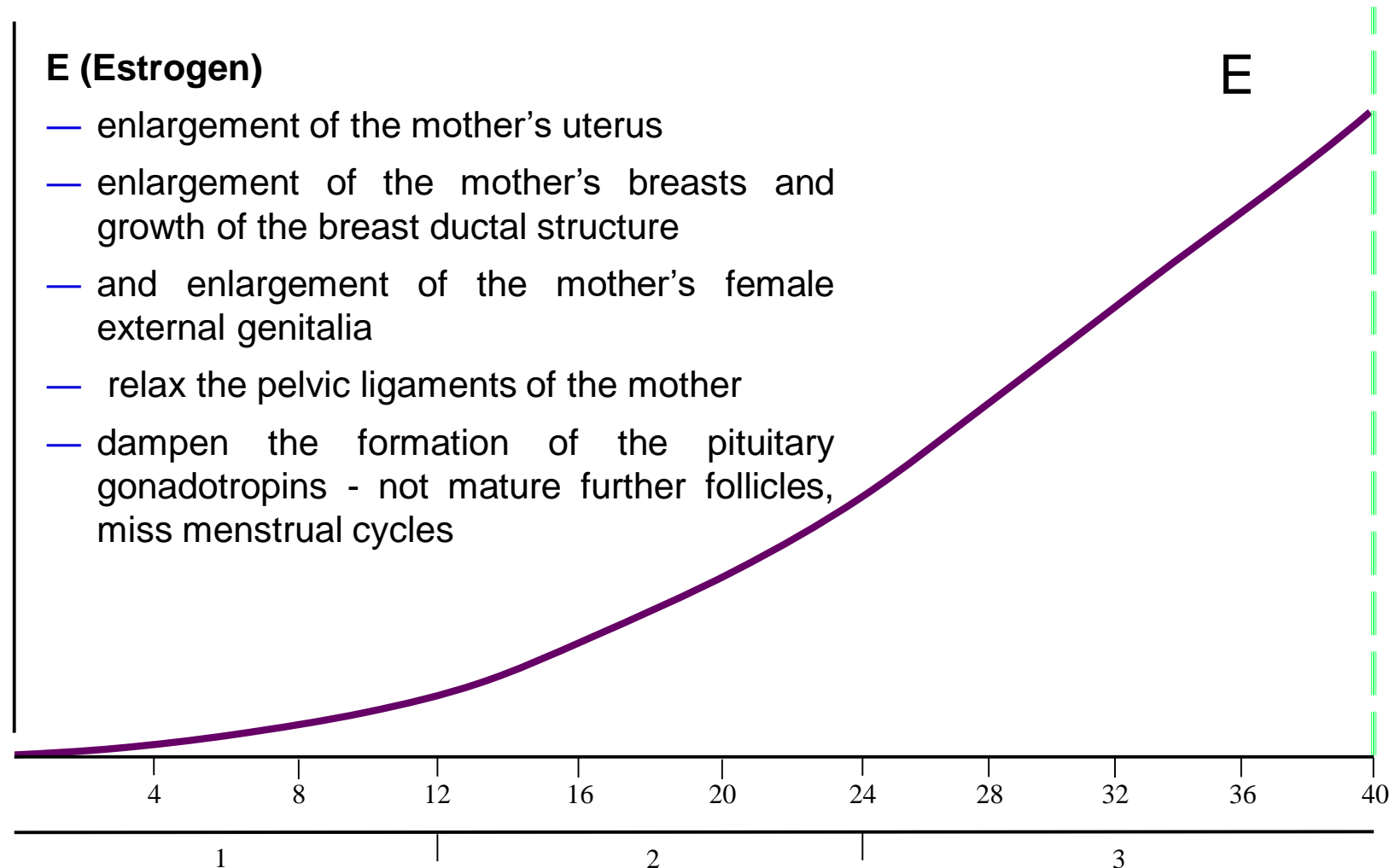


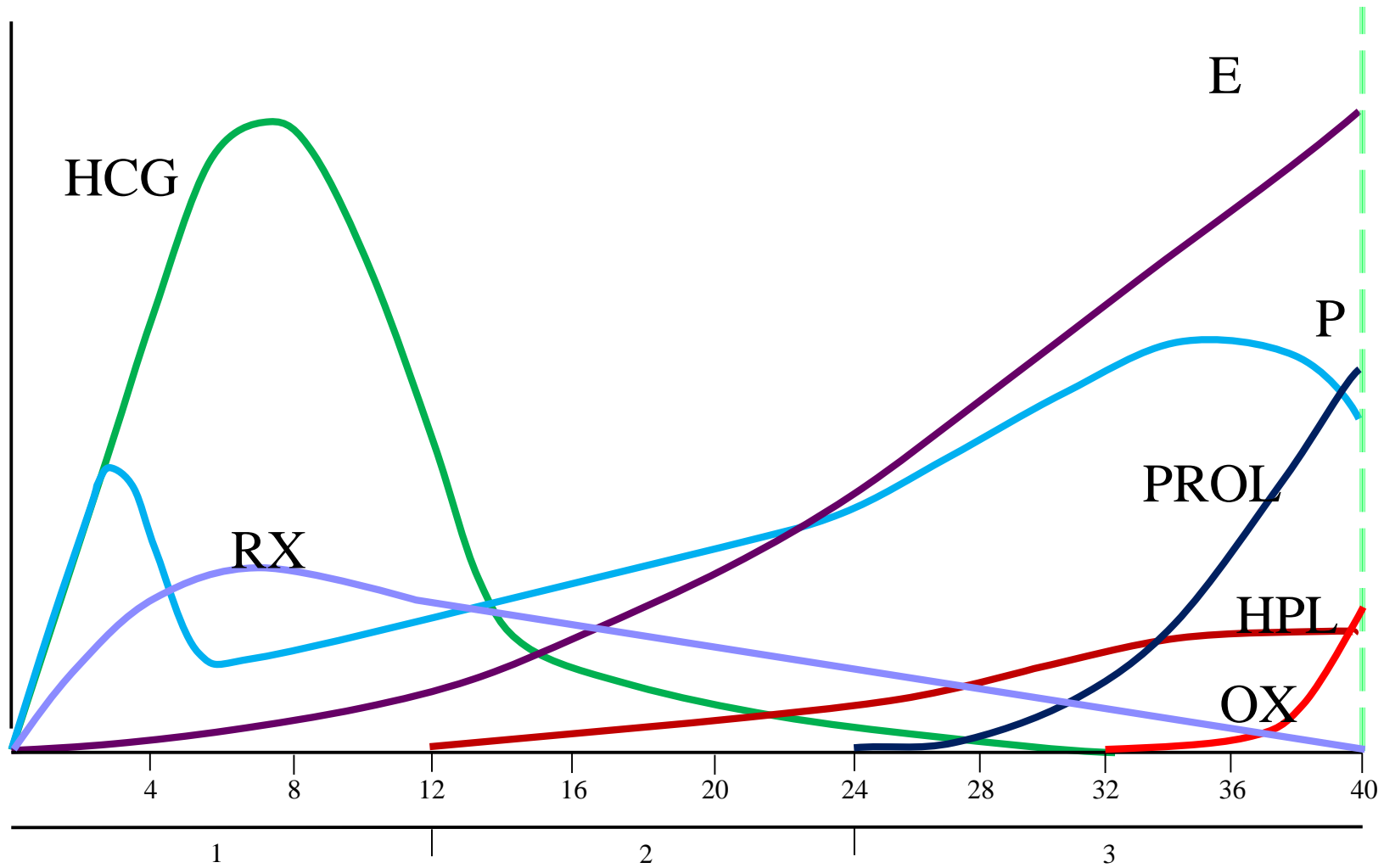
# Progesteron



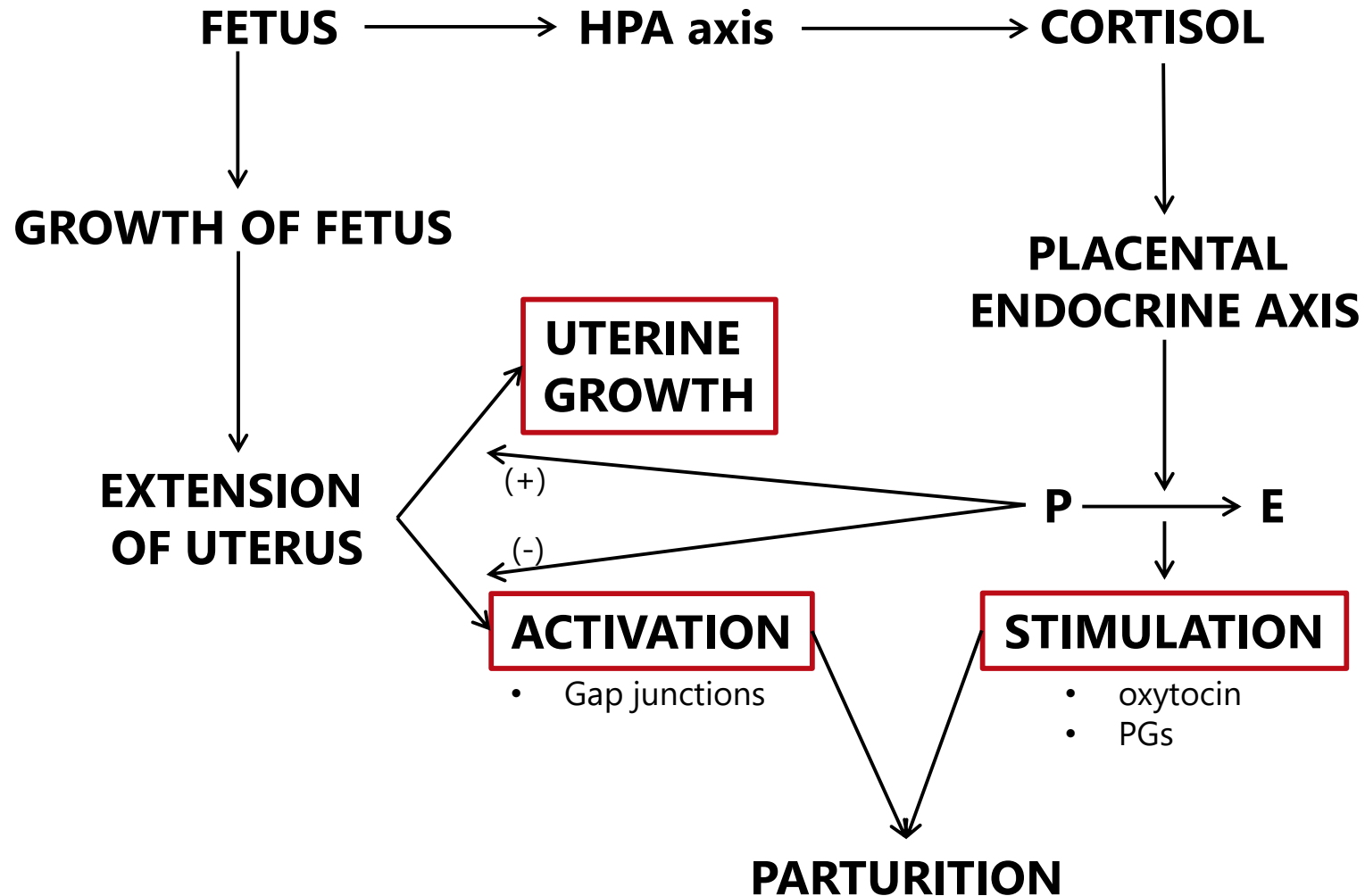


# Estroen

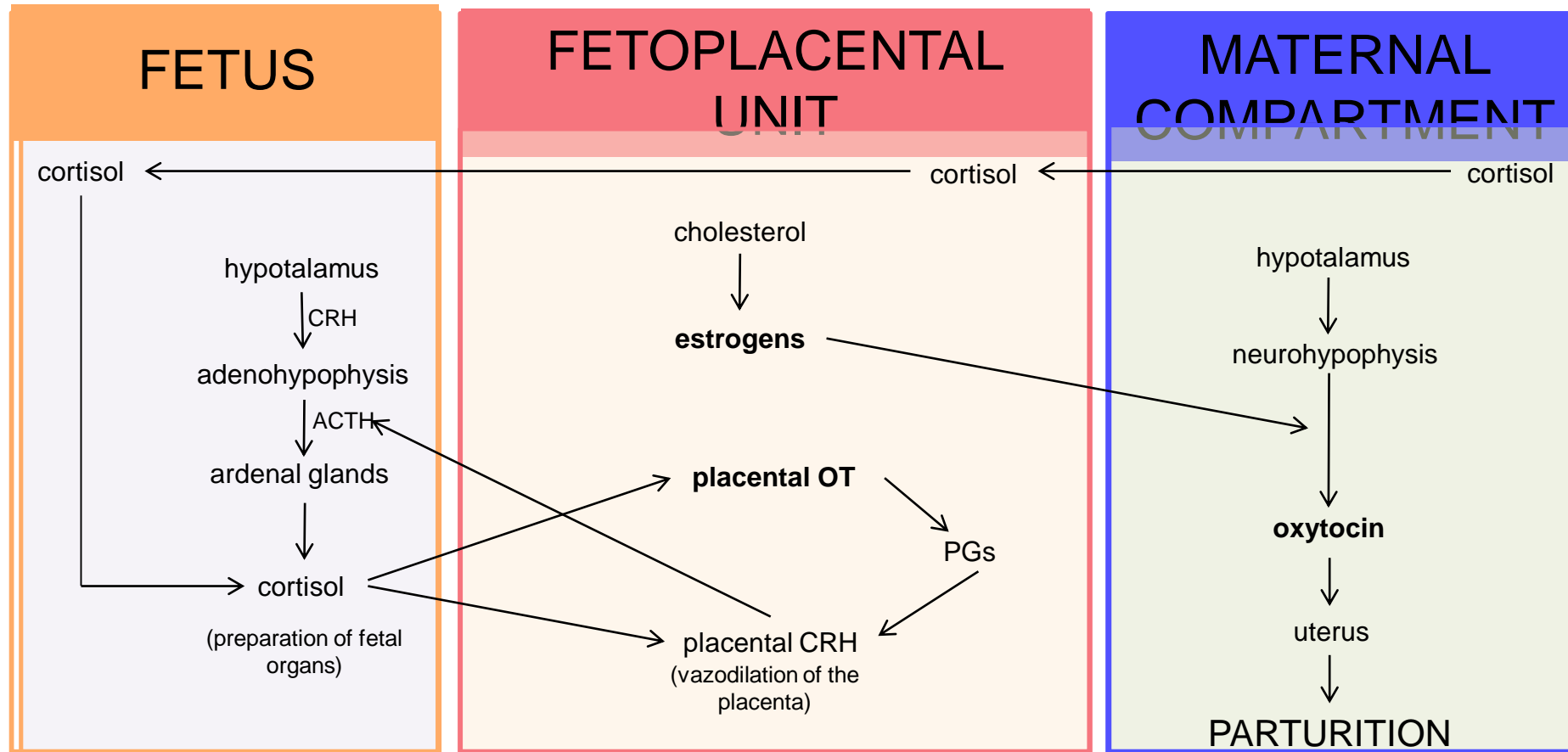




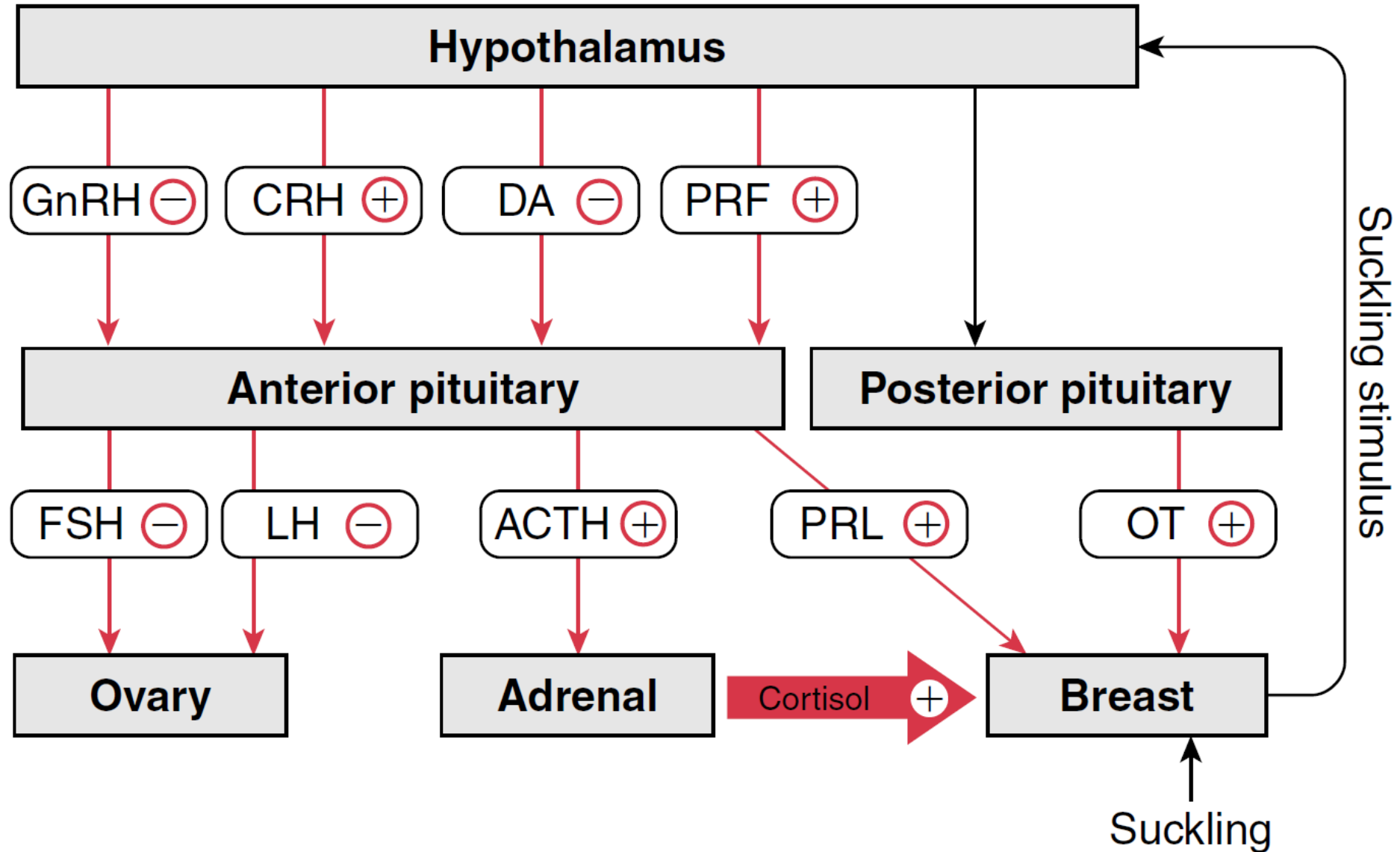
# Fetoplacental unit



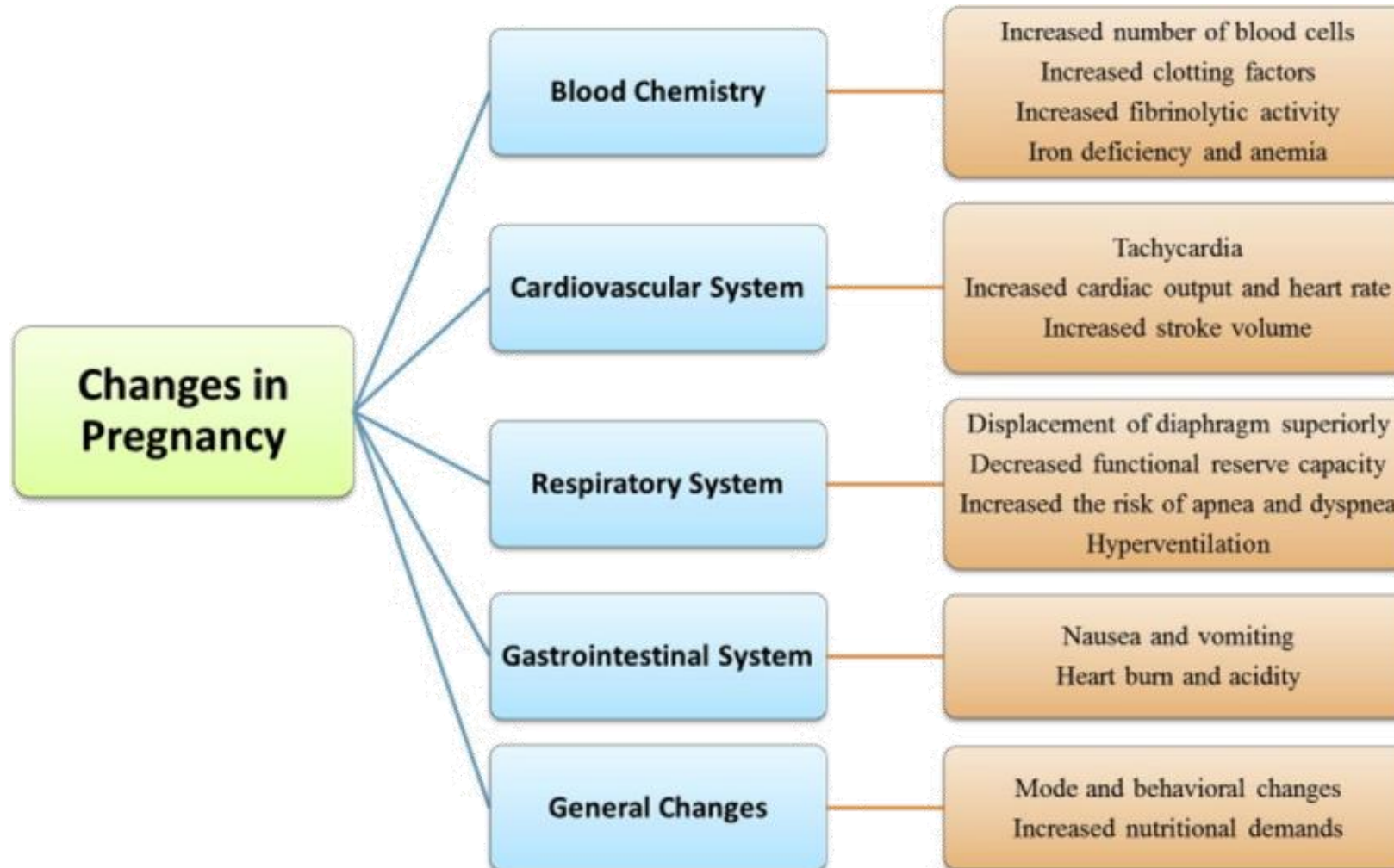
# Fetoplacental unit



# Lactation



# Physiological changes during pregnancy



THANK YOU FOR YOUR ATENTION