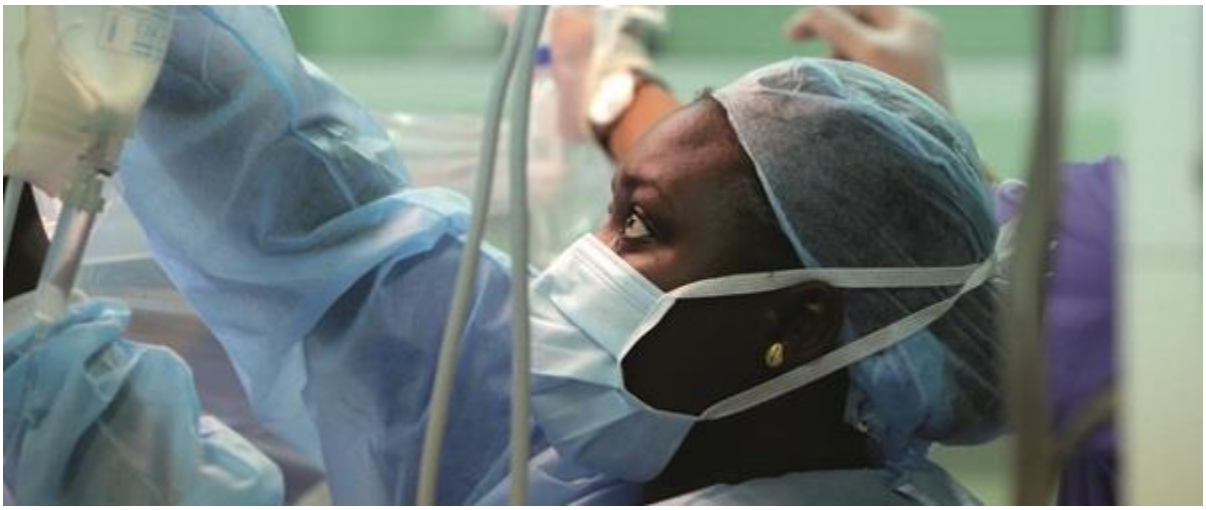

ANHI September 2025 Nutrition Research Review

Consequences of weight cycling in patients with obesity and the potential impact of high protein diet: A health economic assessment from a US societal perspective

Publication: BMJ Open
Publish Date: August 2025
Authors: Schwander B, Kerr KW, Williams D, Sulo S, Butsch WS

SUMMARY

Using a health economic model simulating patient outcomes over a lifetime, this study assessed the health and economic burden of weight cycling in adults with obesity (BMI ≥30 kg/m²) from a US societal perspective. Weight cyclers had more obesity-related events, shorter life expectancy, and lower quality-adjusted life years (QALYs), resulting in an additional cost of $4,592 per patient compared to non-cyclers. Introducing a high-protein oral nutritional supplement (HP-ONS) for weight maintenance after GLP-1RA-induced weight loss improved outcomes and was cost-effective at $24,276 per QALY

gained. The findings support the use of HP-ONS as a strategy to mitigate the adverse effects and costs associated with weight cycling.

READ ARTICLE

Multi-faceted nutritional interventions are imperative to reduction of stunting among children in low- and middle-income countries

Publication: Frontiers in Nutrition
Publish Date: August 2025
Authors: Sharn AR, Oliveros E, Lai S, Sanchez CP, Villa-Real Guno MJ, Rojas Montenegro C

SUMMARY

This review explores the effectiveness of multi-faceted nutritional interventions in reducing stunting among children in low- and middle-income countries (LMICs). Analyzing nine studies, the authors identify key strategies including routine nutritional screening, caregiver education, targeted supplementation, and consistent follow-up. These interventions, when implemented together, showed promising results in improving growth outcomes and reducing stunting prevalence. The review emphasizes that single interventions are often insufficient and that comprehensive, community-based approaches are necessary. Despite limited high-quality evidence, the findings support the integration of nutrition programs into broader public health initiatives. The authors call for more implementation research to refine strategies and assess long-term impact. They also stress the importance of culturally appropriate interventions and collaboration with local stakeholders to ensure sustainability and effectiveness.

READ ARTICLE

Methodological standards for body composition—an expert-endorsed guide for research and clinical applications: levels, models, and terminology

Publication: The American Journal of Clinical Nutrition
Publish Date: August 2025
Authors: Heymsfield SB, Prado CM, Müller MJ, Bosy-Westphal A, Smith-Ryan AE, Thomas DM, Hu HH, Shen W, Gallagher D, Going SB, Earthman CP, Kyle UG, Wang Z, Fields DA, Guglielmi G, Silva AM, Fuller NJ, Wells JCK

SUMMARY

A multidisciplinary panel of experts presents a comprehensive guide to standardize body composition methodology for research and clinical practice. The article outlines a hierarchical framework of five levels of body composition analysis, ranging from atomic to whole-body levels, and describes corresponding models and measurement techniques. It emphasizes the importance of consistent terminology and model selection to improve data comparability and interpretation. The guide also addresses the limitations and appropriate applications of various methods, including DXA, MRI, and bioimpedance. By establishing methodological clarity, the authors aim to enhance the accuracy, reproducibility, and clinical relevance of body composition assessments across diverse populations and settings.

READ ARTICLE

Advances in artificial intelligence and precision nutrition approaches to improve maternal and child health in low-resource settings

Publication: Nature Communications
Publish Date: August 2025
Authors: Mehta S, Huey SL, Fahim SM, Sinha S, Rajagopalan K, Ahmed T, Knight R, Finkelstein JL

SUMMARY

Artificial intelligence (AI) and precision nutrition are emerging as transformative tools to combat maternal and child malnutrition in low-resource settings. This article explores how AI can integrate diverse data sources—clinical, biochemical, microbiome, and environmental—to improve nutritional assessments and interventions. Precision nutrition, which tailors dietary strategies to individual needs, is especially critical during the first 1,000 days of life. The authors highlight the potential of AI to enhance early detection of nutritional deficiencies and optimize intervention timing. However, they caution that challenges such as data quality, infrastructure limitations, and ethical concerns must be addressed for successful implementation. The article advocates for hybrid approaches that combine conventional public health strategies with AI-driven insights to improve outcomes. It also emphasizes the need for equitable access to these technologies and culturally sensitive applications.

READ ARTICLE

Nourish the mind: the need for nutrition-focused education in nursing to improve health outcomes

Publication: Journal of Professional Nursing
Publish Date: August 2025
Authors: DuBois S, Spencer A, Nava A, Kaminski M, Gonzalez AL, Arensberg MB

SUMMARY

Recognizing nutrition as a vital component of nursing education, this policy paper outlines strategies to strengthen nutrition-focused content across nursing curricula. The authors emphasize the importance of integrating nutrition into both undergraduate and graduate programs, differentiating between standalone and embedded approaches. Active, interdisciplinary teaching methods are recommended to enhance learning outcomes. The paper also highlights policy developments, such as state-level mandates and national initiatives, that support expanded nutrition education. Continuing education and specialized certifications are presented as avenues to reinforce nutrition competencies throughout nursing careers. These recommendations aim to equip nurses

with the knowledge needed to improve patient care and address nutrition-related health disparities.

READ ARTICLE

Ameliorating gastrointestinal symptoms in children with autism spectrum disorder by modulating the gut microbiota: A systematic review and meta-analysis

Publication: Autism Research
Publish Date: July 2025
Authors: Lu HH, Nguyen NTK, Panwar R, Lin CI, Cross TWL, Lin SH

SUMMARY

This systematic review and meta-analysis evaluated the effectiveness of gut microbiota–modulating interventions (GMMIs) in alleviating gastrointestinal symptoms (GISs) in children with autism spectrum disorder (ASD). Analyzing 19 studies involving 1,154 participants, the authors found that GMMIs—such as probiotics, prebiotics, and synbiotics—significantly improved symptoms like constipation, diarrhea, and abdominal pain. The interventions also increased the abundance of beneficial bacteria, particularly Bifidobacterium spp. Longer treatment durations (≥8 weeks) were associated with better outcomes. Despite promising results, the review notes limitations including small sample sizes, lack of dietary control, and variability in intervention protocols. The findings suggest that GMMIs may be a viable adjunct therapy for managing GISs in children with ASD, though further research is needed to establish standardized guidelines. The authors recommend integrating microbiota-focused strategies into broader ASD care plans, with attention to individual variability and long-term effects.

READ ARTICLE

Large language models in clinical nutrition: an overview of its applications, capabilities, limitations, and potential future prospects

Publication: Frontiers in Nutrition
Publish Date: August 2025
Authors: Belkhouribchia J, Pen JJ

SUMMARY

Exploring the integration of large language models (LLMs) into clinical nutrition, this review outlines their potential to enhance patient care, personalize dietary guidance, and support clinical decision-making. Applications include dietary planning, malnutrition risk assessment, and nutritional education. Key technologies such as prompt engineering, fine-tuning, and retrieval-augmented generation improve domain relevance and accuracy. Despite their promise, LLMs face challenges including limited reasoning, factual inaccuracies, and ethical concerns. The authors emphasize the need for clinician training, validation, and responsible deployment. LLMs are positioned as valuable tools to augment, not replace, healthcare professionals in delivering scalable, data-driven nutritional care.

READ ARTICLE

Dietary recommendations for pediatric and adolescent patients utilizing GLP-1 receptor agonists for weight management: A narrative review of current literature

Publication: Pediatrics
Publish Date: July 2025
Authors: Stefater-Richards MA, Jhe G, Zhang YJ

SUMMARY

GLP-1 receptor agonists (GLP-1RAs) are increasingly prescribed to adolescents for obesity management, offering significant benefits in weight reduction and improvement of obesity-related conditions. This narrative review synthesizes current literature on

dietary considerations for pediatric patients using GLP-1RAs. Key recommendations include managing gastrointestinal side effects such as nausea and constipation through gradual dietary adjustments and ensuring adequate intake of essential nutrients. The authors emphasize the importance of individualized nutrition plans that support sustainable weight loss and metabolic health. Mental health support and equitable access to treatment are also highlighted as critical components of care. The review calls for multidisciplinary approaches that combine pharmacologic therapy with behavioral and nutritional interventions. While GLP-1RAs show promise, long-term safety and efficacy data in youth remain limited, underscoring the need for ongoing research and clinical monitoring.

READ ARTICLE

Impact of early enteral nutrition on the prognosis of mechanically ventilated patients with chronic obstructive pulmonary disease: a retrospective cohort study based on the MIMIC-IV database

Publication: Frontiers in Nutrition
Publish Date: August 2025
Authors: Ouyang L, Wang C, Song Y

SUMMARY

Exploring the role of early enteral nutrition (EEN) in critically ill patients with chronic obstructive pulmonary disease (COPD), this retrospective cohort study analyzed 1,052 mechanically ventilated individuals from the MIMIC-IV database. Patients were grouped based on whether enteral nutrition began within 48 hours (EEN) or later (DEN) after ICU admission. While no significant differences were found in 28-day, ICU, or 60-day mortality rates, the EEN group experienced shorter durations of mechanical ventilation, ICU stays, and total hospitalization. Subgroup analysis indicated reduced 28-day mortality in patients with PaO_2/FiO_2 >200 receiving EEN. These findings support early nutritional intervention to improve recovery metrics in ventilated COPD patients.

READ ARTICLE

Role of micronutrition in patients with oral cancer and nutritional intervention strategies

Publication: Frontiers in Nutrition
Publish Date: July 2025
Authors: Fan Y, Feng Y, Liu W

SUMMARY

Micronutrient status plays a pivotal role in oral cancer pathogenesis and treatment outcomes. This review outlines the antioxidant and immunomodulatory functions of key micronutrients—zinc, copper, selenium, and vitamins A, C, D, E, and B complex—in mitigating oxidative stress and inflammation associated with oral squamous cell carcinoma and precancerous lesions. Zinc and selenium deficiencies impair redox balance, while excess copper promotes fibrosis and angiogenesis. Immunonutrition strategies, including omega-3 fatty acids and arginine, have shown promise in improving postoperative recovery and immune function. Personalized nutritional interventions and biomarker-guided supplementation may enhance treatment tolerance and quality of life in oral cancer patients.

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