





DISEASE-RELATED MALNUTRITION







Nutrition – sustaining the body by eating







Nutrition – how much to eat?















Nutrition – how much to eat when you're ill?

Energy: 25 – 35 kcal/kg/day

Protein: 1 – 1.5 g/kg/day

 Requirements are altered by the clinical situation, treatment, phase of process.





Malnutrition – when eating is not enough







Even healthy-looking people can be malnourished

Disproportion among essential nutrients (imbalance)

• Relative or absolute lack of certain nutrients (specific

deficiency)







Disease-related malnutrition – what is it?

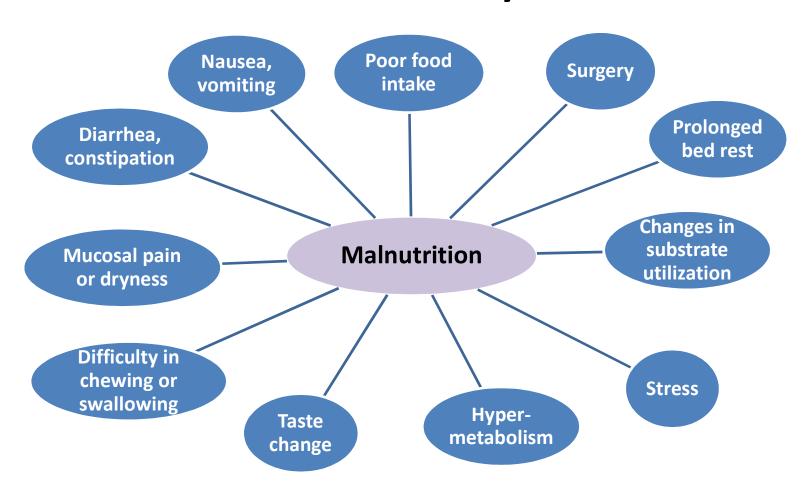
- Disease-related malnutrition is malnutrition triggered by illness or disease
- Certain treatments can also have a negative effect on nutrition (e.g. chemotherapy, radiotherapy, certain drugs)







Disease can lead to malnutrition in several different ways

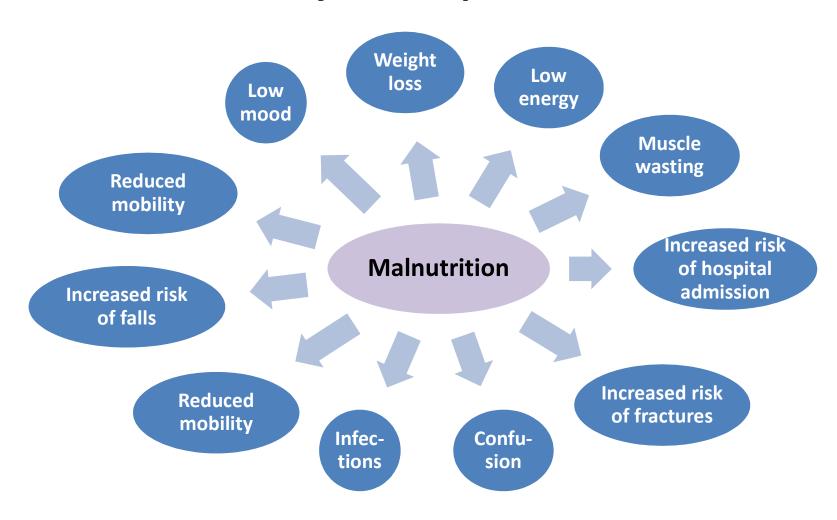








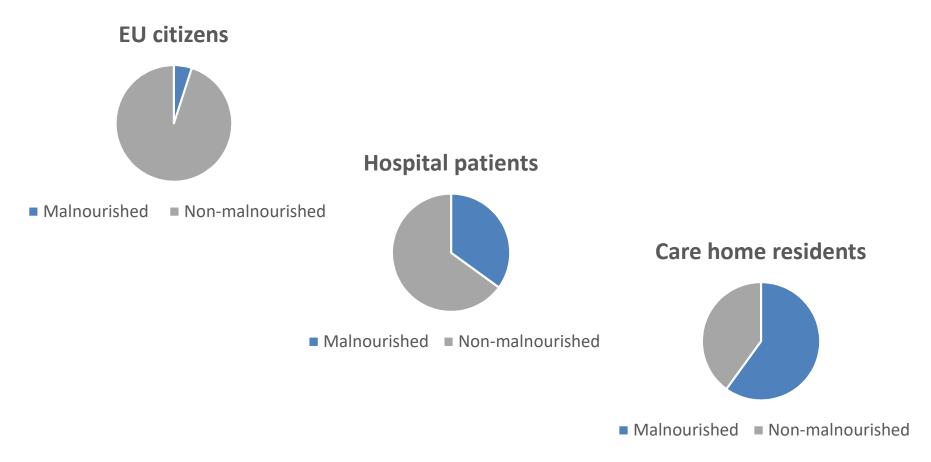
Disease-related malnutrition – why is it important?







Disease-related malnutrition – how frequent is it?

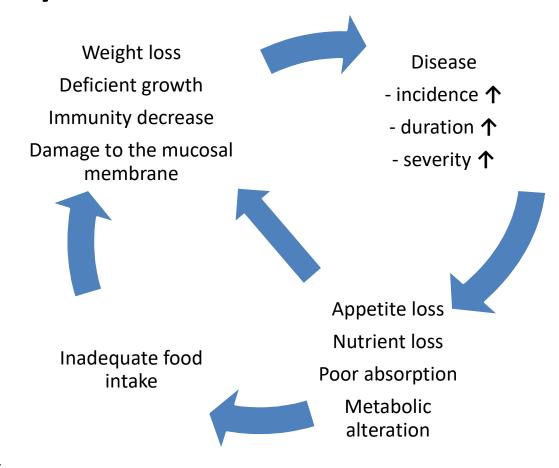








Inadequate food intake and diseases increase vicious cycle of disease-related malnutrition







Disease-related malnutrition – its detrimental effects

Physical	
Impaired growth & development	
Reduced fat & lean body mass	↑ pressure sore risk
Reduced strength & lethargy	↓ mobility & ↑ falls
Reduced ability to cough	↑ risk of respiratory infections
Physiological	
Impaired immune function	↑ risk of infection/complications
Impaired organ function	
Impaired wound healing	个 convalescence
Altered drug metabolism	↑ side effects
Reduced gastro-intestinal secretions	↑ malabsorption
Psychological	
Apathy & depression	↓ quality of life





Disease-related malnutrition – in which diseases?

Diseases frequently associated with disease-related malnutrition are

- chronic kidney failure 30-60%
- chronic heart failure 7%
- cancer 30-50%
- inflammatory bowel disease 25-80%
- cystic fibrosis 22%
- chronic obstructive pulmonary disease 24-36%





Disease-related malnutrition – signs and symptoms

- unintentional weight loss
- muscle wasting
- prolonged wound healing
- frequent illnesses
- longer recovery period
- tiredness
- breathing difficulties
- inability to keep warm



Disease-related malnutrition – which are the risk factors?

- BMI < 18.5 kg/m^2
- Unintentional weight loss of >10% in the past 3-6 months
- Being acutely ill and unable to eat for more than five days





Disease-related malnutrition – how is it treated?





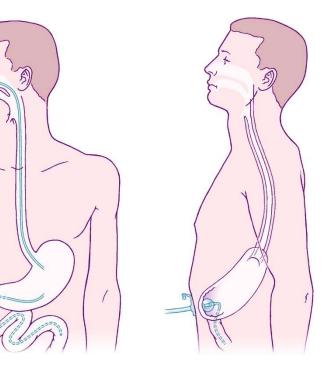
Enteral nutrition – oral nutritional support

- specifically formulated nutritional products
- in liquid or powder form
- reliable and quntifiable method of supplementation
- usually energy- and protein-rich
- nutritionally incomplete or complete
- to be consumed by itself or to be added to meals
- usually available in various flavours



Enteral nutrition – enteral tube feeding

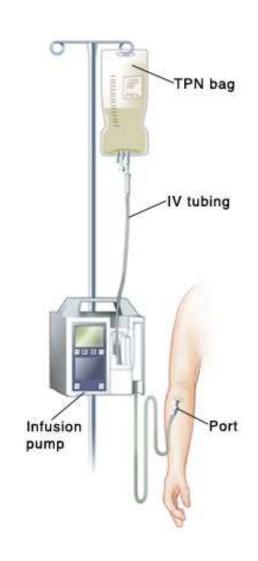
- when oral intake is inadequate, impossible or unsafe
- via nasogastric tube, PEG (percutanoeus endoscopic gastrostomy), PEJ (percutanoeus endoscopic jejunostomy)
- specially formulated nutritional products
- in liquid form
- with limited residue
- usually initiated in hospitals, but managable also at home





Parenteral nutrition

- if digestive problems rule out enteral feeding
- via a tube fitted in a large vein
- specially formulated nutritional products
- in liquid form
- with limited residue
- in "elemental" form (requires little or no digestion)





SWITZERLAND

Eating while being ill – what to do?

- Do not keep a diet or start fasting if not recommended by your doctor
- Eat even if you don't feel like
- Eat less but more frequently
- Eat slowly, chewing all food adequately
- Eat food at room temperature or cold
- If solid food can't be eaten, make sure the liquified food is rich in energy and nutrients





Eating while being ill – when oral nutritional supplement is prescribed

- Consume the liquid sip feed according to your doctor's orders
- Consume the liquid sip feed slowly, by gulps
- Consume the liquid sip feed chilled
- When precribed as a supplemental therapy, consume the liquid sip feed between meals, instead of snacks
- When precribed as a supplemental therapy, consume meals fortified with the liquid sip feed (soups, second courses, desserts)





Eating while being ill – try to enjoy it!









BACK-UPS







Decline in nutritional status caused by the disease leads to unfavorable clinical outcomes and reduced quality of life

