



FEBRUARY 2022 NUTRITION RESEARCH REVIEW

Key Approaches to Diagnosing Malnutrition in Adults

Publication: Nutrition in Clinical Practice
Publish Date: December 2021
Authors: Ainsley Malone, Kris M Mogensen

Nutrition assessment is used to describe nutrition status-related nutrition problems, including malnutrition, and their causes. Four malnutrition diagnostic tools are currently in use today in adults: Subjective Global Assessment, the Mini Nutritional Assessment, the Academy of Nutrition and Dietetics/American Society for Parenteral and Enteral Nutrition malnutrition consensus characteristics, and the Global Leadership Initiative on Malnutrition (GLIM) criteria. The aim of this article is to provide sufficient background of these methodologies to assist clinicians in choosing their approach in diagnosing malnutrition, while recognizing that there is substantial overlap between the criteria included in these malnutrition diagnostic approaches. A desired goal is to identify a core data set to evaluate malnutrition prevalence globally and to assess the impact of nutrition interventions on nutrition and clinical outcomes.

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Malnutrition in Relation to Muscle Mass, Muscle Quality, and Muscle Strength in Hospitalized Older Adults

Publication: Journal of the American Medical Directors Association
Publish Date: December 2021
Authors: Lingling Xie, Jiaojiao Jiang, Hongbo Fu, Wenyi Zhang, Ling Yang, Ming Yang

This cross-sectional study aimed to explore the associations of Global Leadership Initiative on Malnutrition (GLIM)-defined malnutrition with muscle mass, muscle quality, and muscle strength in 1,135 hospitalized older adults. Malnutrition was defined by the GLIM criteria after screening by the Mini Nutrition Assessment-Short Form (MNA-SF). Chest CT images were used to segment skeletal muscle area (SMA) and intermuscular adipose tissue (IMAT), and to measure skeletal muscle radiodensity (SMD). Skeletal muscle index (SMI) was calculated by SMA (cm²)/body height squared (m²). Handgrip strength (HGS) was measured using a digital dynamometer. The results showed that MNA-SF score is positively associated with SMI, SMD, and HGS, but negatively associated with IMAT. Compared to patients with normal nutrition, patients with malnutrition had significantly lower SMD and HGS in both men and women. Women with malnutrition had significantly higher IMAT than women with normal nutrition, whereas men with malnutrition had significantly lower SMI than men with normal nutrition. After adjustment for confounders, SMI (adjusted OR 0.95, 95% CI 0.93, 0.98), SMD (adjusted OR 0.94, 95% CI 0.93, 0.98), and HGS (adjusted OR 0.91, 95% CI 0.89, 0.94) were significantly and negatively associated with malnutrition. IMAT appeared to be positively associated with malnutrition, but the result was not statistically significant (adjusted OR 1.03, 95% CI 1.00, 1.07). This study provides new evidence regarding the association between handgrip strength and malnutrition in older inpatients, and a small association of chest CT—derived muscle quality and mass with malnutrition is identified.

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Identifying Knowledge and Practices Regarding Cancer Patient Malnutrition: A Survey Study Among Oncologists

Publication: Nutrition in Cancer
Publish Date: December 2021
Authors: Ozlem Sonmez, Evrim Tezcanli, Dilsat Bas, Hande Busra Kazanci, Ayse Altinok, Atakan Demir, Basak Oyan Uluc

This study aims to report the questionnaire-based evaluation of different views toward medical nutrition among medical and radiation oncologists with the purpose to underline the problems and requirements of cancer nutrition. The survey was answered by a total of 247 (34%) radiation and medical oncologists in Turkey, with the majority of the oncologists (77%) working at the University Hospitals and Education & Research Hospitals. Most of them were specialists with 5-10 years of experience. Nutritional status was routinely assessed in oncology units of 84% of (206) oncologists. However, only 50% reported nutritional evaluation follow-ups without waiting for a patient's declaration and 5 (2%) oncologists reported the absence of nutritional evaluation in their unit. Additionally, more than 79% of participants reported that their knowledge was not enough about enteral and parenteral nutrition while 8% were skeptical about the benefits of medical nutrition.

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Pre-operative Fasting in Children: A Guideline from the European Society of Anesthesiology and Intensive Care

Publication: Eur J Anaesthesiol
Publish Date: January 2022
Authors: Peter Frykholm, Nicola Disma, Hanna Andersson, Christiane Beck, Lionel Bouvet, Eloise Cercueil, Elizabeth Elliott, Jan Hofmann, Rebecca Isserman, Anna Klaukane, Fabian Kuhn, Mathilde de Queiroz Siqueira, David Rosen, Diana Rudolph, Alexander R Schmidt, Achim Schmitz, Daniel Stocki, Robert Sümpelmann, Paul A Stricker, Mark Thomas, Francis Veyckemans, Arash Afshari

Current pediatric anesthetic fasting guidelines have recommended conservative fasting regimens for many years and have not altered much in the last decades. Recent publications have employed more liberal fasting regimens with no evidence of increased aspiration or regurgitation rates. In this first solely pediatric European Society of Anesthesiology and Intensive Care (ESAIC) pre-operative fasting guideline, we aim to present aggregated and evidence-based summary recommendations to assist clinicians, healthcare providers, patients and parents. Recommendations for reducing clear fluid fasting to 1 h, reducing breast milk fasting to 3 h, and allowing early postoperative feeding were the main results, with GRADE 1C or 1B evidence. The available evidence suggests that gastric ultrasound may be useful for clinical decision-making, and that allowing a “light breakfast” may be well tolerated if the intake is well controlled. More research is needed in these areas as well as evaluation of how specific patient or treatment-related factors influence gastric emptying.

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Nutrition in Adolescent Growth and Development

Publication: The Lancet
Publish Date: November 2021
Authors: Shane A Norris, Edward A Frongillo, Maureen M Black, Yanhui Dong, Caroline Fall, Michelle Lampl, Angela D Liese, Mariam Naguib, Ann Prentice, Tamsen Rochat, Charles B Stephensen, Chiwoneso B Tinago, Kate A Ward, Stephanie V Wrottesley, George C Patton

During adolescence, growth and development are transformative and have profound consequences on an individual's health in later life, as well as the health of any potential children. The current generation of adolescents is growing up at a time of unprecedented change in food environments, whereby nutritional problems of micronutrient deficiency and food insecurity persist, and overweight and obesity are burgeoning. In a context of pervasive policy neglect, research on nutrition during adolescence specifically has been underinvested, compared with such research in other age groups, which has inhibited the development of adolescent-responsive nutritional policies. One consequence has been the absence of an integrated perspective on adolescent growth and development, and the role that nutrition plays. Through late childhood and early adolescence, nutrition has a formative role in the timing and pattern of puberty, with consequences for adult height, muscle, and fat mass accrual, as well as risk of non-communicable diseases in later life. Nutritional effects in adolescent development extend beyond musculoskeletal growth, to cardiorespiratory fitness, neurodevelopment, and immunity. High rates of early adolescent pregnancy in many countries continue to jeopardize the growth and nutrition of female adolescents, with consequences that extend to the next generation. Adolescence is a nutrition-sensitive phase for growth, in which the benefits of good nutrition extend to many other physiological systems.

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