



Kssmm's

**DHANVANTARI COLLEGE, NASHIK.**

**SUPPLEMENT**

13/20

Faculty / Course : BHMS Date : \_\_\_\_\_

Degree / Diploma, Year : I BHMS Semester First / Second

Subject : Physiology Roll No.: 5

Sr.No. 3651 No. of Supplement \_\_\_\_\_ Supervisor's Sign.: \_\_\_\_\_

### Function of Skin

- 1) protective function -  
Skin covers all organ of the body, and protect them from bacteria, virus, ultra rays, mechanical blow, injury.
- 2) Function of skin - protection from Bacteria  
skin has direct contact with external environment so it protect organ from bacteria.
- 3) storage function - skin stores water, fat, subcutaneous tissue, salt, glands etc.
- 4) Synthetic function - Vitamin D. is synthesised in skin by ultraviolet rays.
- 5) Secretory function -  
sweat secrete through sweat gland  
sebum secrete through sebaceous gland.
- 6) Regulation of Body temperature.
- 7) Regulation of water and electrolyte balance
- 8) excretory function.
- 9) Absorptive function.

## LUNG VOLUMES

Lung volumes are of four types -

- 1) Tidal volume (TV): is the volume of air breathed in and breathed out of lungs in a single normal quiet respiration. <sup>Normal</sup> value - 500 ml.
- 2) Inspiratory Reserve volume - (IRV)  
It is an additional volume of air that can be inspired forcefully after the end of normal inspiration. Normal value - 3,300 ml.
- 3) Expiratory Reserve volume - (ERV)  
It is an additional volume of air that can be expired out forcefully, after normal expiration. Normal value - 1000 ml.
- 4) Residual volume (RV) It is the volume of remaining in the lungs even after forced expiration. Normal value - 1200 ml.

## LUNG CAPACITIES

Lung Capacities are of four types

- 1) Inspiratory Capacity = Tidal volume + IRV  
= 500 + 3000 = 3800 ml.
- 2) Vital Capacity = IRV + TV + ERV  
= 3300 + 500 + 1000 = 4800 ml.
- 3) Functional Residual Capacity = ERV + TV  
= 1000 + 500 = 1500 ml.
- 4) Total Lung Capacity =  
TLC = IRV + TV + ERV + RV  
= 3300 + 500 + 1000 + 1200  
= 6000 ml.

# CARDIAC CYCLE

definition:-

Cardiac cycle is defined as the sequence of coordinated events taking place in the heart during each beat.

Events of Cardiac Cycle -

- 1) Atrial Systole - 0.1 sec
- 2) Atrial diastole - 0.7 sec
- 3) ventricular Systole - 0.3 sec
- 4) ventricular diastole - 0.5 sec.

Duration of Cardiac cycle - 0.8 second.

1] Atrial systole -

also known as last rapid filling phase.

Duration - 0.1 second.

During this period only a small amount i.e. 10% of blood is forced from atria to ventricles. Atrial systole is not essential for the maintenance of circulation. Many persons with atrial fibrillation survive for years without suffering from circulatory insufficiency.

pressure & volume changes:-

Intra ventricular atrial pressure increases.

fourth heart sounds -

Contraction of atrial musculature causes the production of fourth heart sound.

2] Atrial Diastole -

Atrial diastole starts at the end simultaneously ventricular diastole.

Time duration - 0.7 sec.

Out of 0.7 sec of atrial diastole first 0.3 sec coincides with ventricular diastole. Later 0.4 sec coincides atrial systole diastole with ventricular diastole.

3] Ventricular Systole - 0.3 sec.

i) Isometric Contraction period -

It is the first phase of the ventricular systole.

ii) Ejection period -

Due to opening of the semilunar valves blood is ejected out from the ventricle.

iii) End systolic volume  $\rightarrow$

Amount of blood remaining in the ventricle at the end of systole is called as the end systolic volume.

iv) Ejection Fraction  $\rightarrow$

The fraction of end diastolic volume ejected out by ventricle.

4) Ventricular diastole -

i) protodiastole - first stage of ventricular diastole indicates only the end of systole and beginning of diastole.

ii) Isometric Relaxation period -

ventricular muscle relaxation occur without changing the length of muscle fibre.

iii) Rapid filling phase -

when AV valves open sudden rush of blood from atria to ventricle

iv) Slow filling phase - also called diastasis.

v) last Rapid phase - occurs because of atrial systole.



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SUPPLEMENT

Faculty / Course : BHMS Date : \_\_\_\_\_

Degree / Diploma, Year : II Year Semester First / Second

Subject : FMT Roll No. : 3

Sr.No. 9171 No. of Supplement \_\_\_\_\_ Supervisor's Sign.: \_\_\_\_\_

① Briefly describe procedure for external & internal examination at autopsy (I)

1) External Examination.

→ A brief general description of the body. Should be given as regards sex, age, hair on various parts of the body. with their length & colour of the iris, deformities, etc. for the purpose of identification.

→ When poisoning is suspected the body weight, must be recorded to determine if the quantity of poison detected could have caused a fatal outcome.

→ The height is important in cases of assault where the relative size of assailant & victim would matter.

2) Detail examination.

The point relating to the probable cause of death must include everything that is indication of the mode of death.

- The odour if any, should be noted.
- Stains on clothes due to poison, vomits or faecal matter, should be kept for analysis.
- The condition of natural orifice, viz nose, mouth, ear, vagina & anus, should be observed & any change from normal noted.
- Samples of discharges from urethra, vagina & anus should be taken on swabs.
- Multiple tattoos on upper extremity to hide needle tracks are seen in drug abusers.
- In suspected asphyxial death, the eye should be examined for subconjunctival petechiae.

## 2) Dhatura poison

⇒ Diliriant poison

- plant commonly grows in waste places all over india.

Common name - Thorn apple.

Two varieties - Cubife flower plant  
purple flower plant.

Kidney shape seeds.

→ Alkaloids of dhatura stimulates -

→ Higher centre of brain than motor centre.

→ They inhibit secretion of sweat & saliva.

⇒ Sign & symptoms :-

- Dryness of mouth & throat.

- Difficulty in taking

- Dysphagia.

- Dilatation of pupil.

- Delirium

- Drowsiness.

⇒ Vomiting

→ Giddiness & unsteady gait

↓

like drunken individual

Mind - early ⇒ restless & confused  
later → delirious.

- patient becomes drowsy

↓

may progress to stupor

↓

Death.

⇒ Treatments -

→ Stomach wash with weak solution of potassium permanganate or 4-5% tonic acid

→ Normal general valuable treatment.





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**SUPPLEMENT**

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Faculty / Course : B.H.M.S.

Date : \_\_\_\_\_

Degree / Diploma, Year : III yr.

Semester First / Second

Subject : Gynaecology

Roll No. : 2

Sr.No.

**3456**

No. of Supplement \_\_\_\_\_

Supervisor's Sign. : \_\_\_\_\_

Q.1 DUB (Dysfunctional uterine bleeding)

Definition :-

- This is a condition where the excessive menstrual bleeding occurs more than 80ml, where there is no pathological cause (systemic, pelvic, or haematological) can be detected.

Aetiology :-

DUB is due to →

i) Anovulation (85%)

- Particularly during adolescence & premenopause.
- Anovulatory DUB is painless.

ii) Ovulatory cycles (15%)

- Developing in maturity group (20-40 yrs).

iii) Mental anxiety.

Histology :-

Endometrial pattern in DUB shows:

- i) Proliferative endometrium in secretory phase (Anovulation)
- ii) Secretory endometrium (Ovulatory).
- iii) Endometrial hyperplasia & adenomatous hyperplasia, cystic glandular hyperplasia.

## Symptoms:

- Menorrhagia
- May be irregular bleeding
- Short period of amenorrhoea with prolonged bleeding.
- Symptoms due to anemia  $\rightarrow$  weakness, breathlessness on exertion.

## Signs:

- Patient is anemic
- Bilateral palpable ovaries.  
Cystic can be felt in metropathia.

## Management:

- General rest advised during bleeding phase.
- Anemia should be corrected with proper diet.
- Any systemic / endocrinal abnormality should be investigated & treated accordingly.

## Therapeutics:

- i) Subina
- ii) Sepia
- iii) Lycopodium
- iv) Secale corn.

## Q.2. Dysmenorrhoea:

### Definition:

- Dysmenorrhoea literally means painful menstruation.
- Painful menstruation of sufficient magnitude so as to incapacitate day to day activities.

### Types:

- Primary / spasmodic dysmenorrhoea
- Secondary / congestive dysmenorrhoea

### Clinical features:

- Patient is young, usually of 18-24 yrs.
- Painful menses usually occurs years after menarche.
- Pain starts 1-2 hrs before the onset of menses.
- Pain is colicky & cramp like at the haemorrhagic region.

### 4 Diagnosis:

- Pelvic USG is helpful.
- Typical history of painful menses in young girls with no other clinical abnormality in health & pelvis is diagnostic of primary dysmenorrhoea.
- Routine laboratory testing is done.

Q.3

## Hirsutism:

### Definition:

- Hirsutism is defined as distribution of hair in a female normally present in a male.
- i.e. - upper lip, chin, chest, lower abdomen and thighs.

### Endocrinology:

In women, androgen - secreted by the ovaries & adrenal gland in different proportion.

(i) Testosterone (T)

= 0.2 - 0.3 mg daily.

4

### Causes:

- (i) Genetic & ethnic
- (ii) Excess androgen / ↑ sensitivity of pilosebaceous unit to T.
- (iii) Liver d/s → when level of SHBG level drops.

### Management:-

(i) Treat the cause :-

- Removal of ovarian & adrenal tumor

(ii) Drugs

- Dexamethasone
- Spironolactone

(iii) hll. reduction.



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Faculty / Course : BAMS Date : \_\_\_\_\_

Degree / Diploma, Year : IV YEAR Semester First / Second

Subject : HOMOEOPATHIC MATERIA MEDICA Roll No. : 01

Sr.No. 3501 No. of Supplement \_\_\_\_\_ Supervisor's Sign.: \_\_\_\_\_

Q.1] Guiding symptoms & head complaints of  
glycerine.

→ COMMON NAME :- NITRO-GLYCERINE  
PROVER :- HERING  
FAMILY :-  $(C_3H_5(NO_2)_3)$

CONSTITUTION - especially suited to plethoric,  
sensitive persons who are very irritable &  
easily excited.

7 TEMPERAMENT :- nervous / irritable.  
THERMALS :- NOT PATIENT.  
MIASMS :- prola in background.

→ SPHERE OF ACTION - It acts on brain,  
pneumogastric & vaso motor nerve.

→ GUIDING SYMPTOMS :-

(1) SENSATION OF PULSATION THROUGHOUT BODY.

(2) General weakness & depression from heat of  
sun or summer.

(3) Symptoms are WORSE IN THE SUN

(4) weakness & trembling of tongue, hands,  
legs & entire body.

(5) Bad effects of mental excitement, fright,  
fear, mechanical injuries, hair cut &  
SUN STROKE

- (6) It acts violently & suddenly in acute diseases of brain causing fulness, tension, throbbing burning sensation.
- (7) Its action is so local, so sudden, so definite & torturing.

→ AILMENTS FROM :- sun, heat of fire, fear, fright, injury, etc.

→ HEAD COMPLAINTS :-

- (1) HEADACHE - headache from working in under gas light, when heat falls on head or WALKING IN SUN, from heat of stone.
- (2) Head feels enormously LARGE as if the skull were too SMALL for brain.
- (3) Sense THROBBING, PULSATING type of headache.
- (4) The patient hold the head with both hands.
- (5) Headache increase & decrease with the SUN.
- (6) Headache in place of nerves.
- (7) Apoplexy with cerebral congestion.
- (8) MENTINGITIS - during the time of dentition.
- (9) Convulsion of CHILDREN from cerebral congestion.

→ MODALITIES :-

Aggravation :- warm room, heat of fire, sun, fear, fright, injury.

Amelioration :- cold in general.

Q.2] Guiding symptoms & skin complaint of Psoriasis.

→ COMMON NAME :- A product of psora.  
PROVER :- Heing.  
FAMILY :- a neurode.

CONSTITUTION :- psoric constitution prone to skin affections, less & thin person with skin eruption having filthy smell of body.

THERMALS :- EXTREMELY CHILLY PATIENT.

TEMPERAMENT :- irritable.

MIASM :- psora in background.

→ SPHERE OF ACTION :- It acts on skin, subcutaneous tissue, lungs, intestine, mind & gland.

→ GUIDING SYMPTOMS :-

① GREAT DEBILITY

② Feel unusually well day before the attack begins.

③ skin eruption appears in every winter which is dry, thick & dirty looking.

④ HUNGRY in middle of night.

⑤ MUST HAVE SOMETHING TO EAT

⑥ EXTREMELY CHILLY

⑦ wants warm clothing even in hot summer weather.

(8) Profuse perspiration after acute disease with relief of all sufferings.

(9) There is amelioration of all complaints by lying down & by perspiration.

(10) All secretion & excretions of BODY ARE EVIL SMELLING HAVE CARRION LIKE ODOUR.

### → SKIN COMPLAINTS :-

(1) The skin is very much sensitive to atmospheric changes.

(2) INTENSE ITCHING which leads patient to despair. He scratches until the part is raw.

(3) Eczema due to suppression of skin eruption.

(4) SKIN LOOKS DIRTY AND UNHEALTHY

(5) The eruption may be DRY, SCALY OR MOIST

(6) The eczema of scalp, face & behind the ear.

(7) Acne - all forms, aggravates during menses.

(8) The skin is generally DRY AND SWEAT PORE

### → MODALITIES :-

Aggravation :- warmth of bed, warm application, covering & open air.

Amelioration :- by sweating.