

Attitude and practice regarding diagnosis and treatment of starvation, cachexia and sarcopenia

Roundtable ESDN Older Adult

- Elisabet Rothenberg Ass Prof, President of DRF, Sweden
- Lies ter Beek PhD Student, the Netherlands
- Harriët Jager-Wittenaar Prof, the Netherlands

Diagnosis and treatment of starvation, cachexia and sarcopenia

Concepts

Elisabet Rothenberg
Lead of ESDN older adults
President of the Swedish Association of Clinical
Dietitians
Associate professor

Aim of the session

- Present the ongoing ESPEN task of terminology
 - But also previous activities
- Discuss terms and concepts with you
 - Respons
 - Suggestions



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The nutrition care process

- Screening/risk evaluation
- Assessment
 - diagnosis
- Treatment
- Monitoring

A clear diagnostic procedure has been missing

Basic nutritional investigation

Defining malnutrition: Mission or mission impossible?

Judith M.M. Meijers, R.N., Ph.D.^{a,*}, Marian A.E. van Bokhorst-de van der Schueren, R.D., Ph.D.^b,
Jos M.G.A. Schols, M.D., Ph.D.^c, Peter B. Soeters, M.D., Ph.D.^d, and Ruud J.G. Halfens, Ph.D.^a

Conclusion: there is no full agreement among experts on the elements defining malnutrition.

The results may fuel the discussion, which will most ideally lead to an international consensus on a definition and operationalism of malnutrition.

Meijers JM, van Bokhorst-de van der Schueren MA, Schols JM, Soeters PB, Halfens RJ.
Defining malnutrition: mission or mission impossible?

Nutrition (Burbank, Los Angeles County, Calif). 2010;26(4):432-40. Epub 2009/12/04.



ESPEN Blue book definition of undernutrition

ESPEN proposes the following definition of undernutrition:

“A state resulting from lack of uptake or intake of nutrition leading to altered body composition (decreased fat free mass (FFM) and body cell mass (BCM)) leading to diminished physical and mental function and impaired clinical outcome from disease”. In potentially recoverable clinical conditions, such a definition is also helpful in determining the cases in which nutritional support is likely to make a difference.

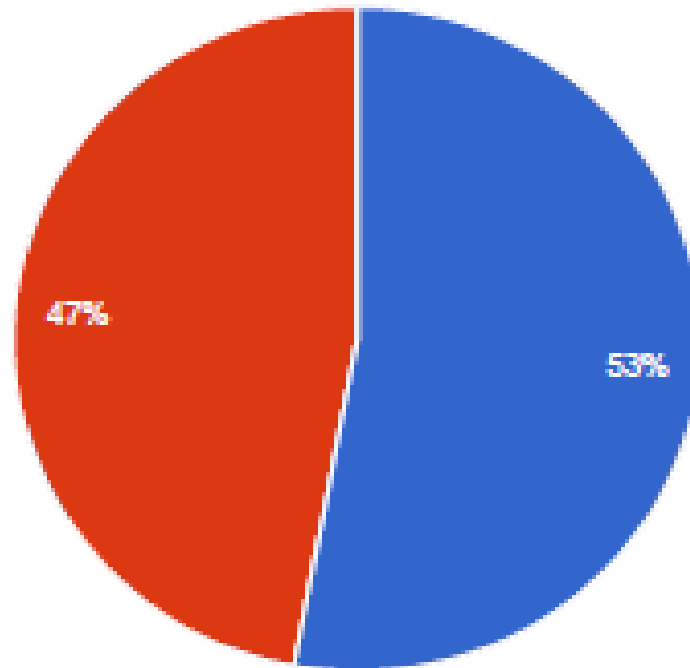
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Poll - 304 ESPEN votes

Terminology



53% - malnutrition
47% - undernutrition



Contents lists available at [ScienceDirect](#)

Clinical Nutrition

journal homepage: <http://www.elsevier.com/locate/clnu>



ESPEN endorsed recommendation

Diagnostic criteria for malnutrition – An ESPEN Consensus Statement



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M. Muscaritoli ^g, I. Nyulasi ^h, J. Ockenga ⁱ, S.M. Schneider ^j, M.A.E. de van der Schueren ^{k,l},
P. Singer ^m

Cederholm T, Bosaeus I, Barazzoni R, Bauer J, Van Gossum A, Klek S, et al.
Diagnostic criteria for malnutrition – An ESPEN Consensus Statement.
Clinical nutrition (Edinburgh, Scotland). 2015;34(3):335-40. Epub 2015/03/24.



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Objectives

- Define diagnostic criteria for malnutrition
 - *The science and practice of clinical nutrition suffers from the lack of a clear definition*
- Up-date of ICD-10

Working Group:

Tommy Cederholm, Ingvar Bosaeus, Pierre Singer, Rocco Barazzoni, Juergen Bauer, Andre Van Gossum, Marian de van der Schueren, Maurizio Muscaritoli, Ibolya Nyulasi, Johann Ochenga, Stanislaw Klek, Stephane Schneider



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Rationale

To

- achieve diagnostic criteria for the *general state of malnutrition* independent from etiology and clinical setting.
- unify the language
- enables comparisons between countries, clinical settings etc.
- these criteria do not replace etiology-based concepts or definitions



Diagnostic criteria for malnutrition

Step 1. Risk screening by a validated instrument , e.g. NRS-2002, MUST, MNA(-SF), SGA, SNAQ, ...

i.e. BMI, Weight loss, Reduced food intake, Disease severity

Step 2. Diagnosis

- **BMI <18.5 kg/m²**

Alternative diagnostic trajectory

- **Weight loss >10%** (indefinite time)/>5% last 3 mo combined with either

- **BMI <20** (if <70 years)/<22 (if >70 y)

or

- **FFMI <15 and 17 kg/m²** in women and men, respect.



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Rationale for criteria

- **Weight loss** gives the dynamic dimension and covers
 - Anorexia, teeth problems, dysphagia
 - Insufficient food intake
- **BMI** and/or **FFM** gives structural measures
- Functional and biochemical indicators are too unspecific (consensus after extensive discussions)
- **ESPEN Member's Poll** May 2014

Terminology of Clinical Nutrition – An ESPEN Consensus Guideline

Cederholm T,a, Austin P, Ballmer P, Barazzoni R,b, Biolo G,c, Bischoff S,b, Holst M, Muscaritoli M,c, Pirlich M, Rothenberg E,a, Schindler K, Schneider S,a, de van der Schueren M,a, Sieber C,a, Valentini L, Singer P

and endorsed by ESPEN Special Interest Groups of Nutrition in Geriatrics, Cachexia-Anorexia in Chronic Disease, and Nutrition in Obesity.

- *Background:* a lack of agreement on definitions and terminology on nutrition related concepts and procedures a limitation for development of nutritional practice and research.

Terminology of Clinical Nutrition – An ESPEN Consensus Guideline

- *Objective:* to consensually summarise evidence-based terminology for core nutritional concepts and procedures for use in clinical practice and research

Table 1. Taxonomy of nutrition terminology, i.e. the structure of nutritional nomenclature as presented in this consensus document

- Classification, definition and diagnostic criteria (when feasible) of core **nutritional concepts** and **nutrition-related disorders** (Table 2)
- List and descriptions of **nutritional procedures**, and explanations of how assessment, care, therapy, documentation and monitoring are performed (Table 3)
- **Organization** and forms of delivery of nutritional care (Table 4)
- **Forms of nutritional** support, i.e. types and routes of nutritional therapy (Table 5)
- **Nutritional products**; i.e. formulas and solutions (Table 6)

Table 2. Classification of nutritional concepts

- Human nutrition
 - Preventive nutrition
 - Population based (public health nutrition)
 - Individualized
 - Clinical nutrition

Table 2. Classification of nutritional concepts

- Clinical nutrition
 - Malnutrition; Synonym: Undernutrition
 - Disease-related malnutrition (DRM)
 - Inflammatory-induced DRM. Synonym: Cachexia
 - » Acute disease- or Injury-related malnutrition
 - » Chronic disease-related malnutrition
 - Cancer cachexia
 - DRM without inflammation. Synonym: Non-cachectic DRM
 - Starvation – food deprivation; e.g. famine, poverty
 - Sarcopenia
 - Frailty

Table 2. Classification of nutritional concepts

- Over-nutrition
 - Overweight
 - Obesity
 - Sarcopenic obesity
- Micronutrient abnormalities
 - Deficiency
 - Excess
- Refeeding syndrome

Table 3. The procedures of nutritional care, i.e. the nutritional care process.

- Malnutrition risk screening
- Nutritional assessment, incl. diagnosis
- Nutritional care plan
- Nutritional care **An action**
- Nutritional therapy **What is delivered**
- Monitoring the effects of nutritional care and therapy
- Documentation of all components of the nutritional care process

Table 4. Organizational forms of providing nutritional care and support

- Care catering/Hospital catering
- Nutrition Steering Committee
- Nutrition Support Team
- Disease-specific teams; eg. Obesity Team
- Clinical Nutrition Care Unit
- Meals-on-wheel

Table 5. Overview of forms for nutritional support

- Eating environment
 - Meal support
 - Eating support
- General diet
 - Dietary advice
- Therapeutic diet
 - Fortified food
 - Texture modified food
 - Do we need more ??
- Oral nutritional support
 - I guess we should provide the various ONS qualities
- Agree different countries have their on diets could conclude as special diets maybe with one example

Views on these terms?

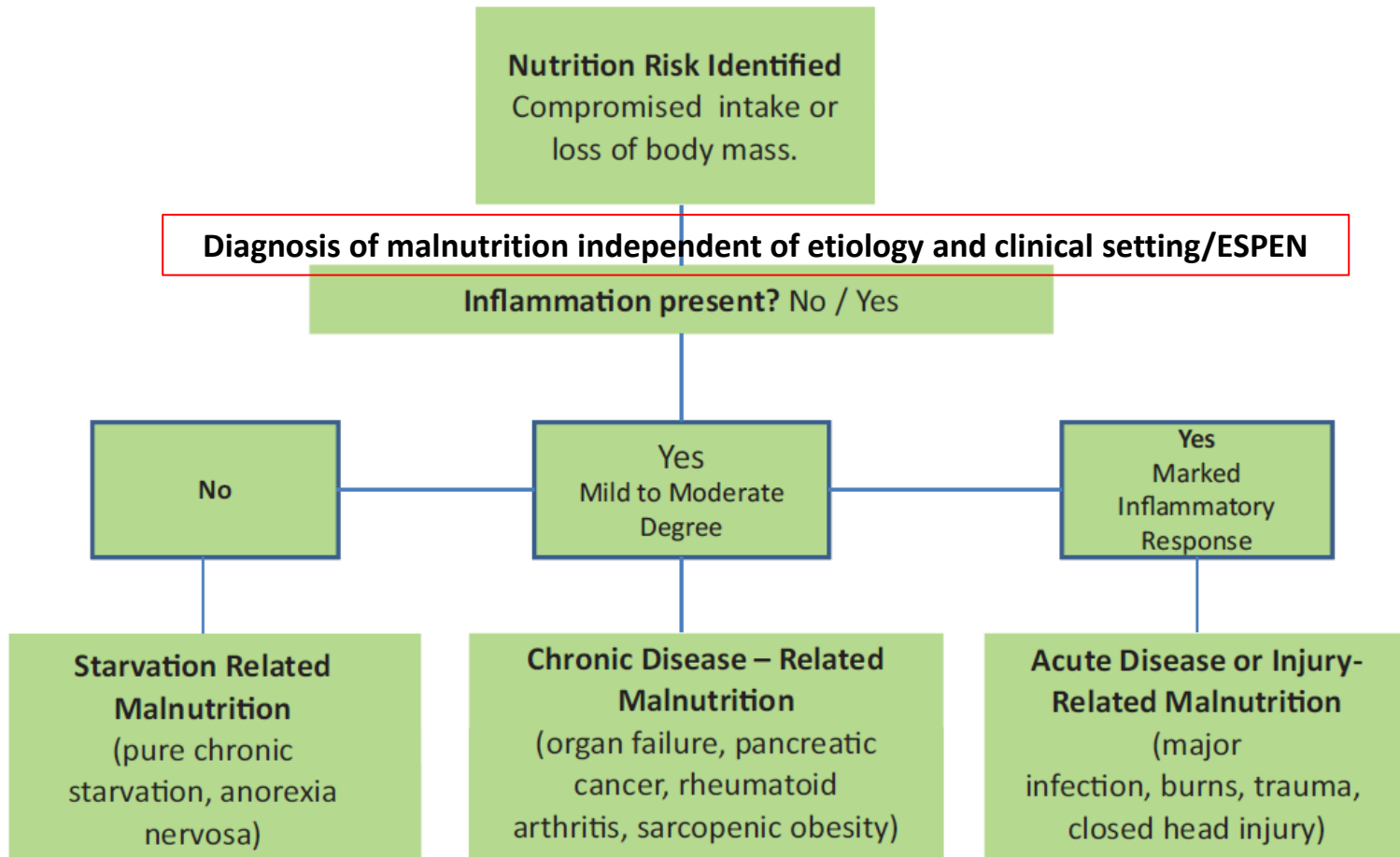
Table 5. Overview of forms for nutritional support

- Artificial nutritional support
 - Enteral nutrition
 - Total
 - Supplemental
 - Parenteral nutrition
 - Total
 - Supplemental
 - Subcutaneous

How to align with our American colleagues and friends?

ASPEN/AND consensus statement

Etiology-based definition



ASPEN/AND consensus statement

Because no single parameter is definitive for adult malnutrition, the identification of **2 or more of the following 6 characteristics** is recommended for diagnosis:

- **Insufficient energy intake**
- **Weight loss**
- **Loss of muscle mass**
- **Loss of subcutaneous fat**
- **Localized or generalized fluid accumulation** that may sometimes mask weight loss
- **Diminished functional status** as measured by handgrip strength



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