

Why consider breastfeeding
cessation at 6 months for
HIV+ mothers?

2/3rds of all breastfeeding-associated HIV transmission occurs after 6 months

Risk of death due to *not* breastfeeding declines substantially with infant age

For the 6-9 month baby

- Breast milk normally provides:
 - 60-80% energy and protein
 - 50-90% micronutrients
 - 60-100% fluid

NOT breastfeeding
6 to 9 month old babies in rural Africa
is *experimental.....*

there are few precedents

HIV-exposed, PCR-negative babies 24 hour dietary history

Mealie meal

Sugar

Oil, Peanut butter

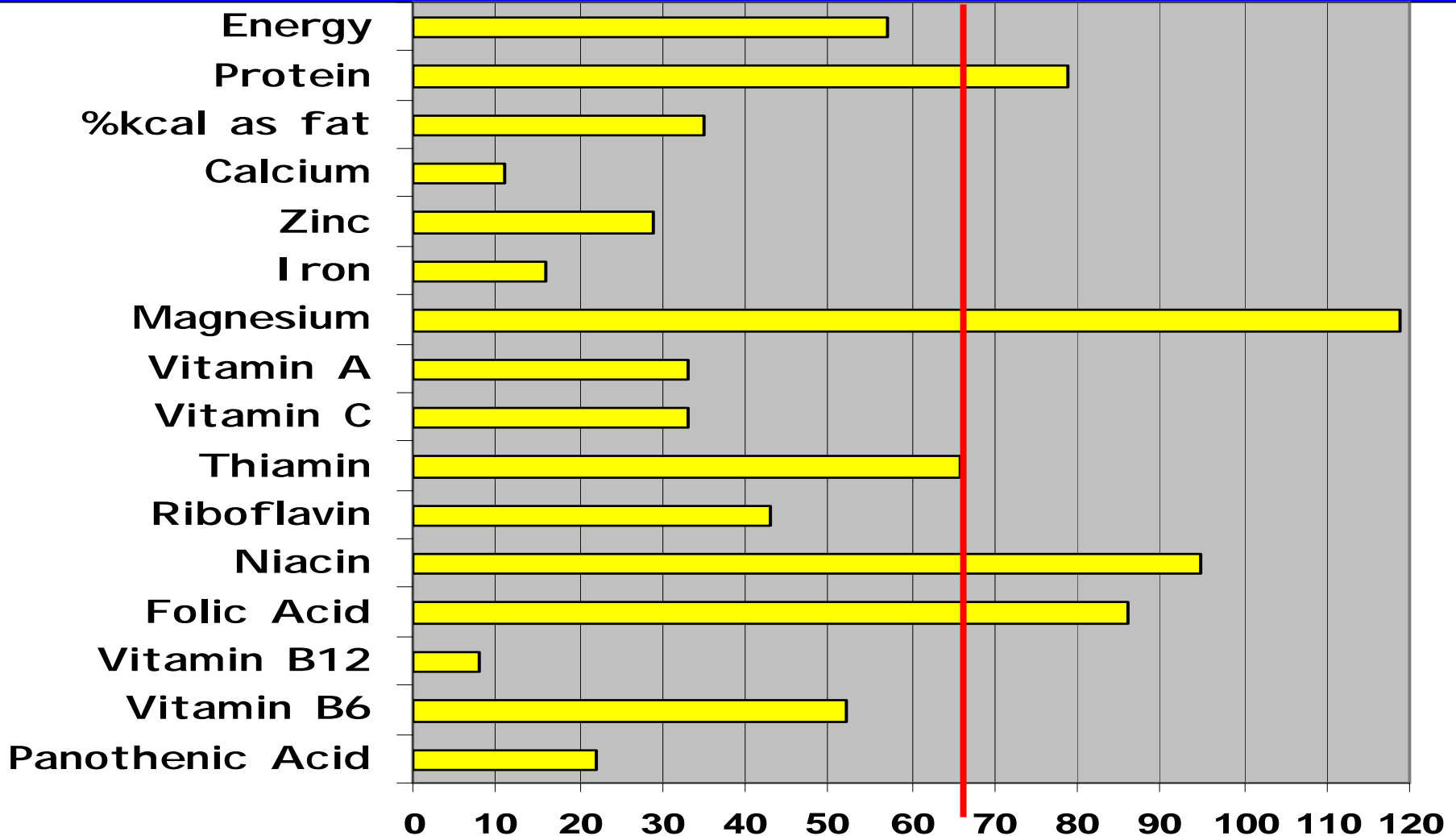
Tomato, Pumpkin, Pumpkin leaves

Meat, Fish

Cow milk, Infant formula

Banana, Cucumber, Maheu

Nutrient intakes (median % requirement)



9 T porridge, 1 t sugar, 1 t oil



4 T sadza
2 T fish and
tomato soup

13 T plain pumpkin

322 kcalories (38% needs); 24% kcal as fat, 8 g protein (52% needs);
Deficient in all micronutrients except Magnesium and Folic Acid

1T sadza, 1½T tomato,
1½t peanut butter

120 ml formula

120 ml formula

½ banana

½ banana

2T porridge, ½t oil

1T sadza

1½T tomato, 1T meat
1½t peanut butter

514 kcalories (58% needs); 42% kcal as fat, 13 g protein (79% needs);

Deficient in all micronutrients except Magnesium and Folic Acid

How could these diets be
made adequate?

*More milk and sugar

480 ml cow milk or formula



1 banana

1 cup porridge
4t oil
2T sugar

851 kcalories (101% needs); 38% kcal as fat; 20 g protein (128% needs);

Adequate in Ca, must supplement Fe/Zn and multivits.

Need 220-520 ml water

No milk: ↑ ↑ oil, sugar, peanut butter

1 banana



1 cup porridge
2t oil
2T & 1t (7 t) sugar
3½T (10 t) peanutbutter

845 kcalories (101% needs); 42% kcal as fat; 19 g protein (119% needs);

Must supplement calcium, Fe/Zn and multivits.

Need 700-1000 ml water


Adequate without supplements



853 kcalories (101% needs); 56% kcal as fat; 41 g protein (257% needs);

No supplement except Fe;

Need ~900-1200 ml water



1 banana

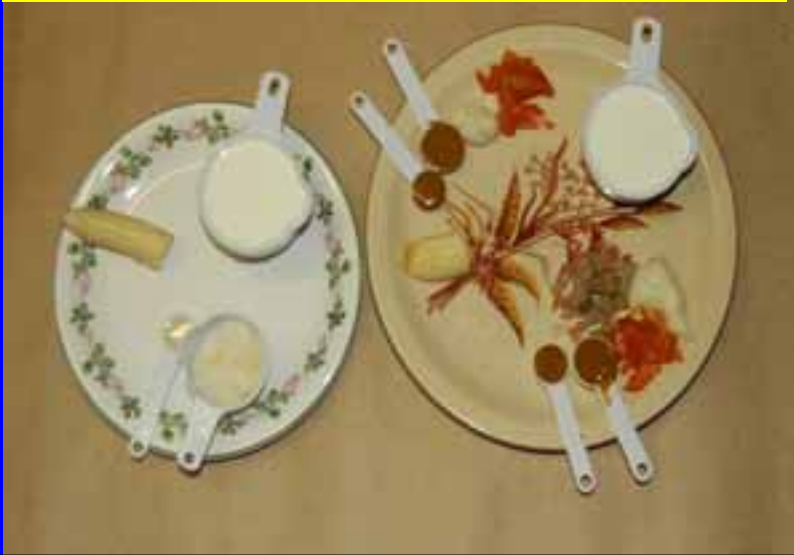
1 cup porridge,
100 gram Plumpy-nut

831 kcalories (99% needs); 41% kcal as fat; 19 g protein (119% needs);

NO supplements required

Need 700-1000 ml water

Inadequate
(514 kcal , 13 g pro)



Adequate
851 kcal , 20 g pro)



Milk	240 ml	480 ml
Mealie	24 g	50 g
Sugar	0	30 g
Fat	17 g	15 g
Banana	1	1
Meat	15 g	0
Tomato	40 g	0

Metabolic consequences of hypocaloric diet

- Caloric costs of synthesis:
 - 7.5 kcal/ 1 g lean body tissue
 - 11.6 kcal/ 1 g adipose tissue
- Caloric gains of catabolism:
 - 4 kcal/ 1 g lean body tissue
 - 9 kcal/1 g adipose tissue

Metabolic consequences of hypocaloric diet

Infants consuming low calorie diets are not only smaller, but also leaner.

Anorexic Illness :

“Fat” infant catabolizes adipose tissue

“Lean” infant catabolizes TWICE the amount of lean tissue which can precipitate a life threatening condition.

Observations reported at Durban PEPFAR meeting (June 2006)

- Mozambique –
Only 10% of HIV+ mothers feeding weaned 6 month infants reported inclusion of animal-sourced food
- Uganda :
High mortality among babies of women on HAART which was associated with shorter duration of BF. (“...revised infant feeding guidelines may be warranted.”)
- Botswana:
Flooding in January/February 2006 contributed to an infant diarrhea epidemic (35,000 cases, 532 deaths).
Not breastfeeding: 50-fold higher risk of diarrhea and 8-fold higher risk of dying from the diarrhea illness.

Five Suggested AFASS Criteria ⁻¹

1. Baby is HIV-uninfected
 - PCR
 - IMCI algorithm
 - Parallel rapid tests
2. Baby is growing and well
3. Mother has disclosed her status to a key support person in her household

Five Suggested AFASS Criteria -2

4. Specific feeding plan in place

- Carefully measured and fed
- Nearly impossible without milk source or "special food"

5. Specific follow-up plan in place:

- the non-BF baby will get sick more often
- the non-BF baby is more likely to progress from mild to severe illness

