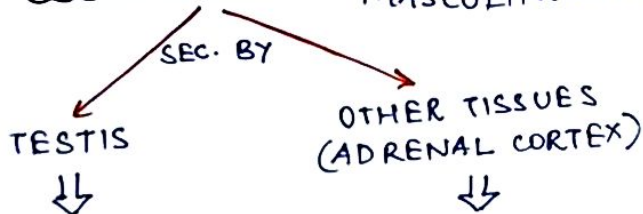


INTRODUCTION :-



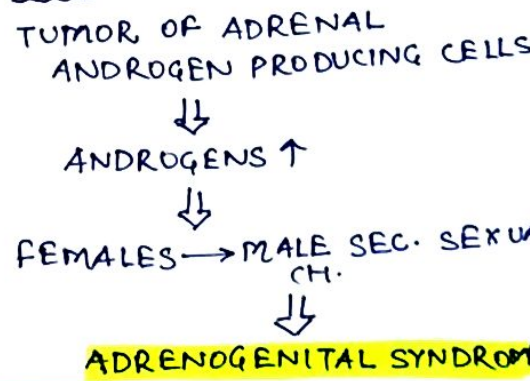
ANDROGENS :- STEROID HORMONES HAVING MASCULINIZING EFFECT



- ✓ 5% EFFECT ON MUSCULINITY
- ✓ FEMALES → SLIGHT MUSCULAR CH.
 - PUBIC HAIR
 - AXILLARY HAIR

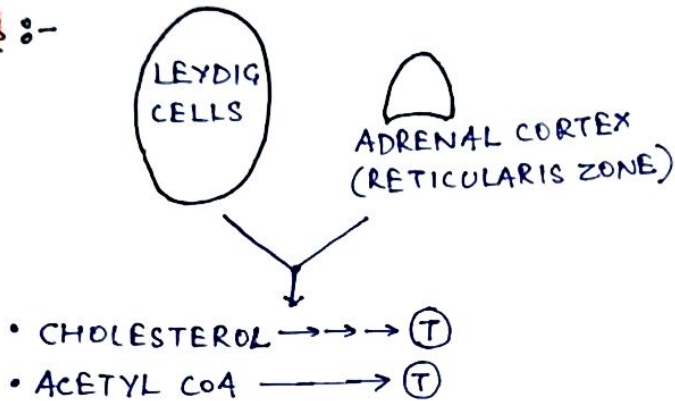
TESTOSTERONE PLASMA CONC
MALES :- 300-1000 ng/dl
FEMALES :- 30-70 ng/dl

CASE :-

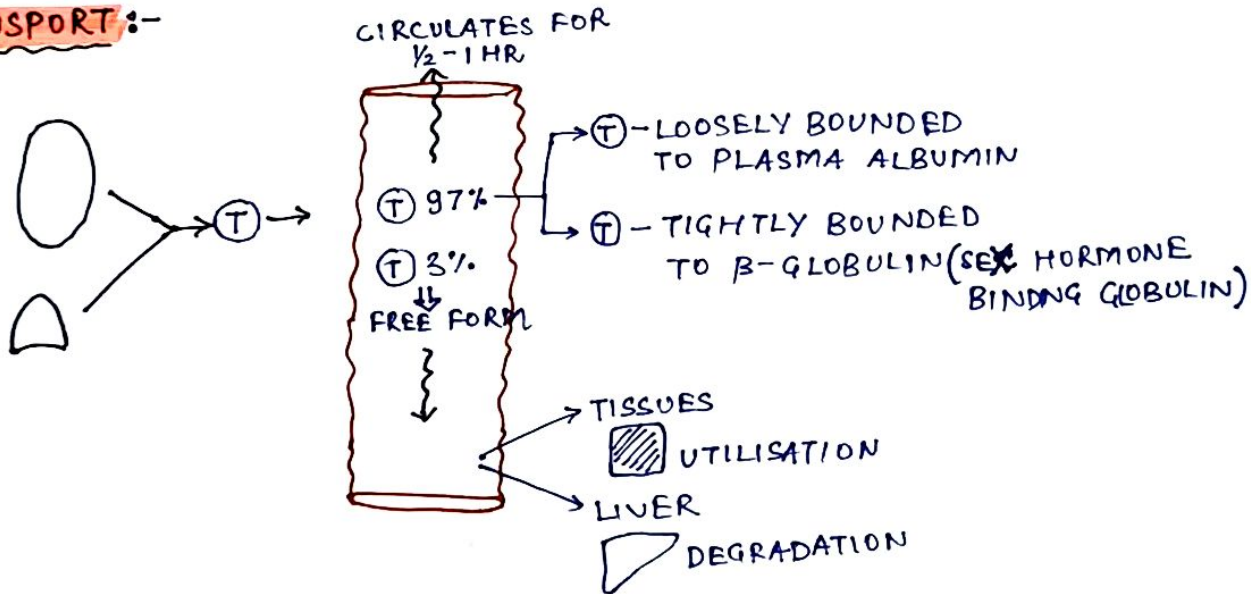


METABOLISM OF T :-

BIOSYNTHESIS :-

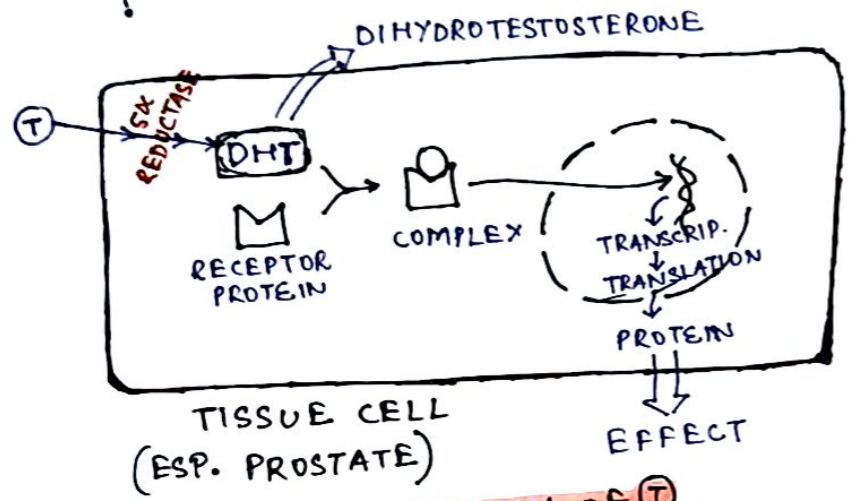


TRANSPORT :-

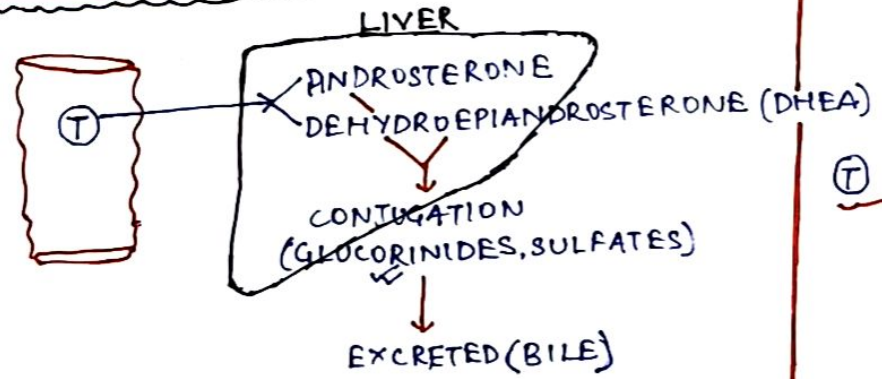


UTILISATION :-

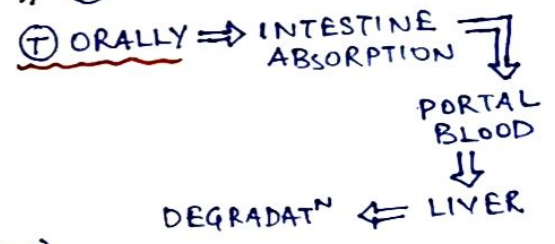
* $\text{T} \rightarrow \text{PROTEIN SYN} \Rightarrow \text{EFFECT}$



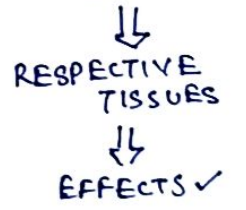
DEGRADATION AND EXCRETION OF T



T NOT GIVEN ORALLY



T INTRAVENOUSLY \Rightarrow BLOOD CIRCULATE



FUNCTIONS OF (T) :-

① DESCENT OF TESTES

→ 7TH MONTH OF JUL COMPLETE



② PROMOTES SPERMATOGENESIS

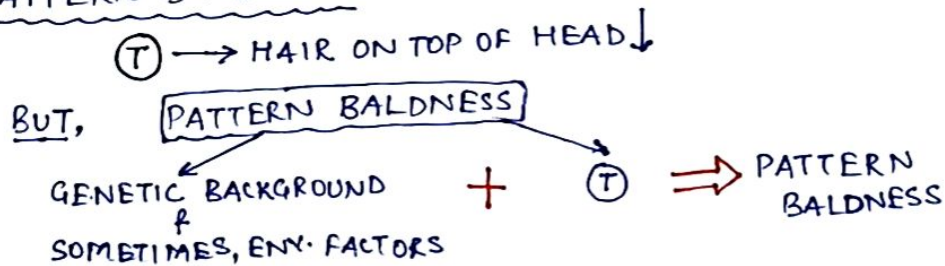
(T) BINDS WITH ABP ⇒ ↑ SPERMATOGENESIS

③ DEV. OF PRIM. AND SECONDARY SEXUAL CHARACTERS

(i) DISTRIBUTION OF BODY HAIR

- PUBIS
- UPWARDS ALONG LINEA ALBA
- FACE
- CHEST

(ii) MALE PATTERN BALDNESS



(iii) VOICE

Ⓣ ⇒ HYPERTROPHY OF LARYNGEAL MUCOSA
⇒ ENLARGEMENT OF LARYNX

→ MUSCULINE VOICE

(iv) THICKNESS OF SKIN; DEV. OF ACNE

Ⓣ → ↑ THICKNESS OF SKIN
→ ↑ RATE OF SECRETION BY SEBACEOUS GLAND

⇓
ACNE DEVELOP

SEVERAL YRS. OF Ⓣ SEC.

⇓
SKIN ADAPTS TO Ⓣ

⇓
ACNE OVERCOME

(v) ↑ PROTEIN FORMATION & MUSCLE DEVELOPMENT.

(vi) ↑ BONE MATRIX & Ca⁺⁺ RETENTION

Ⓣ → BONE THICKER

→ NARROW PELVIC OUTLET
LENGTHEN PELVIS

FUNNEL SHAPED PELVIS
(INSTEAD OF BROAD OVOID SHAPE)

STRENGTH OF PELVIS ↑

Ⓣ ↑ → CHILD GROWTH ↑
→ UNITES EPIPHYSES OF LONG BONES TO SHAFT

⇓
FURTHER GROWTH COMPLETELY STOPS.

ABNORMALITIES :-

① CRYPTORCHIDISM :-

→ UNDESCENDED TESTIS ON ONE OR BOTH SIDE
[REMAINS IN AB. CAVITY / INGUINAL CANAL]

EFFECT :-

SEMINIFEROUS TUBULES → INFANTILE (TEMP. ↑)
↓
SPERMATOGENESIS X
↓
STERILITY

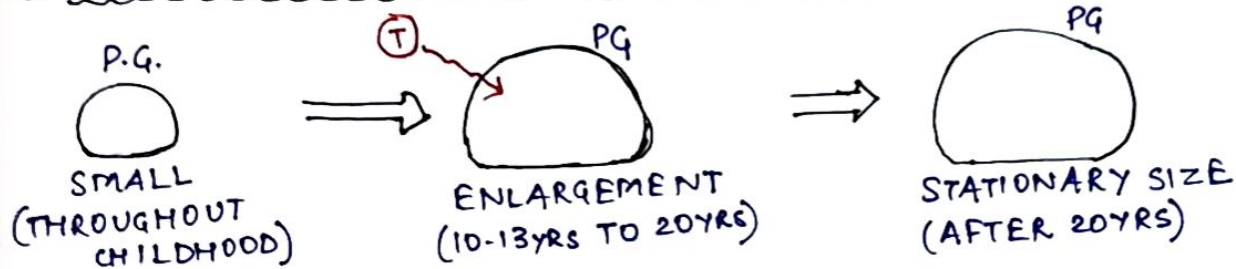
Tx :-

• (T) —————→ DESCENT OF TESTES
• ANT. PITUITARY
GONADOTROPIC HORMONES

GIVEN MUCH BEFORE PUBERTY

[TILL PUBERTY, STERILITY & MALIGNANCY DEVELOPS]

② PROSTATE GLAND & ITS ABNORMALITIES



BENIGN PROSTATIC FIBROADENOMA

- FREQ. DEV. IN OLDER MEN
- CAUSES URINARY OBSTRUCTION
- NOT CAUSED BY T ; CAUSED BY ABNORMAL OVERGROWTH OF PROSTATIC TISSUE



CANCER OF PROSTATE GLAND

- 2-3% OF ALL MALE DEATH
- T NORMAL LEVEL \rightarrow RAPID GROWTH OF CANCEROUS CELLS.

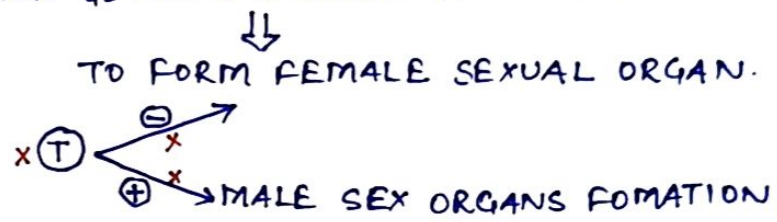
Tx:-

- \ominus BY REMOVAL OF BOTH TESTES (T x)
- ADMINISTRATION OF ESTROGENS.

③ HYPOGONADISM IN MALE

→ NONFUNCTIONAL TESTES
OF MALE FETUS

- NO MALE SEXUAL CHARACTER DEVELOPS
- FEMALE ORGANS FORMED
- ≠ BASIC GENETIC CHARAC. OF FETUS



→ BEFORE PUBERTY
(TESTES DESTROY)

⊖ T ABSENT → PERMANENT STERILITY

⇓
EUNUCHISM

- INFANTILE SEX ORGANS
- ↓ SEXUAL CHARACTERS
- HEIGHT SLIGHTLY GREATER
(D/T SLOW UNITING OF EPIPHYSIS)
- BONES - THIN, MUSCLES - WEAK
- VOICE CHILD LIKE
- NO MASCULINE HAIR GROWTH ON BODY.

**AFTER PUBERTY
(TESTES DESTROY)**

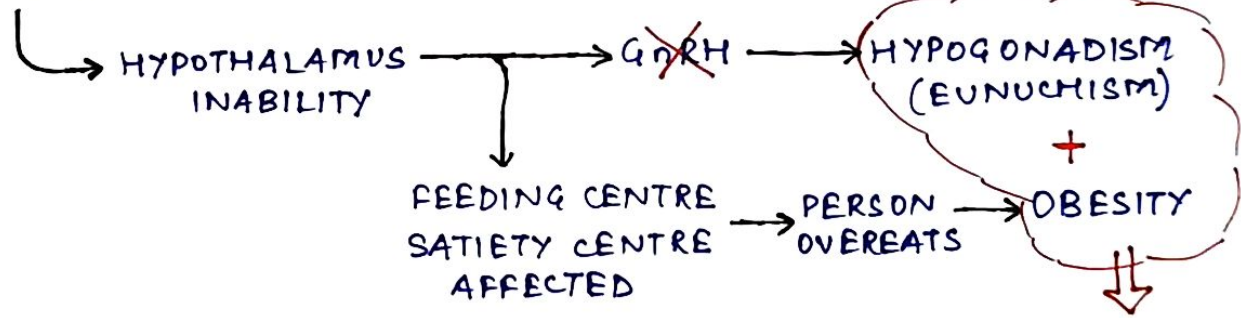
Ⓣ → SEC. SEXUAL CHARAC.
AND
ACCESSORY ORGANS

DEVELOP ✓

MAINTAIN ✓

- ATROPHY OF SEMINAL VESICLE & PROSTATE
 - SEXUAL ORGANS } DEVELOPED ✓
 - MUSCULINE HAIR } FURTHER DEV. X
 - SEXUAL DESIRE } SLIGHTLY IMPAIRED
 - ERECTION OF PENIS }
 - NO ALTERNATION IN VOICE
- Ⓣ → (DEV. ✓, MAINTAINANCE X)

GENETIC INABILITY



ADIPOSOGENITAL SYNDROME
OR
HYPOTHALAMIC EUNUCHISM
OR
FRÖHLICH SYNDROME