

NEET CRASH COURSE

Human Reproduction



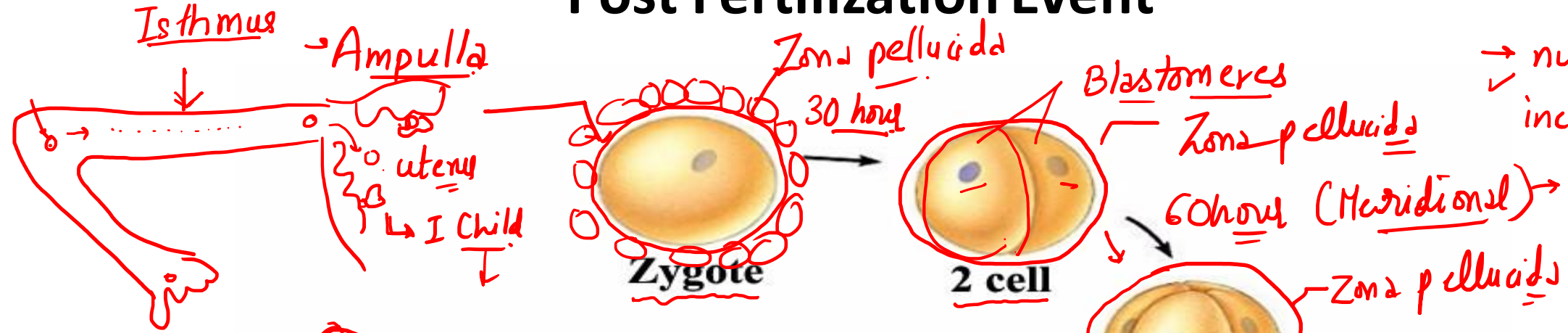
By, Perna Gaur, M.sc (Delhi University)

HUMAN REPRODUCTION

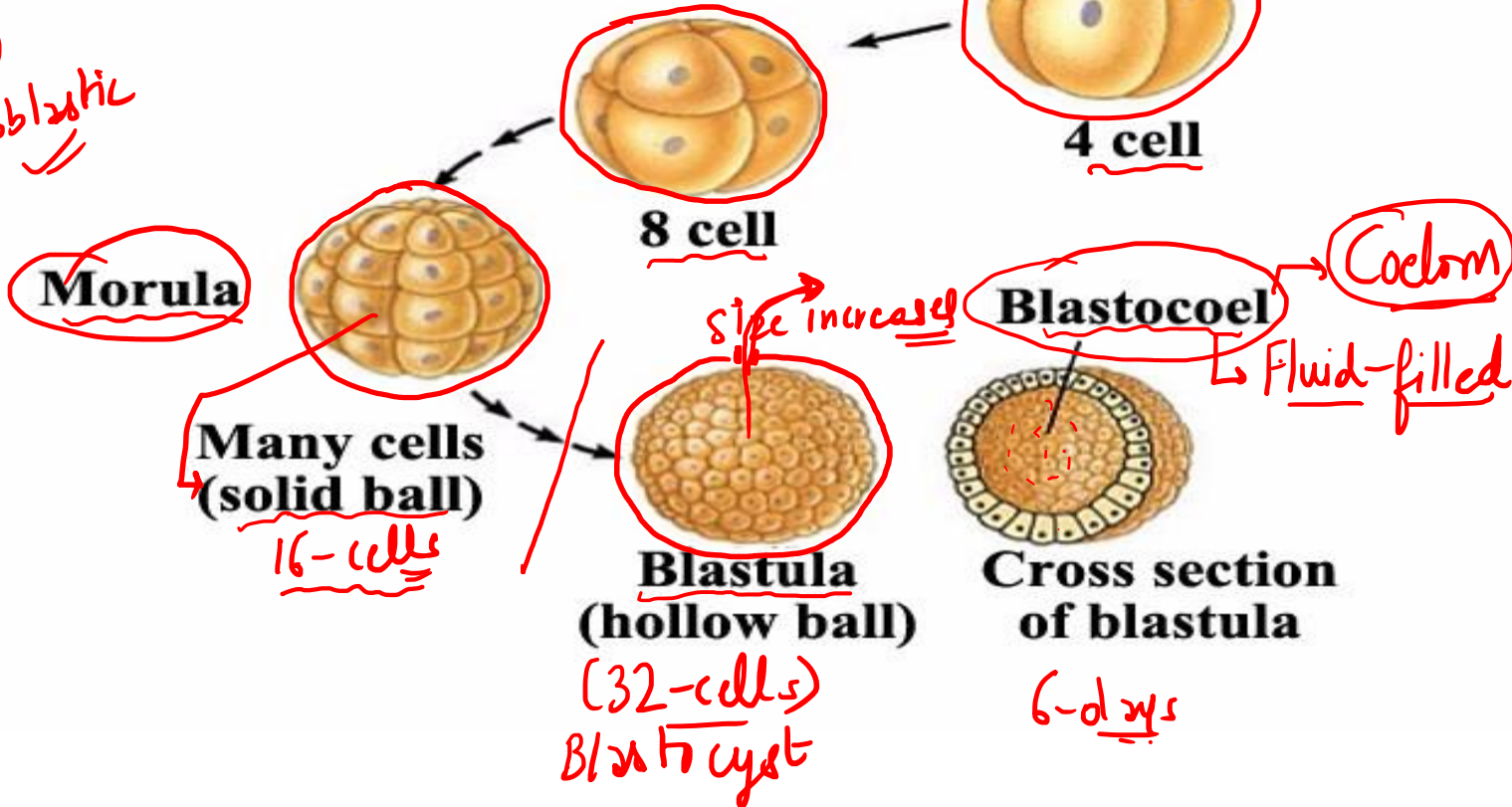
Post Fertilization Event

(Early embryonic dev.)

1st cleavage division
 → SIZE remain same
 → nuclear content increases.



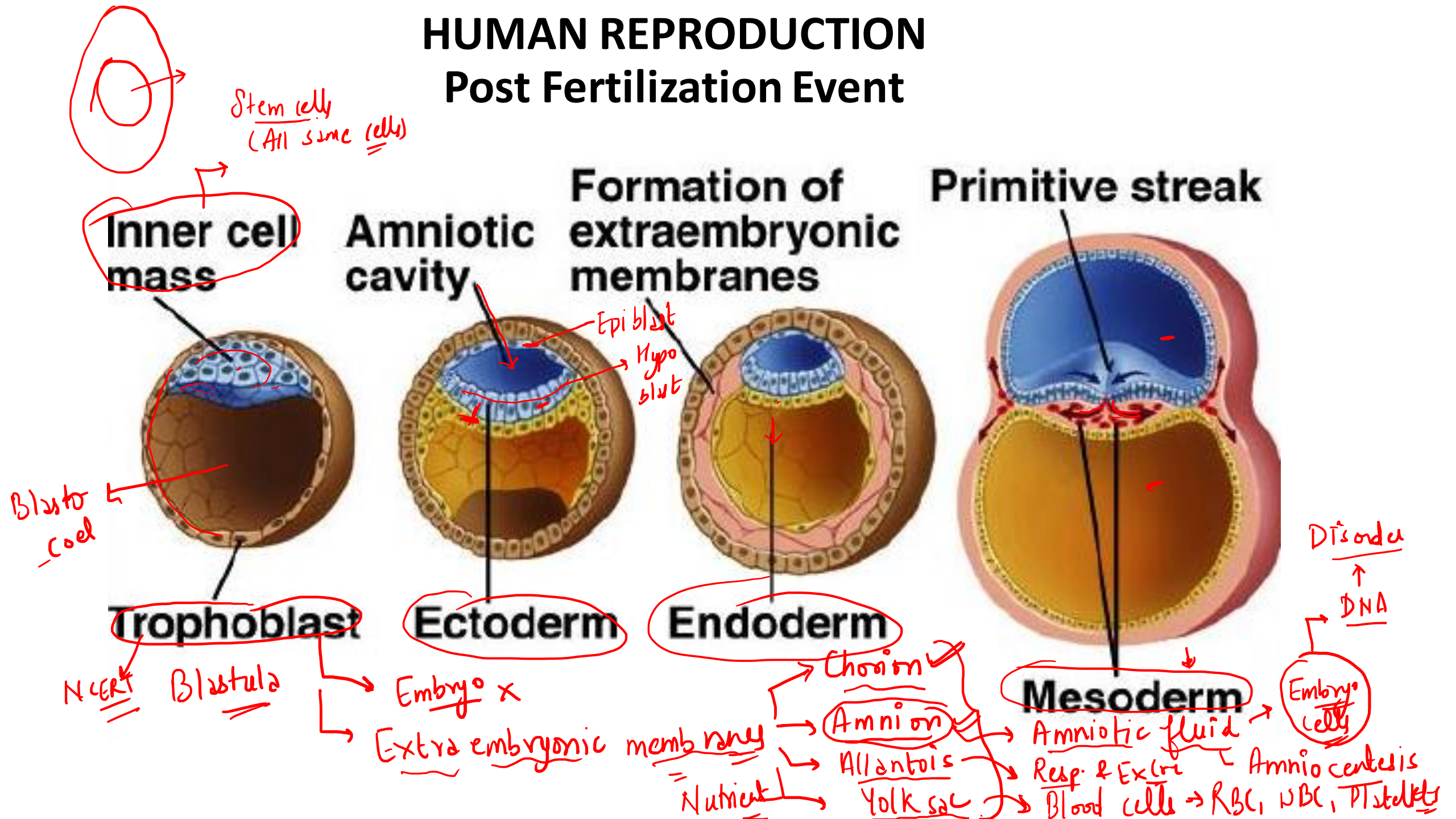
Morula
 Holoblastic
 5-6 days



DNA I → Identical twins
 DNA II →

HUMAN REPRODUCTION

Post Fertilization Event



HUMAN REPRODUCTION

Post Fertilization Event

Germ Layers

- Ectoderm
 - Outer layer
- Endoderm
 - Lines embryonic digestive tract
- Mesoderm
 - Partly fills the space between the endoderm & ectoderm

→ Glands

→ Nervous

Eyes
→

✓

ECTODERM

- Epidermis of skin and its derivatives (including sweat glands, hair follicles)
- Epithelial lining of mouth and rectum
- Sense receptors in epidermis
- Cornea and lens of eye, Retina
- Nervous system
- Adrenal medulla
- Tooth enamel
- Epithelium or pineal and pituitary glands

Microglial
Microglial

MESODERM

- Notochord
- Skeletal system
- Muscular system
- Muscular layer of stomach, intestine, etc.
- Excretory system] Kidney
- Circulatory and lymphatic systems
- Reproductive system]
- Dermis of skin
- Lining of body cavity
- Adrenal cortex

→ Choroid

ENDODERM

- Epithelial lining of digestive tract
- Epithelial lining of respiratory system
- Lining of urethra, urinary bladder, and reproductive system
- Liver ✓
- Pancreas ✓
- Thymus ✓
- Thyroid and parathyroid glands ✓

Dev. Events

Gestation period → 9 months

→ 3 months Ist trimester

IInd

IIIrd

→ Cleavage

→ Implantation → 7th day

→ Gastrulation

↳ Ecto | M_{es} | Endo

→ Ist heart sound

↳ 1 month

→ Notochord - V-C

Neural tube - Nervous system

→ 3 months → All organs developed.

↳ 4th Month

↳ 5th Month

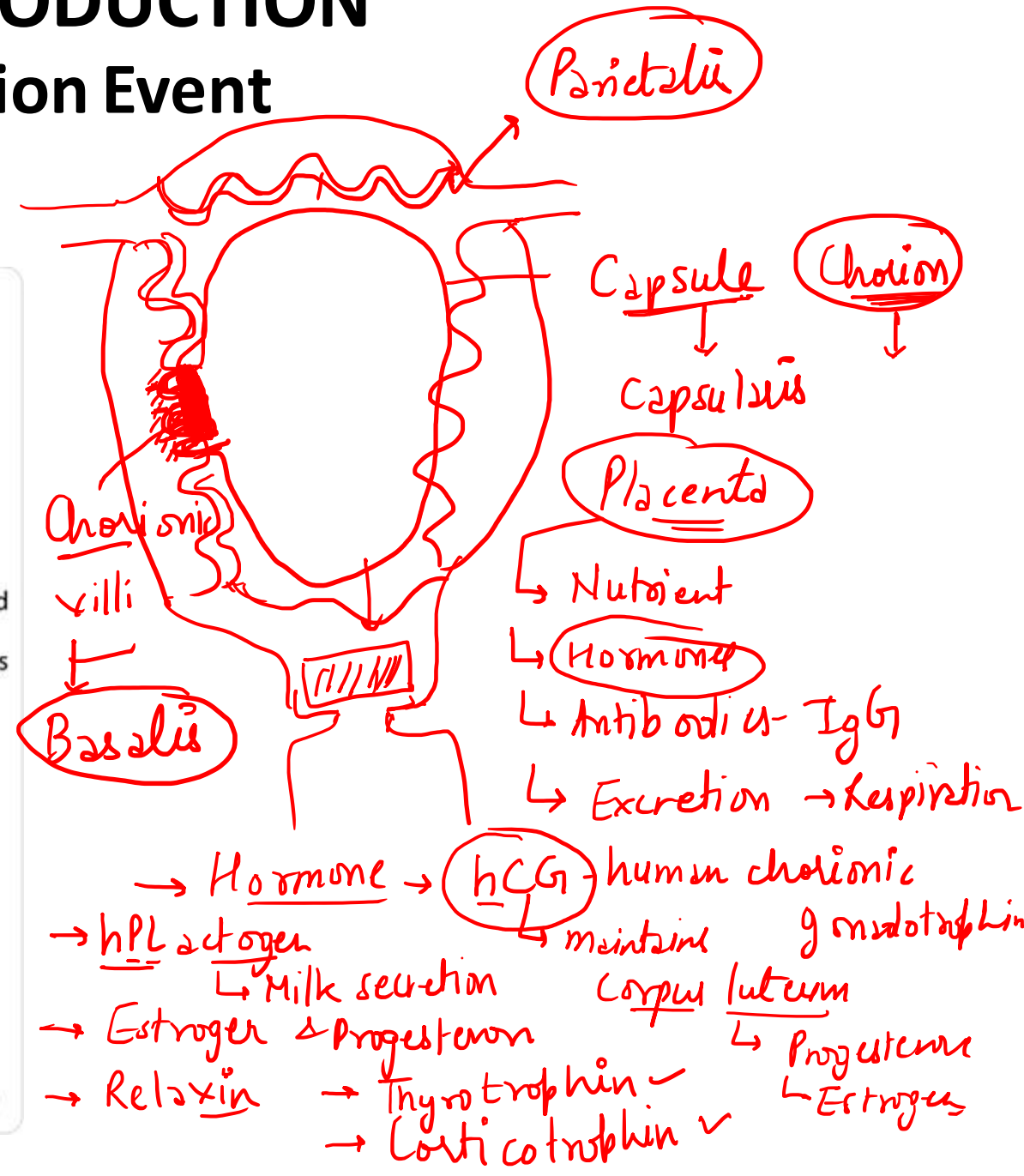
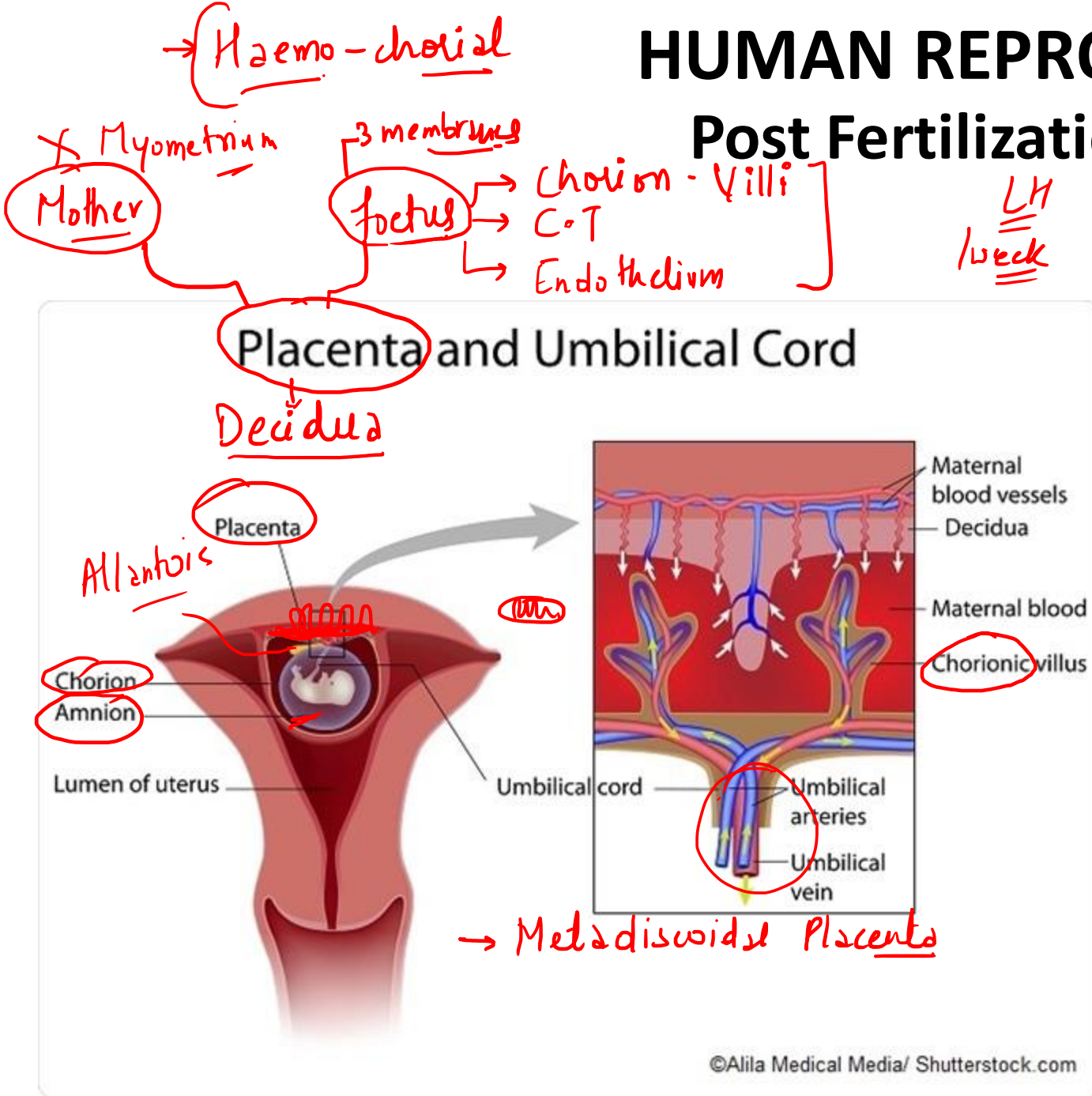
↳ Ist movement.

↳ Lanugo - hair coat

Shed → Before birth

HUMAN REPRODUCTION

Post Fertilization Event



HUMAN REPRODUCTION

Post Fertilization Event

Placenta & fully developed foetus

Mechanism of Parturition

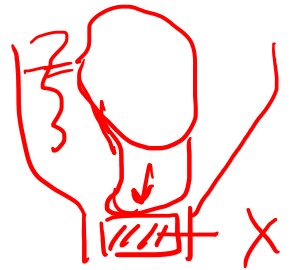
Hypothalamus
(oxytocin)

Posterior Pituitary

uterus - Myometrium

contraction Every 3-1 min

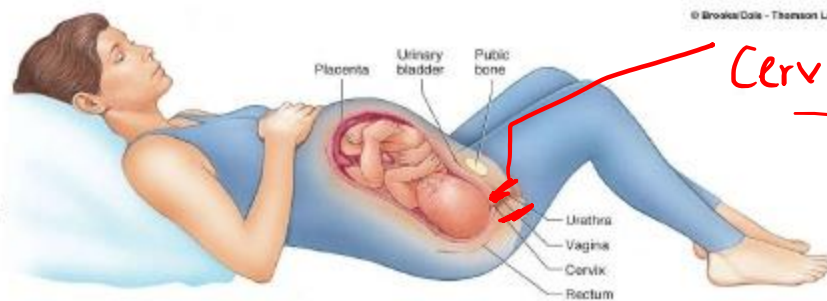
Cervical canal + Vaginal canal [10 cm]



- ① Cervical dilatation
- 24 hrs
- ② Delivery of the baby
- 30-90mins
- Delivery of the placenta
- 15-30mins
- 350 ml of blood lost
- SMC
- Prostaglandins

Expulsion

Relaxin



First stage of labor:
Cervical dilation



Second stage of labor:
Delivery of the baby



Third stage of labor:
Delivery of the placenta

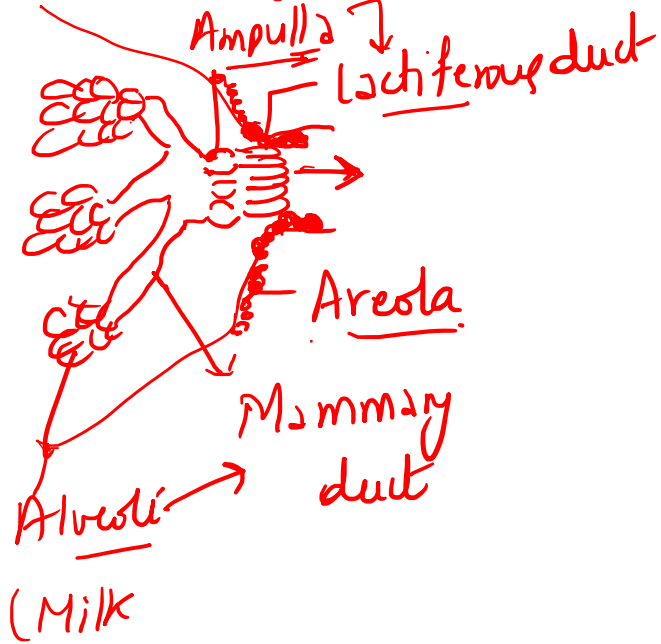
Involution of uterus

HUMAN REPRODUCTION

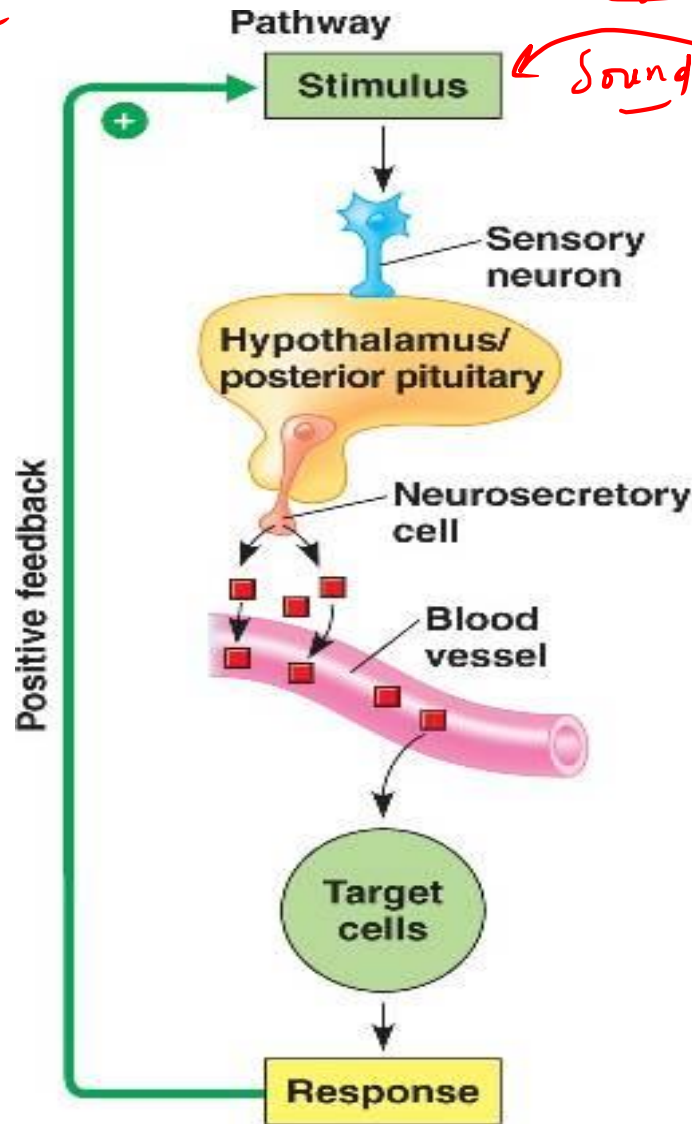
Post Fertilization Event

→ Lactation

↳ Mammary gland



(Milk formation)
Prolactin ↑ development
 ↓ Egg X



Sight

Sound

Example

Suckling

Baby (infant)

Ist Milk - colostrum
 → Yellowish, thick
 → IgA =

Posterior pituitary secretes oxytocin (■)

Smooth muscle in breasts

Milk release

→ Ejection of milk

Extra

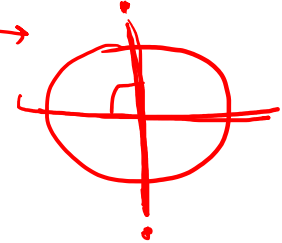
Egg

• Alecithel without yolk

↳ Shelled egg



IInd



→ Ovation Ovulation
 → Antrum
 → 100 Primary spermatocytes → (4)
 ↓
 Spermatids →
 → Spermatogonia
 ↓
 Sperm

→ Release of sperm from semi

→ Pregnancy →

→ LH FSH Progesterone HCG

→ Corpus luteum
 → Primary oocyte → Ovum
 (25)
 →

→ Nieberkuhn Mito

→ PYQs

Thank You

→ Seminiferous tubule → Rete testis →
 Epididymis → Vasa efferentia.