







# Is there any difference between treatment of marasmus& kwashiorkor?

# :Phases

- **\*Initial phase**
- 1st week.
- Rehabilitation phase
- 2<sup>nd</sup> -6<sup>th</sup> week.
- Follow up phase
- 7th -26th week.



ACTIVITY	TREAT	TAL MENT Days 3-7	REHABILITATION Weeks 2-6	FOLLOW-UP Weeks 7-26
Treat or prevent	-			
Hypoglycemia	>			
Hypothermia	>			
Dehydration	>			
Correct electrolyte imbalance				
Treat infection				
Correct micronutrient deficiencies	<without iron=""> <with iron=""></with></without>			
Begin feeding				9
Increase feeding to recover lost weight ("catch-up growth")				
Stimulate emotional and sensorial development				
Prepare for discharge				

Phases

## \* 1-6 days:

- F 75 milk according to Z score in the 1st 2-7 days 3 hourly for 2 days then 4 hourly Orally or by N/G tube
- Folic acid tab 5 mg in the 1st day
- ► Vit A cap in the 1st day

# \* 3rd -7th day:

F 100 milk same dose of F 75 Then increase gradually& slowly If the patient tolerates the milk

Add RUTF:
Blumby nuts or BP 100 alone
Or better combination with food

INGREDIENT	AMOUNT		
INGKLDILINI	F75*	F100 [†]	
Dried skim milk	25 g	80 g	
Sugar	70 g	50 g	
Cereal flour	35 g		
Vegetable oil	27 g	60 g	
Mineral mix [‡]	20 mL	20 mL	
Vitamin mix [‡]	140 mg	140 mg	
Water to make	1,000 mL	1,000 mL	



CONSTITUENT	AMOUNT PER 100 mL			
CONSTITUENT	F75	F100		
Energy	75 kcal <sub>th</sub> (315 kJ)	100 kcal <sub>th</sub> (420 kJ)		
Protein	0.9 g	2.9 g		
Lactose	1.3 g	4.2 g		
Potassium	3.6 mmol	5.9 mmol		
Sodium	0.6 mmol	1.9 mmol		
Magnesium	0.43 mmol	0.73 mmol		
Zinc	2.0 mg	2.3 mg		
Copper	0.25 mg	0.25 mg		
Percentage of energy from:				
Protein	5%	12%		
Fat	32%	53%		
Osmolarity	333 mOsmol/l	419 mOsmol/l		

SAM management				
Independent additional criteria	No appetite     Medical     complications		Appetite     No medical complications	
<del>.</del>	<b>\</b>		<b>\</b>	
Type of therapeutic feeding	Facility-based	<b> </b>	Community-based	
Intervention	F75→ F100/RUTF and 24 hour medical care		RUTF, basic medical care	
Discharge criteria (transition criteria	Reduced oedema Good appetite		15 to 20% weight gain	

from facility to

care)

community-based

(with acceptable<sup>a</sup> intake of RUTF)

a Child eats at least 75% of his/her calculated RUTF ration for the day

75 & F 100 are not available, What to do?

**Method** 

L formula plus mineral & vitamin supplementa

### **Dried skimmed milk:**

- Better to be L-F especially in kwashiorkor
- 110 Kcal/kg/day by N/G tube:
- Small frequent feeds increased gradually
- 11 ml /kg/dose 2 hourly for 2 days
- 16 ml/kg/dose 3 hourly for 2 days
- 22 ml/kg/dose 4 hourly for 2 days

### **+**Then add to each feed:

- 10 drops of olive oil
- 25 gram sugar
- 1 tea spoon cereals or rice

### **Minerals:**

- →Potassium:
- 4-8 mmol/kg/day PO according to the case Increased gradually
- ▶Magnesium:
- 0.2 ml/kg/dose 50%

Or

1 ml/kg/dose 10% IM single dose

- **▼**Zinc:
- 25 mg/day PO

### **Vitamins:**

Vitamin A:

0-6 months 50.000 IU

6-12 months 100.000 IU

>12 months 200.000 IU

PO if asymptomatic IM if symptomatic

In the  $1^{st}$ ,  $2^{nd}$ ,  $14^{th}$  day or In the  $1^{st}$ ,  $2^{nd}$ ,  $30^{th}$  day or In the  $1^{st}$ ,  $14^{th}$  day



### Vitamins:

- Folic acid tab orally mg in the 1st day then 1 mg daily for 1 month
- Soluble vitamins(without iron):
- 2.5ml 5 ml 2-3 TDS for 1 month

### **Antibiotics:**

### he 2nd week:

Take oral milk mixed with rice and/or cereals 4 hourly

At the end of the 2<sup>nd</sup> week:

mit one milk feeding& replace it by light family food

s: rice+ vegetables + olive oil

orridge + soap

Gradually replace distant 2 milk feeds with family food

Start:

ron orally 3- 5 mg/kg/day

Calcium+ Vit D orally

### **General Rules:**

→Encourage mother bounding.

→Emotional stimulation.

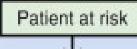
→Educate the mother.

◆Encourage child's feeding.









Check potassium, calcium, phosphate, magnesium

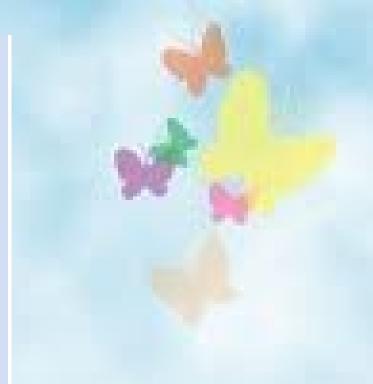
Before feeding starts, administer thiamine 200-300 mg daily orally, vitamin B high potency 1-2 tablets 3 times daily (or full dose intravenous vitamin B), and multivitamin or trace element supplement once daily

- Start feeding 0.0418 MJ/kg/day\*
- Slowly increase feeding over 4-7 days

Rehydrate carefully and supplement and/or correct levels of potassium (give 2-4 mmol/kg/day), phosphate (0.3-0.6 mmol/kg/day), calcium, and magnesium (0.2 mmol/kg/day intravenously or 0.4 mmol/kg/day orally)

Monitor potassium, phosphate, calcium, and magnesium for the first 2 weeks and amend treatment as appropriate

\*If patient is severely manourished (for example, body mass index (kg/m²) ≤14) or if intake is negligible for ≥2 weeks, start feeding at a maximum of 0.0209 MJ/kg/day





Ht



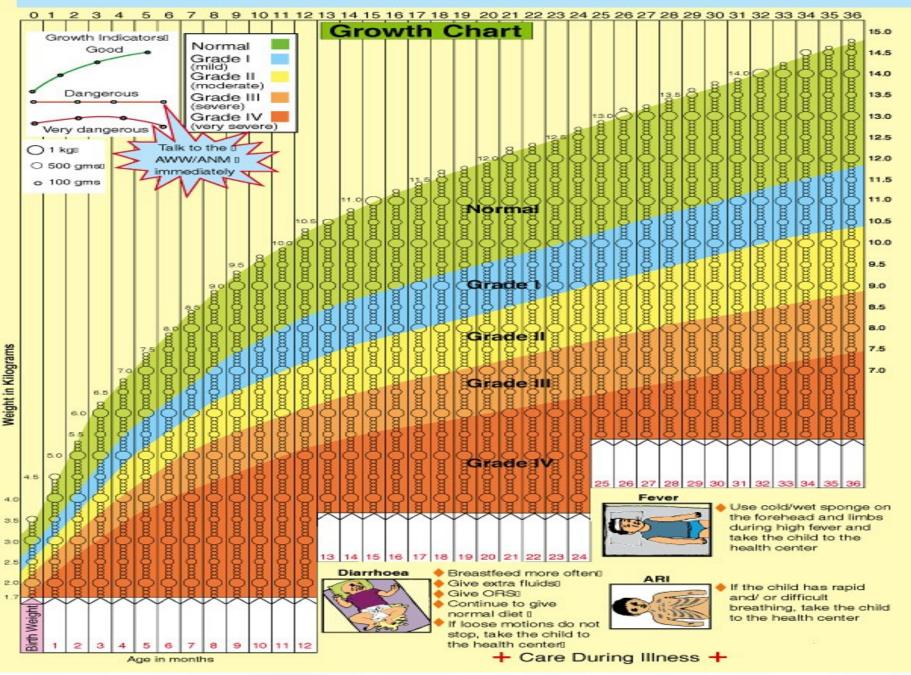


# Strict F/up:

- General condition
- •HR,RR, Temp
- Wt daily
- MUAC weekly
- Ht monthly



### Have your child weighed at the AW centre regularly



\* Follow up phase:

- \* Weekly as possible to discover any mistakes or deficiencies.
- Do intervention rapidly.





- @8 Milk feeds alone
- @6 Milk feeds + 2 meals/day
- @5 Milk feeds + 3 meals/day
- @4 Milk feeds + 4 meals/day

Weekly increment



- @5 Milk feeds alone
- @4 Milk feeds + 1 meals/day
- @3 Milk feeds + 2 meals/day
- @2 Milk feeds + 3 meals/day
- @2 Milk feeds + 5 meals/day









### Old food Chemicals Botulism toxins



















Birth to 3 months 4 to 6

6 to

8 to 12 months

12 to 24 months

Breast Milk or Fr

Cereals >

Fruits & Vegetables

Step 1 Foods | > Step 1 Nutrition

Fruits, Vegetable & Desserts

▶ Step 2 Foods | ▶ Step

trition

s, Vegetables sserts

3 Foods | > Step 3 Nutrition

Toddler Cuisine

Toddler Foods

► Toddier Nutrition



Meats / Dinners ▶

Juices >







