



# سوء تغذيه

## موضوعات مورد بحث

- *Definitions*
- Types
- Malnourished people/Intervention
- Mechanism
- Hospital Malnutrition
- Situation In Iran
- Situation in Mashhad
- Future research

# سوء تغذيه

- People who consume less energy than they expend lose body weight.
- The deficit of energy in the diet is made up by releasing energy reserves first from fat, then muscle
- (Man & Truswell 2002).

## تعريف سوء تغذية

Surprisingly, there is no universally accepted definition of malnutrition.

Professor Elia (Elia 2000)

- “Malnutrition is a state of nutrition in which a deficiency, excess, or imbalance of energy, protein, and other nutrients cause measurable adverse effects on tissue / body form (body shape, size, and composition) function, and clinical outcome.”

# تعريف سوء تغذية

The National Institute of Clinical Excellence (NICE) guideline (2006)

- malnutrition as: “a state in which *a deficiency* of nutrients such as energy, protein, vitamins and minerals causes measurable adverse effects on body composition, function or clinical outcome.”

# تعريف سوء تغذيه

Malnutrition: a serious depletion of any of the essential nutrients but not necessarily energy

- (Man & Truswell 2002).

# Undernutrition & Malnutrition

## **Undernutrition:**

- results simply from an inadequate intake of energy.
- **The American Society for Parenteral and Enteral Nutrition** (1995) has defined undernutrition as a disorder of nutritional status resulting from reduced nutrient intake or impaired metabolism.

# شیوع بطور کلی

About a quarter of the world's children are underweight and almost a third have stunted growth (UNICEF 2007).



# شیوع

- در آمریکا 11 درصد (12.6 میلیون) - عدم تامین غذا
- در آمریکا 12 درصد (37 میلیون) زیر خط فقر

# شیوع در کشورهای در حال توسعه

- شایعترین فرم کمبود درشت مغذی هاست.
- شایعترین کمبود ریز مغزی ها مربوط به فقر آهن، ویتامین A و ید می باشد.

• **Undernutrition affects young children and women.**

• Every year more than 5.5 million preschool children (or about 12 children every minute) in the developing world die of causes related to undernutrition (Caulfield LE, et al AJCN 2004).

# روش ارزیابی سوء تغذیه

- Nutritional assessment
- Methods

MNA

MNT

Must

NRS-2000

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**TABLE 17-5**   **Classification of Protein-Energy Malnutrition**

ICD-9-CM*	DIAGNOSIS AND DESCRIPTION	CRITERIA AND CHARACTERISTICS
260.0	Kwashiorkor: nutritional edema with dyspigmentation of skin and hair	<ol style="list-style-type: none"><li>1. Normal anthropometrics: weight &gt;90% of standard weight for height</li><li>2. Depressed visceral protein concentrations: serum albumin &lt;3 g/dl, transferrin &lt;180 mg/dl</li><li>3. Caused by acute energy and protein deficiency or a metabolic response to injury</li><li>4. Characterized by edema, catabolism of muscle tissue, weakness, neurologic changes, loss of vigor, secondary infections, stunted growth in children, and changes in hair</li></ol>
261.0	Marasmus: nutritional atrophy; severe, chronic calorie deficiency; severe malnutrition	<ol style="list-style-type: none"><li>1. Depressed anthropometrics: weight &lt;80% of standard weight for height, weight loss &gt;10% of usual weight in last 6 months with muscle wasting, or both</li><li>2. Relative preservation of visceral proteins: serum albumin &gt;3 g/dl</li><li>3. Caused by chronically deficient energy intake</li><li>4. Characterized by catabolism of fat and muscle tissue, lethargy, generalized weakness, and weight loss</li></ol>
262.0	Other severe PEM: nutritional edema without dyspigmentation of skin and hair	<ol style="list-style-type: none"><li>1. Depressed anthropometrics: weight &lt;60% of standard weight for height</li><li>2. Depressed visceral protein concentration: serum albumin &lt;3 g/dl</li><li>3. Occurs when a patient with marasmus is exposed to stress (e.g., trauma, surgery, acute illness)</li><li>4. Characterized by combined symptoms of marasmus and kwashiorkor, a high risk of infection, and poor wound healing</li></ol>
263.0	Malnutrition of moderate degree	<ol style="list-style-type: none"><li>1. Depressed anthropometrics: weight 60% to 75% of standard weight for height</li><li>2. Relative preservation of visceral proteins: serum albumin 3 to 3.5 g/dl</li></ol>
263.1	Malnutrition of mild degree	<ol style="list-style-type: none"><li>1. Depressed anthropometrics: weight 75% to 90% of standard weight for height</li><li>2. Preservation of visceral proteins: serum albumin 3.5 to 5 g/dl</li></ol>

From *Manual of clinical dietetics*, ed 5, Chicago, 1996, The American Dietetic Association.

\**International classification of diseases*, ed 9, Clinical Modification.



# Primary and secondary malnutrition

- Primary malnutrition may happen in the vulnerable dependent, who rely on others for nourishment, e.g. infants and the elderly (Garrow et al. 2000).
- Secondary malnutrition accompanies any disease which affects appetite and / or utilization of nutrients.