OneShot 4.0
Paediatrics

DBMCI one

PAEDIATRICS

“If you want to get to heaven then be prepared to die for it.”

- Dr. Aditya Gupta

GROWTH

WEIGHT

BIRTH 3Kg (X)

5MO X

1YEAR X

2Y X

3YEARS X

5YEAR X

7YEARS X

LENGTH

BIRTH

1YEAR

2YEAR

4YEAR.

WEIGHT DOUBLES BY ____ , TRIPLES BY _____

HT/LENGTH DOUBLES BY , TRIPLES BY _____

A CHILD IS HALF THE ADULT HEIGHT AT _____

HEAD CIRCUMFERENCE.

BIRTH

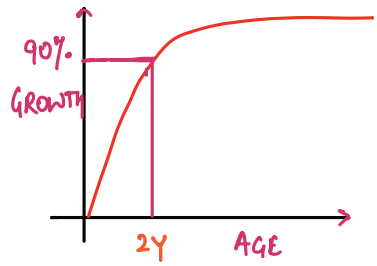
FIRST 3MONTH

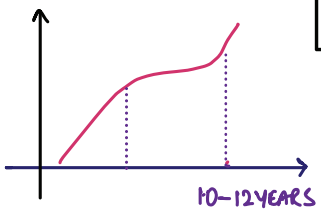
4-6 MONTHS

7-12 MONTHS _____

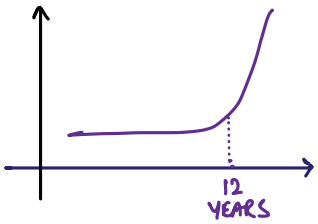
90% of ADULT HC BY →

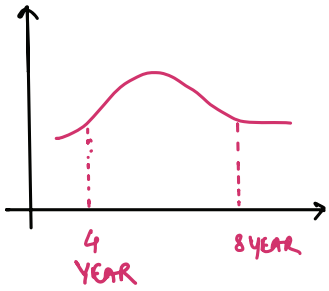
GROWTH CURVES





S/Sigmoid

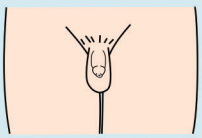
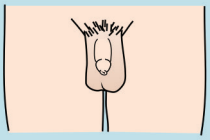
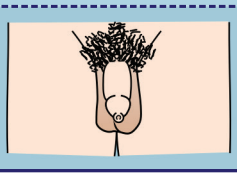


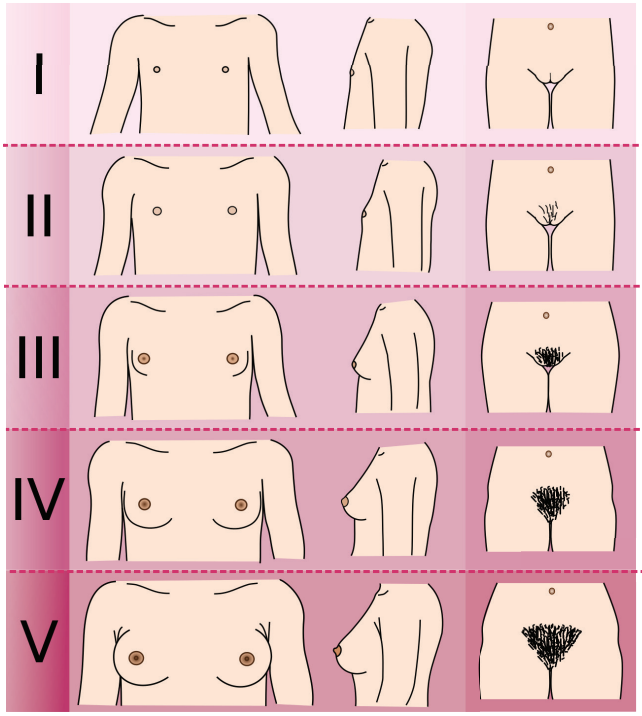


PUBERTY AND ADOLESCENCE

GROUP (WHO defined)

SEQUENCE OF PUBERTY [FEMALES]	SEQUENCE OF PUBERTY [MALES]
T ↓ P ↓ M	T ↓ P ↓ M.

I		3 <2,5	PRE — _____
II		4 2,5-3,2	INCREASE IN VOLUME _____ PUBIC HAIR
III		10 3,6	PUBIC HAIR ⟶ INCREASE IN PENILE
IV		16 4,1-4,5	GROWTH SPURT INCREASE IN PENILE
V		25 >4,5	ADULT TV



PRE- _____

APPEARANCE OF _____ BUD

_____ PUBIC HAIR

GROWTH

PUBIC HAIR

PUBIC HAIR ⟶ ADULT except

FORMATION OF

ADULT

ASSESSMENT OF GROWTH

AGE DEPENDENT

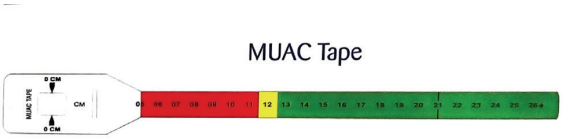
1.
2.
3.

AGE INDEPENDENT

1.
2.
3.

LENGTH v/s HEIGHT

MID-UPPER ARM CIRCUMFERENCE.



RED

YELLOW

GREEN

SKIN FOLD THICKNESS

< 6mm →

> 10mm →

M/C SITE →

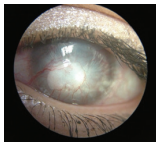
OTHER SITES

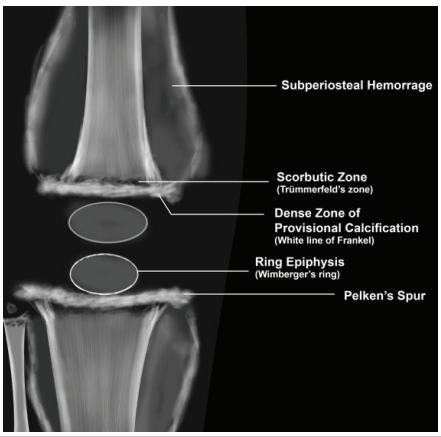
VITAMINS | MINERALS

FAT SOLUBLE

WATER SOLUBLE

WATER SOLUBLE

	FUNCTION	DEFICIENCY
B_1 THIAMINE	INVOLVED IN ____ CYCLE A T P	BERI • EATING ____ RICE
B_2 Riboflavin	PART OF • S • GLUTATHIONE	 
B_3 NIACIN	In our body TRYPTOPHAN ↓ PATHWAY :	 3 ALSO SEEN IN (A) ____ RICH DIET (B) ____ DISEASE (C) SYNDROME (D) DRUGS eg.
B_5 PANTOTHENIC ACID.	Part of	
B_6 PYRIDOXINE	(A) (B) SYNTHESIS (C) ALT / AST	• NEONATAL • PERIPHERAL • DRUGS →

B7 BIOTIN		• EATING RAW leads to
FOLATE Vit B_{12}	B12 ONLY in	B12 → ANEMIA +
VITAMIN C	1. Hydroxylation of 2. Anti – 3. Absorption of	SCURVY 1. BLEEDING 2. SKIN. 3. JOINTS → 

FAT SOLUBLE VITAMINS

	FUNCTION	DEFICIENCY
VITAMIN A	• EPITHELIAL • VISION • CELL –	DRY FIRST EYE SYMPTOM FIRST EYE SIGN X1A Conj. X1B SPOTS. X2 CORNEAL X3 CORNEAL

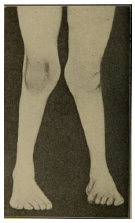
VITAMIN D

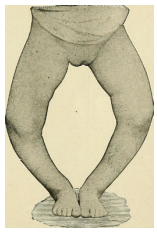
RICKETS :

CLINICAL FEATURES

1ST Sign

LOWER LIMB





CHEST

XRAY

1ST

TREATMENT

LAB INV.

CALCIUM :

PO_4

PTH

ALP

VitK

↓ carboxylation of FACTORS

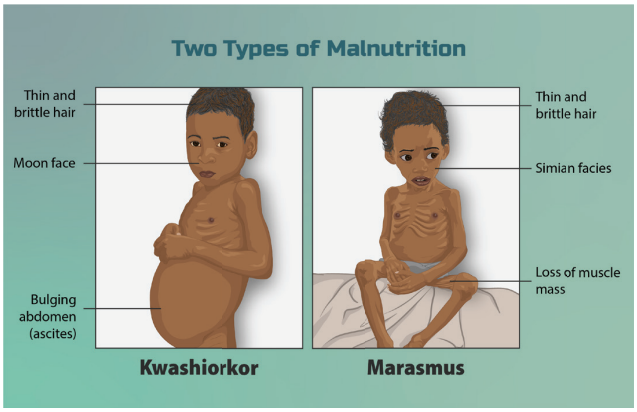
defⁿ → DISEASE OF NEWBORN

MALNUTRITION (SEVERE FORMS)

KWASHIORKAR V/S MARASMUS.

LOSS OF PROTEIN

LOSS OF PROTEIN



	KWASHIORKAR	MARASMUS.
WASTING		
APPETITE.		
CONSCIOUSNESS		
AGE (ONSET)		
LIVER		
FACE (Appearance)		
PROGNOSIS		
Additional features		

MALNUTRITION

ACUTE CHRONIC

BEST METHOD

if <-2 SD

<-3 SD

ACUTE MALNUTRITION is aka

aka.

Weight for age → BOTH (A) (B)

if <-2SD :

Eg① 2y old child

12kg, 88cm → 1month → 8kg, 88cm

2y 1mo

W/L →

W/A →

H/A →

Eg② 2y old child

12kg, 88cm → 1year → 12kg, 88cm

W/A →

H/A →

W/L →

BEST (ACUTE) :

BEST (CHRONIC) :

SAM (SEV. ACUTE MAL^N)

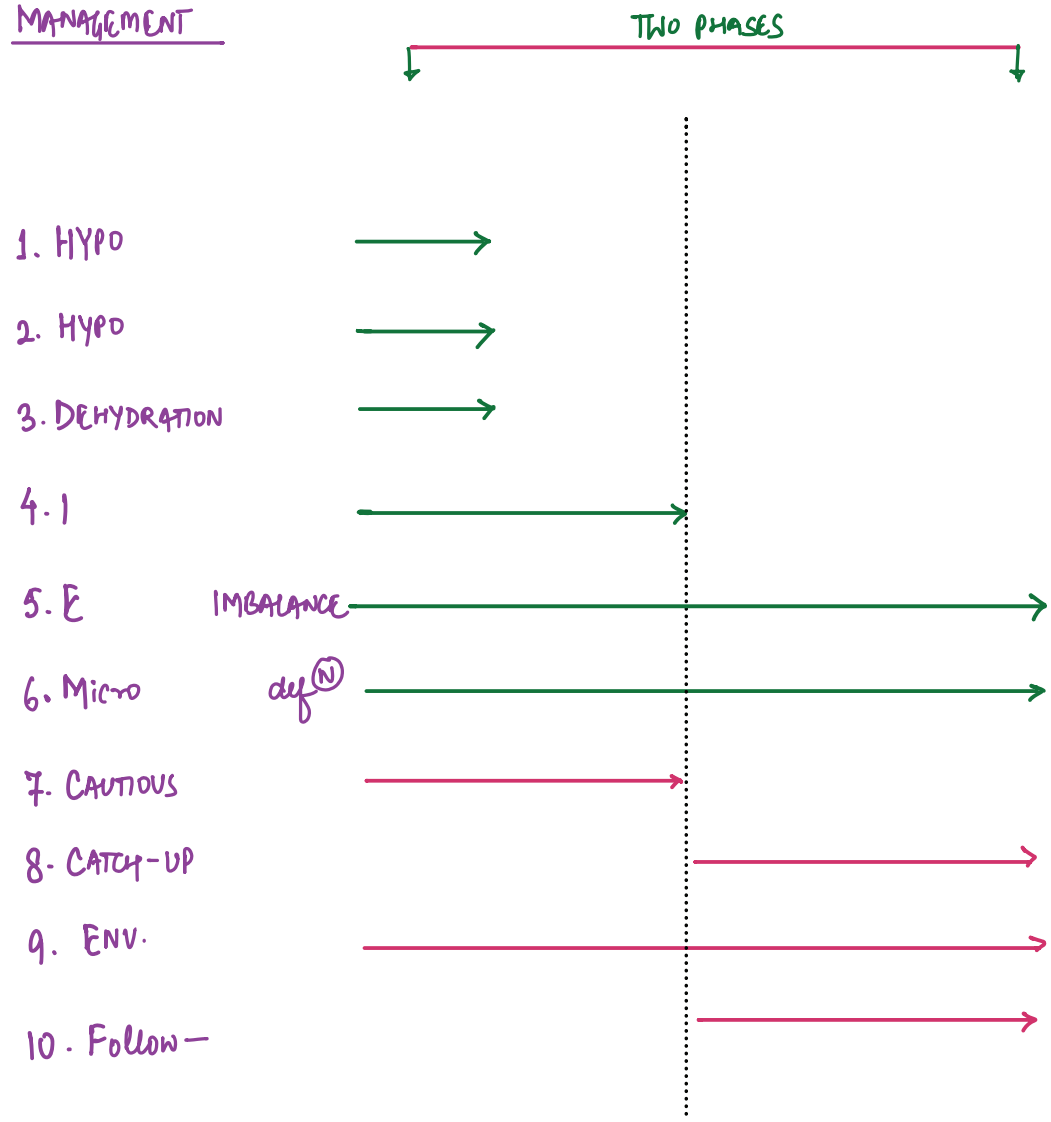
DEFINITION

Ⓐ WEIGHT FOR length less than _____
OR

Ⓑ MUAC less than _____
OR

Ⓒ

MANAGEMENT



MILESTONES

GROSS MOTOR

3 MONTHS

6 MONTHS — with support

8 MONTHS

9 MONTHS — with support

10 MONTHS

12 MONTHS — with support.

15 MONTHS

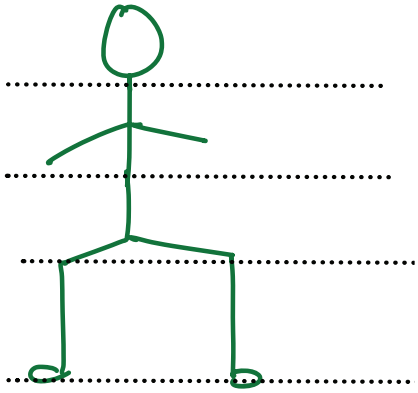
18 MONTHS

2 years.

3 years.

4 years

5 years.



FINE MOTOR.

3 MONTHS	PUTS HANDS into _____
4 MONTHS	GRIP [BUT
5 MONTHS	GRIP [N
6 MONTHS	DEXTROUS Grasp
7 MONTHS	DEXTROUS Grasp
9 MONTHS	
12 MONTHS	
15 MONTHS	

DRAWING SKILLS

2 YEAR

3y

4y

4.5y

5 years

6-7 years

9 years

11 years.

DRESSING & UNDRESSING

SOCIAL MILESTONES

2 MONTHS — SOCIAL

3 MONTHS — RECOGNISES

6 MONTHS

7 MONTHS

9 MONTHS

1 YEAR.

15 MONTHS — 2Ⓟ

18 MONTH — 2Ⓓ

2 YEARS

3 YEARS

4 YEARS

LANGUAGE MILESTONES

2 MONTHS

3 MONTHS

4 MONTHS

6 MONTHS — SYLLABLE

9 MONTHS — SYLLABLE

12 MONTHS

15 MONTHS

18 MONTHS

24 MONTHS

3 YEARS — 3 THING

4 YEARS

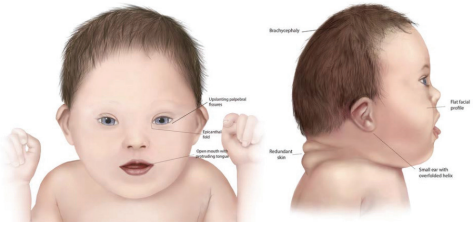
5 YEARS

- HANDEDNESS
- R/L diff^{n}
- BINOCULAR vision.

NOTES

GENETICS

DOWN SYNDROME



(1) EPICANTHAL _____
(2) UPWARD SLANT OF
P _____ FISSURE
(3) ____ SET EARS
(4) _____ FACIAL profile
(5) _____ NASAL BONE
(6) _____ TRANSVERSE CREASE
(7) TONE

ASSOCIATIONS

(1) CVS
(2) GIT
(3) HEMAT
(4) Endocrine

Congenital

ANTENATAL SCREENING.

1ST TM Dual TEST (1) (2)

2ND TM TRIPLE TEST (1) (2) (3) + (4)

Radiographic parameters

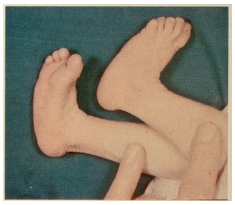
(1)
(2)
(3)

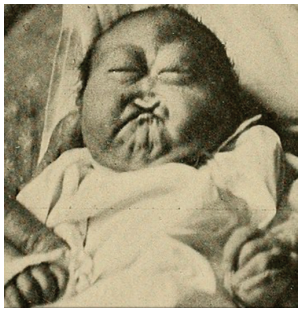
RADIO + DUAL TEST →

+ TRIPLE TEST → INT

EDWARD v/s PATAU.

EDWARD	PATAU.	
TRISOMY	TRISOMY	
		ROCKER BOTTOM FEET
		CLEFT PALATE
		HOLOPROSENCEPHALY.
		FINGERS
		Kidney
		CUTIS APLASIA





TURNER v/s NOONAN

TURNER	NOONAN	
		GENOTYPE
		PHENOTYPE
		CVS
		IQ.
		FERTILITY

DIGEORGE SYNDROME

defective formation

C

A

T

C

Y

-22

CONGENITAL INFECTIONS

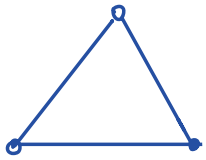
C

C

H

CONGENITAL TOXOPLASMOSIS

CONGENITAL RUBELLA SYNDROME



CONGENITAL CMV INFECTION

C

M

V

90% CASES

MOST COMMON

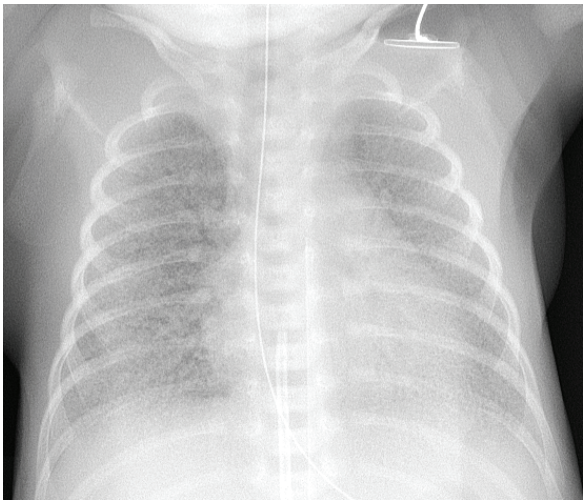
METHOD OF DETECTION ⟶

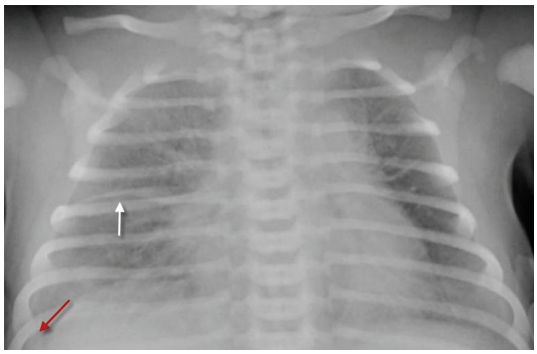
TREATMENT :

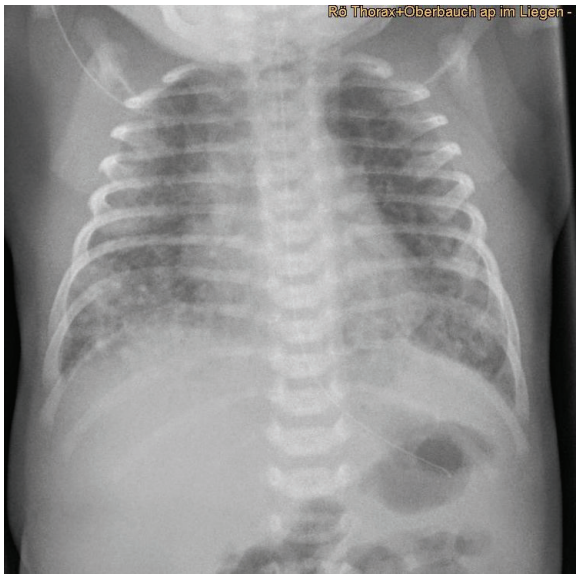
NEONATOLOGY

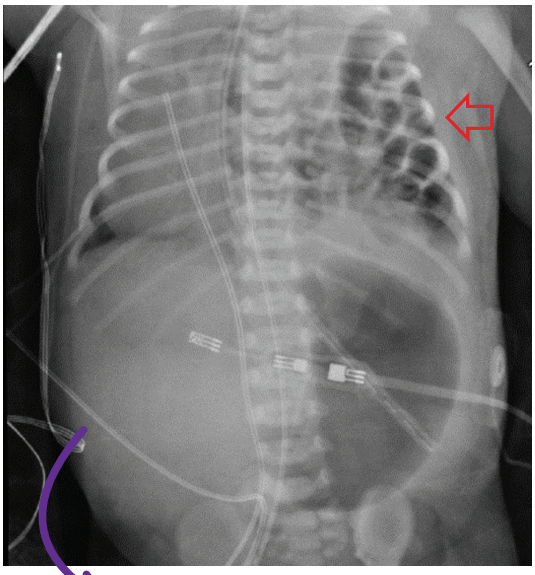
RESP DISTRESS IN NEWBORNS

DISORDER	CAUSE	XRAY	TREATMENT
RESPIRATORY DISTRESS SYNDROME	DEFICIENCY OF — RATIO	• •	PREVENTION ANTENATAL. • B — metrasone. • D — TREATMENT
APNEA OF PREMATURITY	IMMATURITY OF		RULE OUT CAUSES ↓ DOC:
TRANSIENT TACHYPNEA OF NEWBORN	LACK OF OF $ENaC^{\oplus}$ CHANNEL ↓ RETENTION OF		
MECONIUM ASPIRATION SYNDROME	MECONIUM → ↓ (A) (B) complete (C) PARTIAL		









CONG. D H

- M/C TYPE M/C SITE
- @ BIRTH +

SCORES IN NEWBORN

Resp. distress
- SILVERMAN ANDERSON
- DOWNES

SILVERMAN ANDERSON

	0	1	2
UPPER CHEST RETRACTIONS			
LOWER CHEST RETRACTION			
XIPHOID "			
NASAL FLARING			
GRUNTING			

DOWNE'S SCORE

	0	1	2
Resp.			
Grunting			
R			
Air			
C			

APGAR

0 1 2

A

P

G

A

R

NEONATAL SEPSIS

M/C CAUSE →

RISK FACTORS

EONS (< HOL)	LONS (> HOL)
1.	1. POOR HY
2. Prolonged	2. POOR C
3. Prolonged	3. BOTTLE
4.	
5. Asphyxia	
6. >3 or single	

GOLD STD:

SEPSIS SCREEN — High sensitivity / NPV · POOR SPECIFICITY.

4 components

1.

2.

3.

4.

2/4 ⟶

TREATMENT

Supportive +

if meningitis

DURATION

1. Sepsis SCREEN ⊖
2. Blood C/S ⊕
3. (LP) Meningitis.

NEC (STAGING)

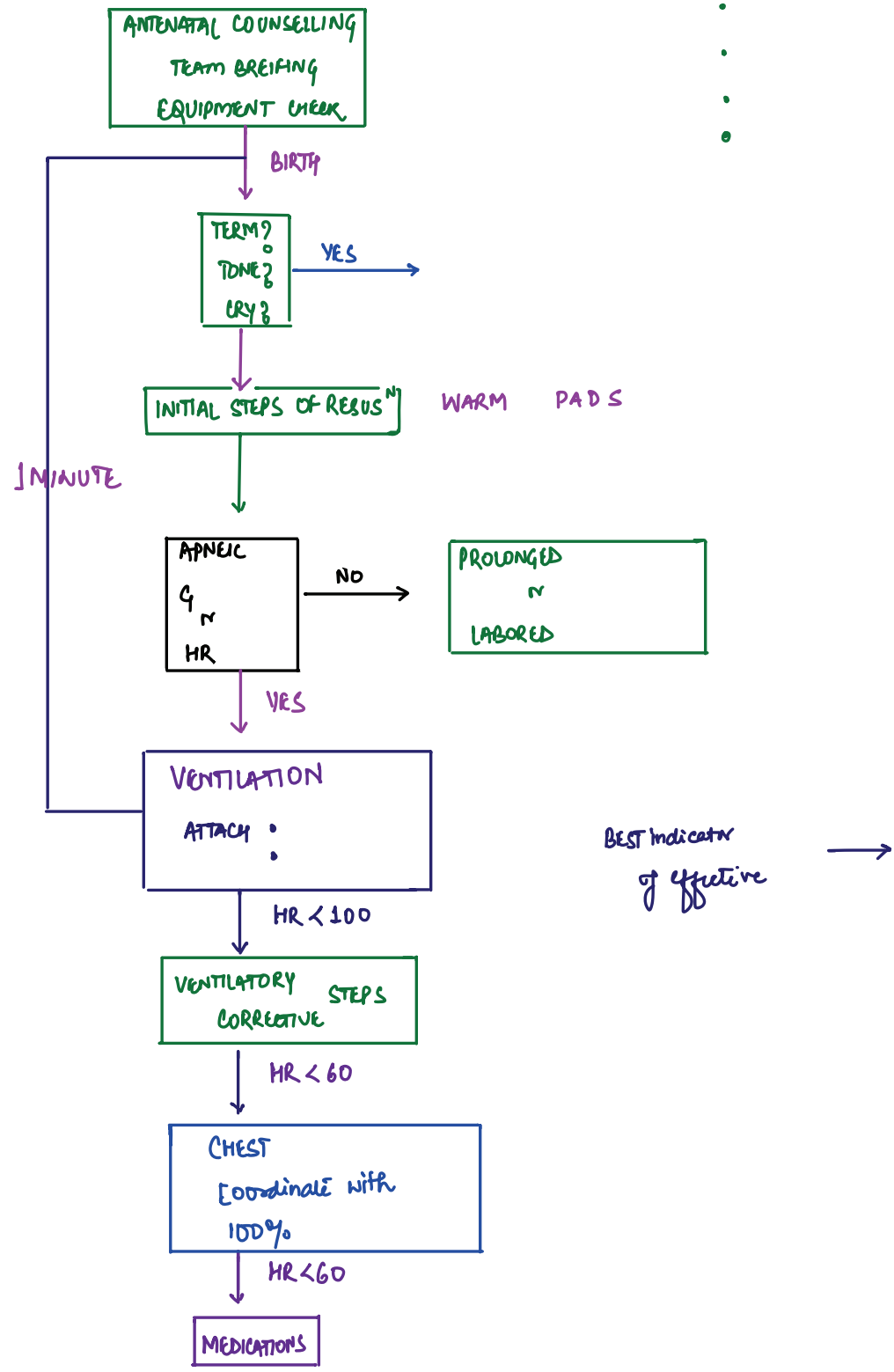
PROTECTION

Ⓐ

Ⓑ

Bell		CHARACTERISTIC FEATURE	X RAY
SUSPECT	I (A / B)	----------	
Confirmed	II (A / B)	----------	
Surgical	III (A / B)	----------	

NEONATAL RESUSCITATION



4 ESSENTIAL PRE BIRTH QUESTIONS

-
-
-
-

BEST Indicator of effective SS →

VENTILATORY CORRECTIVE STEPS

M

R

S

O

P

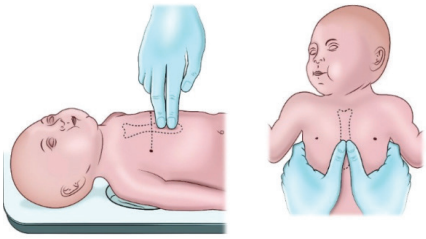
A

CHEST COMPRESSION

INDICATION :

RATIO :

Technique



MEDICATIONS

Indication

DRUG

Strength

DOSE

IV / IO

Intratracheal

Repeat every 3-5 min

↓ HR < 60

(A)

(B)

GIT AND SYSTEMIC PAEDIATRICS

Diarrhoea

ADULTS ↓

M/C →

BACTERIAL M/C →

HIV →

Diarrhoea MANAGEMENT

1. DEHYDRATION
2. ADMINISTRATION OF ZINC

DEHYDRATION — approx fluid loss.

NO

SOME

SEVERE

	NO	SOME	SEVERE
CONSCIOUSNESS	NORMAL		
THIRST	NORMAL		
SKINPINCH	NORMAL		
EYES	NORMAL		

PLAN (A) No dehydration → Replace

WITH EACH LOOSE STOOL →

ORS

Na

Glu

$K^{\oplus}$

$Cl^{\ominus}$

CITRATE

PLAN (B) Some dehydration

Rehydrate → OVER

+ Replace ongoing fluid losses.

PLAN (C) SEVERE

IV/C IVF →

100ml/kg

TOTAL

>1YEAR

<1YEAR

Summarizing

	FLUID	AMOUNT	TIME.
No			
Some			
SEVERE			

MAINTENANCE FLUIDS

	AMOUNT	TIME
FIRST 10kg [1-10]		
11-20 kg		
>20kg		

PNEUMONIA (IMNCI)

	CLINICAL FEATURES	TREATMENT
NO PNEUMONIA	• NO FEATURES OF _____ • Only cough or cold •	
PNEUMONIA	• FAST BREATHING (RR: <2MONTH; 2–12 MO; >12 MO) •	
SEVERE PNEUMONIA	• STRIDOR in an OTHERWISE or ① Temp ② SpO_2 ③ L ④ S	

CYSTIC FIBROSIS

GENE:

CHROMOSOME 7

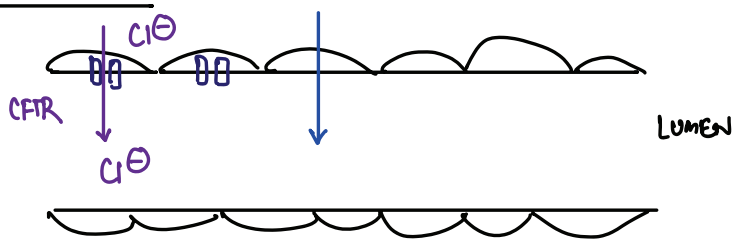
M/C MUTATION :

FUNCTION

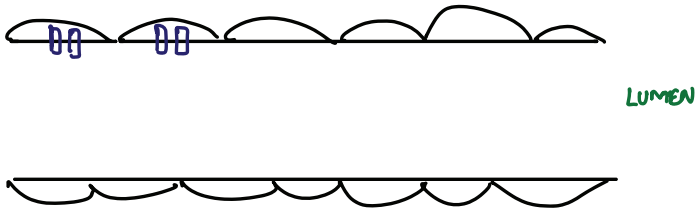
CONDUCTANCE

CHANNEL

AIRWAY / PANCREAS



SWEAT GLANDS



CLINICAL FEATURES

1. AIRWAY – Recurrent LRTI → BRONCHIECTASIS — M/C →
2. EXOCRINE pancreatic insufficiency LEADS TO
3. Intestine → DIOS / RECTAL prolapse
4. Congenital absence of vas deferens.

DIAGNOSIS — ANY 1 of the following

(A) SWEAT $Cl^{\ominus}$ > ____ Meq/L on two or MORE OCCASIONS

(B)

(C) _____ NASAL POTENTIAL DIFFERENCE

TREATMENT

1. CHEST PHYSIOTHERAPY
2. _____ ENZYME REPLACEMENT
3. NEWER DRUGS
   - A. _____ – CAFTOR
   - B. _____ CAFTOR

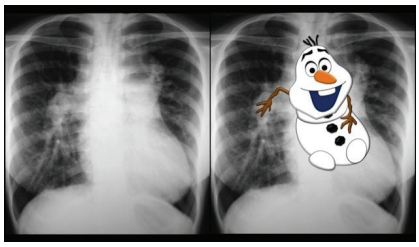
CONGENITAL HEART DISEASE

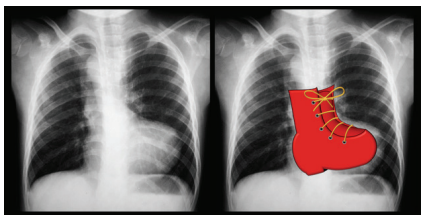
NADA'S CRITERIA

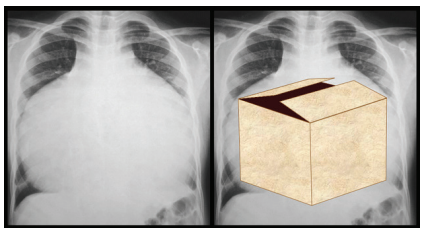
MAJOR (1) OR (2) MINOR

1. 2. 3. 4.

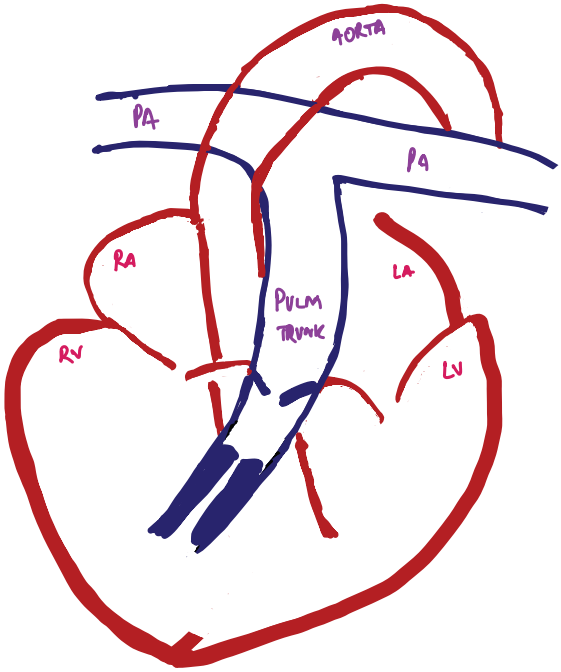
1. 2. 3. 4. 5.







TETRALOGY OF FALLOT



CYANOSIS

MURMUR

NEPHRITIC & NEPHROTIC SYNDROME

NEPHRITIC Syndrome – Glomerulonephritis

- HALLMARK
- PROTEIN + ↑SCR.
- RBC
- Dysmorphic

M/C:

NEPHROTIC Syndrome

1. _____ RANGE _____ → $\frac{U_p}{U_c}$ > ; > mg/m²/PER HOUR PROTEINURIA
2. HYPO _____ .
3. GENERALISED

- MINIMAL CHANGE
  - LM
  - EM
  - AGE
  - HTN
  - PROGNOSIS
  - DOC:
- SIGNIFICANT CHANGE

DKA in children

all 3

① RBS >
② pH <
③ ⊕ of

DKA (SEVERITY)	$HCO_3^{\ominus}$	pH
MILD		<7.3
MOD		<7.2
SEV		<7.1

MANAGEMENT

ABC

↓

1ST HOUR — BOLUS (10-20ml/kg of

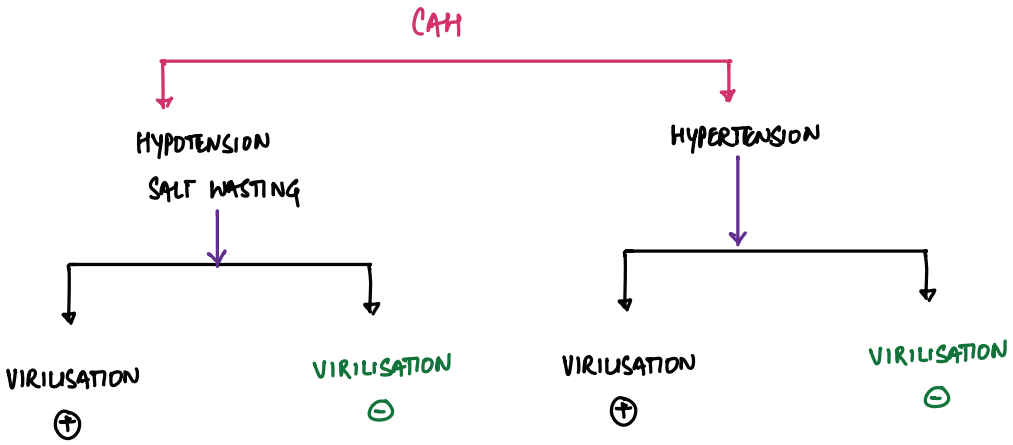
↓

START

( )

$K^{\oplus}$
>5.5
2.5 - 5.5
<2.5

CONGENITAL ADRENAL HYPERPLASIA



Imp Epilepsy Syndromes

	Age group	Clinical feature	Treatment
JANZ (Juvenile myoclonic epilepsy)	Adolescent – females.	TRIGGERS → (A) (B)	
WEST Syndrome	Infancy		
SMEI / DRAVET (Sev. Myoclonic epilepsy of Infancy)	Onset ↓ Infancy		
Lennox GESTAUT	2–8 y		

RAPID FIRE IMAGE

Diphtheria

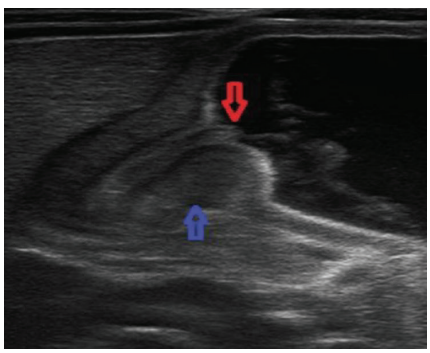
Toxin inhibits

Complication :

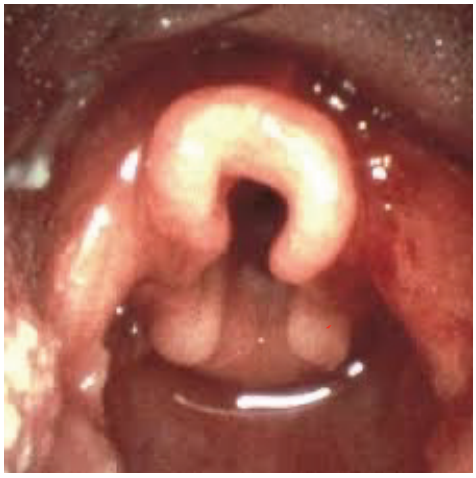
Vaccine

TONGUE

1. C
2. R
3. E
4. A
5. M



- M/C SITE
- LACK of plexus - defective
- IOC :



- shaped Epiglottis
- M/C cause of STRIDOR <

th DISEASE
aka ERYTHEMA

↳
1.
2. Non Immune
3. NON ERO

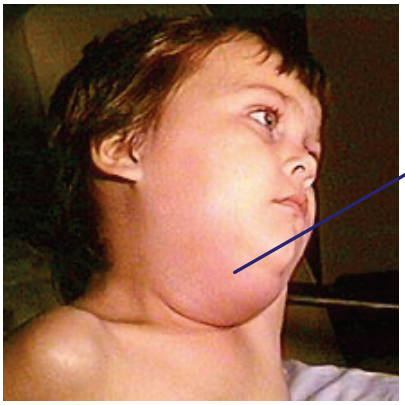
M/C complication

most common cause of death

LATE complication

TREATMENT

VACCINE :



ADULTS

VACCINE :

NOTES

NOTES