

# Nutrition in emergency (current view)

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# Emergency situation

- Natural:

- droughts, rains, floodings, earthquakes, volcanos, insect outbreak, plant diseases

- Manmade :

- wars (civil or between countries), unrests, robberies, destruction of food production

- Other causes:

- Population growth exceeding production, overall poverty, malfunction of food transport, inequalities in resource allocation

# Food market - Angola



# Water supply - Kenya



# Land mines - Afghanistan



# IDP'camp, Chechnya



# Starvation

State, which due to prolonged lack of food  
creates adaptation problems to  
malnutrition

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Heathy man, weighing 70 kg, has approx.  
15 kg body fat ~ 135.000 kcal,  
1350 kcal/days for 100 days.

# Clinical signs of starvation

- Thinness
- Dry skin
- Muscle loss
- Shineless hair
- Slow heart rate
- Low blood pressure
- Amenorrhoea, impotence
- Spontaneous abortion
- Oedemas
- Anemics
- Diarrhoea
- Psychic and mental disorders



# Famine

- Critical lack of food in certain area, which causes starvation and death of majority of population.
- In many cases affected only selected population groups.

# Consequences of famine

- Starvation
- Population migration
- Epidemics (typhoid, plague, chickenpox, cholera, dysentery)
- Increased number of death due to infectious diseases (measles, tuberculosis)

# History of famines (I.)

- 1769/70, India. 10 million died (1/3 population)
- 1840, Ireland. Restricted potatoe production. 1,6 million emigrated to U.S.A., the same number died.
- 1941-44, Europe (Holland, Leningrad).
- 1943, Benghal. 1 million died, 60 million hardly affected.

# History of famines (II.)

- 1958 – 61, China. 15-30 million died (droughts + floods deteriorated by economic and political chaos)
- 1968 – 73, Africa, famine in Sahel (climate)
- 1977, Africa, Ethiopia (climate)
- 1990s: Bosna, Somalia, Angola, Liberia, Mozambique, south Sudan, Rwanda, Zaire

# Basic criteria for food aid

- Foods known and consumed in determined area
- Distribution point should be as closed as possible
- People to be informed of progress of famine, ways of food preparation etc.
- Primary health care incl. BF support
- Monitoring of the data on availability of food, distribution, mortality rate and nutritional status

# Typical demographic distribution

Age (yrs)	<5	5 - 14	Women 15 - 44	Men 15 - 44	> 44
Distribution (%)	20	35	20 (out of this, 40% P+ L)	10	15

# Orphans earning money by gathering the wood in land mines fields - Angola



# Daily food supply

- 2100 kcal / day (not distinguished according age and gender)
- Approx. 500 kcal people are usually able to raise
- 10-12% total energy from protein
- 10 – 17 % total energy from fat
- Adequate micronutrient intake from fresh or fortified food



# Food aid

- Access to variety of foods (cereals, pulses or animal sources, fat)
- Access to vitamin A, C and iron
- Iodized salt available for >90% population
- Additional sources of niacin, if staple food is corn or sorghum
- Additional sources of thiamin, if staple food is the rice
- Additional sources of riboflavin, if the total intake is very restricted

# Recommendation for food aid (I.)

- Make sure that there is available energy source for cooking and dishes
- Food distribute weekly, maximum once a fourteen days
- Breast milk substitutes are strictly forbidden!
- Milk powder should be mixed in other food in advance
- Add vitamin A and C, if there is no F + V
- Increase the palatability of the meals (sugar, salt)

# Recommendation for food aid (II.)

- Sometimes 300-500 kcal daily helps in prevention of severe starvation
- Try to meet the highest standards of hygiene
- Organize mobile kitchens or canteens
- Food prices controlled by the government
- System of weekly news on the situation (sanitary level, potable water, personal hygiene, safe eating/catering)

# Food-for-work

- If famine not present, food only for work (direction of WFP)
- Advantages: prevention of creation of mentality of dependent people
- Disadvantages: hard work increases energy requirement. Several people disqualified, eg. children, elderly, sick, pregnant...

# Specific emergency

Leprosy in Africa

Man affected by wet  
form of leprosy



# Risk groups

- Children <5 yrs
- Pregnant and lactating women
- Elderly
- Sick, weak, invalid, handicapped
- Additional risk sub-groups: HIV positive, mountain population etc.

# Waiting food supply...

The source of  
meat  
Gorno  
Badachstan



# Conclusion I.

## Famine prevention

- Diversified economy
- Developed agriculture and food sector
- Effective intervention (control of crops diseases)
- Functional management (government, infrastructure, health)



# Welfare...

Apartment  
building  
in Kuito

5 yrs after  
28 yrs  
lasting  
civil war



# Conclusion II.

## Famine prevention

- NGO participation
- Transport, roads...
- Safe food supply
- Suitable range of acceptable food

# Conclusion III.

## Famine prevention

Education for all!

# Classroom ...

