

PROTEIN ENERGY MALNUTRITION

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NUTRITIONAL STATUS

UNDERNUTRITION

- Inadequate consumption
- Poor accretion
- Excess loss of nutrients

OVERNUTRITION

- Overweight ,obesity
- Excess intake
- Pathological

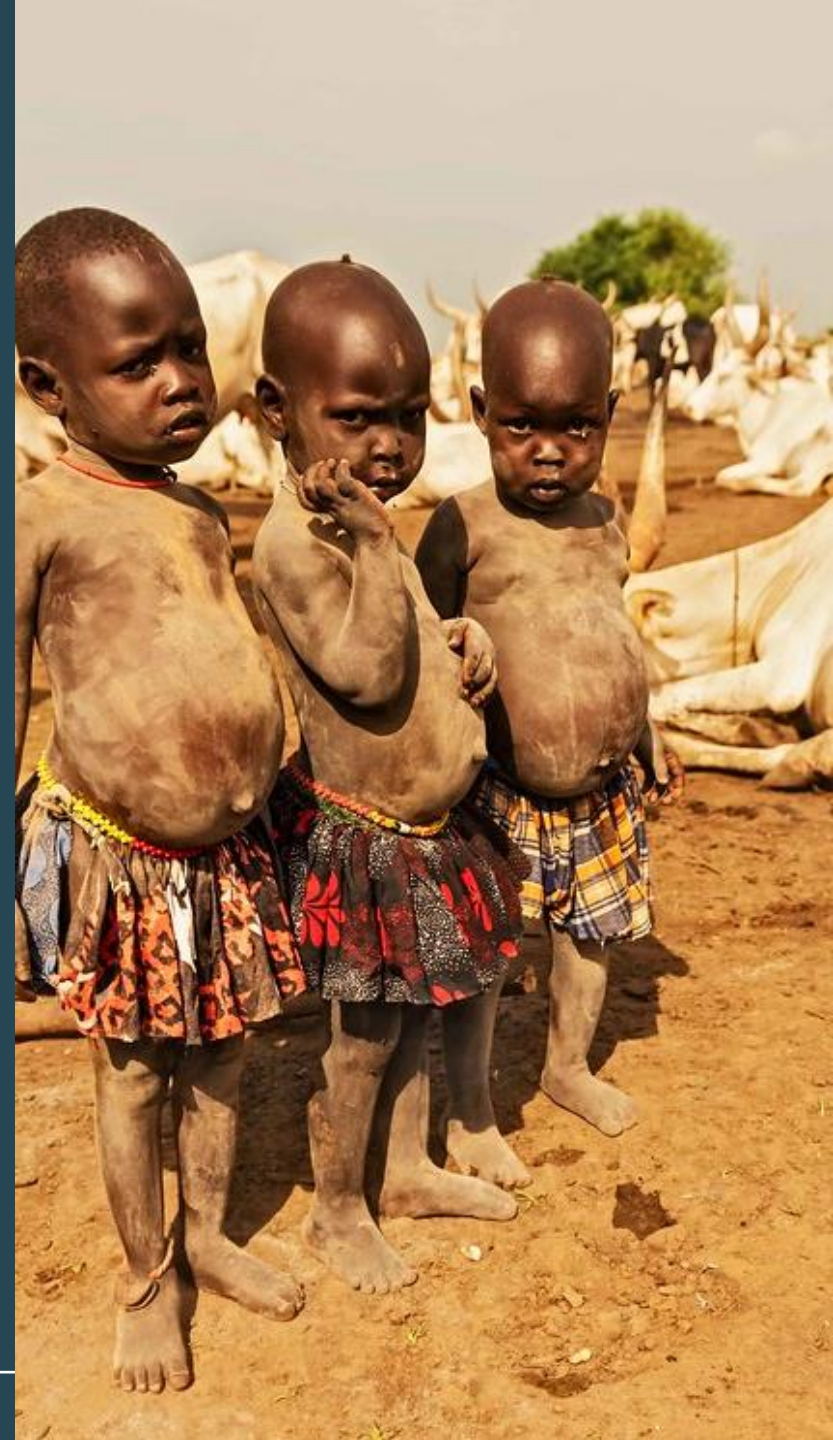
MALNUTRITION

- Deficiencies,exc
esses or
imbalances in
intake of energy
and or nutrients

UNDERNUTRITION

- Underweight-wt for age (s/w or both)
- Stunting-ht for age-c/c
- Wasting-wt for ht-a/c

<-2 SD
<-3SD



CLASSIFICATION

MALNUTRITION-IAP

% OF IDEAL WT EXPECTED FOR AGE	GRADE OF PEM
>80	NORMAL
71-80	I
61-70	II
51-60	III
<50	IV

STUNTING-WATERLOW

%	GRADE
>95	NORMAL
90-95	I
85-89	II
<85	III

WASTING-WATERLOW

%	GRADE
>110	OVERWEIGHT
91-110	NORMAL
81-90	I
70-80	II
<70	III

3 CARDINAL DETERMINANTS OF UNDERNUTRITION

LOW BIRTH WEIGHT

20% childhood undernutrition-fetal growth restriction

INFECTIONS

25%-diarrhea,pneumonia

LOW FOOD INTAKE

- Inadequate breastfeeding,delayed complementary feeding
- Less energy & protein available
- 55%

CLASSIFICATION OF MALNUTRITION

I. MAM

II. SAM

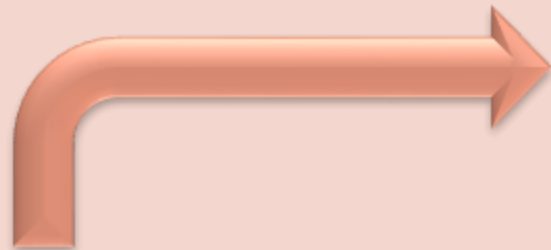
MODERATE A/C MALNUTRITION

- Wt for ht between -2 & -3 SD
- MUAC between 11.5 & 12.5

TREATMENT-Adequate protein & energy, at least
150kcal/kg/day

SEVERE A/C MALNUTRITION

- Wt for ht $<-3SD$
- MUAC $<11.5cm$
- Bipedal edema



- SEVERE EDEMA
- LOW APETITE
- MEDICAL COMPLICATIONS(anemia,tb, pneumonia,dehydration,cerebral palsy,HIV,heart disease)
- Danger signs acc to IMNCI

CASE SHEET FORMAT

AGE

Kwashiorkar 1-4 yrs

SEX

If female not preferred ,neglect

CC

Vomiting,loose stools,abdominal distension,steatorrhea,pica,decreased activity, feeding problems,edema,failure to gain wt

HOPC

Onset,duration,progress,enquire other deficiencies-vit A,vitD,vitK,vitB12,Zn,Cu. If PEM+SEIZURE,consider hypoglycemia

PAST

Measles,whooping cough,vomiting,diarrhea,TB

BIRTH

Maternal malnutrition, working till term, short interval b/w preg, poor wt gain in preg, LBW babies

Developmental delay is expected

DIET

Breastfeeding adequate, enquire about dilution of formula/cow, Calorie gap, energy gap

Kwashiorkor precipitated by abrupt stoppage of milk feeds followed by substitution with carbohydrate

SOCIAL

Poverty, ignorance, cultural belief, male preference,