

Nutrition and Hydration

Current Awareness Bulletin

March 2025

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- Simple and painless evidence into practice (BMJ Best Practice and the LKS Hub) 30 minutes. Learn about quick and hassle-free ways to seamlessly incorporate evidence into your daily work.

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- Quickfire health literacy – getting your message across 30 minutes. Learn about the communication barriers patients may encounter, and ways to ensure they get the most from their care.

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1. Novel Strategies to Promote Intensive Care Unit Recovery via Personalized Exercise, Nutrition, and Anabolic Interventions

Authors: Artese, Ashley L.;Winthrop, Hilary M.;Beyer, Megan;Haines, Krista L.;Molinger, Jeroen;Pastva, Amy M. and Wischmeyer, Paul E.

Publication Date: 2025

Journal: Critical Care Clinics

Abstract: Survivors of critical illness experience significant morbidity, reduced physiologic reserve, and long-term complications that negatively impact quality of life. Although rehabilitative treatments are beneficial during early recovery, there is limited evidence regarding effective multimodal rehabilitation, nutrition, and anabolic nutrient/agent strategies for improving long-term outcomes. This review discusses novel personalized rehabilitation, nutrition, and anabolic nutrient/agent (ie, creatine, β -hydroxy- β -methylbutyrate, testosterone) approaches that allow for precise exercise and nutrition prescription and have potential to improve patient care, address continued medical needs, and optimize long-term recovery. Continued research is needed to further evaluate effectiveness and implementation of these strategies throughout the continuum of care.; Competing Interests: Disclosure A.L. Artese, M. Beyer, and A.M. Pastva have nothing to disclose. H.M. Winthrop has served as a consultant and speaker for Baxter. K.L. Haines received grants from Fresenius Kabi, Germany, grants and personal fees from Baxter, United States, and grants from Abbott outside the submitted work. Dr P.E. Wischmeyer reported receiving grants from Abbott Ince to Duke University, serving as a consultant for Abbott Inc, honoraria for continuing medical education (CME) lectures, grants from Baxter, serving as a consultant for Baxter, honoraria for CME lectures

from Fresenius serving as a consultant for Danone Nutricia, honoraria for CME lectures from Danone Nutricia, serving as a consultant for Mend Inc, and receiving honoraria for CME lectures from Mend Inc, unrestricted gift funding for research from MuscleSound and unrestricted gift funding and honoraria for CME lectures from DSM, The Netherlands, outside of the submitted work. (Copyright © 2024 Elsevier Inc. All rights reserved.)

2. Why One-Size-Fits-All Doesn't Work in Intensive Care Unit Nutrition?

Authors: Bear, Danielle E.;Lambell, Kate J. and Stoppe, Christian

Publication Date: 2025

Journal: Critical Care Clinics

Abstract: Nutrition therapy is a complex intervention with several underlying considerations that may influence effectiveness. Considerations include the mechanism of action of the intervention and the patient phenotype, including sex, ethnicity, body composition, and the patients' nutritional and inflammatory status. Energy and protein targets are elements of nutrition therapy that may be particularly influenced by individual patient factors. Biomarkers may provide a useful tool to monitor and individualize nutrition therapy in the future. The considerations mentioned, with many yet to be studied, highlight the rationale for more individualized interventions moving away from a 'one-size-fits-all' approach.; Competing Interests: Disclosures D.E. Bear has received honoraria for speaking engagements from Fresenius Kabi and consulting fees from Nutricia and Baxter Healthcare. C. Stoppe received honoraria for speaking engagements and medical advisory board participation from BBRAUN, Baxter, and Fresenius. K.J. Lambell has no conflicts of interest. (Crown Copyright © 2024. Published by Elsevier Inc. All rights reserved.)

3. Pregnant women's experiences of nutrition care after previous bariatric surgery

Authors: Guthrie, Taylor M.;Kearney, Lauren;Shape, Kahlee;Sweet, Linda;Vasilevski, Vidanka and de Jersey, Susan

Publication Date: 2025

Journal: Midwifery

Abstract: Problem: The rate of pregnancy following bariatric surgery is rising globally and is associated with health benefits but also increased risk of micronutrient deficiency, preterm birth and small for gestational age offspring. Bariatric surgery may limit women's ability to meet the nutrient demands of pregnancy, necessitating individualised nutrition therapy. However, little is known about women's experiences of, and preferences for nutrition-related care during pregnancy after bariatric surgery.; Aim: To describe women's experiences of pregnancy after bariatric surgery, focussing on nutrition-related care.; Methods: This qualitative study interviewed women across Australia with a history of any bariatric surgery. Semi-structured telephone interviews were conducted after 36-weeks gestation and before childbirth. Data

were analysed using reflexive thematic analysis.; Findings: Thirteen women aged 26-37 participated. Three themes were generated: navigating healthcare, the personal toll of pregnancy after bariatric surgery, and women's agency. Despite a strong desire for specialised nutrition care, women encountered several barriers to accessing this. When care was available, it often did not meet women's needs due to healthcare professionals' limited understanding of the nutrition challenges faced in pregnancies following bariatric surgery. This compelled women to seek information outside their maternity care team and advocate for themselves during care.; Discussion: These findings highlight the need to address barriers to accessing nutrition care for pregnant women following bariatric surgery. Improved understanding of pregnancy and post-operative symptoms may enable enhanced woman-centred care.; Conclusion: Greater awareness of bariatric surgery among all maternity care professionals is needed to improve opportunities for informed, shared decision-making with pregnant women.; Competing Interests: Declaration of competing interest The authors declare no conflicts of interest. (Crown Copyright © 2025. Published by Elsevier Ltd. All rights reserved.)

4. Patients' Experience of Nutrition Therapy During Critical Illness and Recovery: A Narrative Review

Authors: Hardy, Georgia;Marshall, Andrea P.;Gantner, Dashiell and Ridley, Emma J.

Publication Date: 2025

Journal: Critical Care Clinics

Abstract: During critical illness and while recovering, patients may experience varied nutrition interventions, nutrition-impacting symptoms, and challenges relating to the systems of hospital food services. All of these factors can directly impact their experiences and nutrition intake. External factors that may indirectly influence the patient experience of nutrition include family involvement, clinician knowledge and communication, and the hospital environment. The experience of patients during hospitalization may affect behavior and ability to comply with nutrition-related recommendations. However, understanding and including these experiences may help to improve clinical practice, hospital food service systems, and research design.; Competing Interests: Disclosures This work was supported by an Australian Government Research Training Program (RTP) scholarship (G.H.). The Australian Government had no role in the writing of this article. (Copyright © 2024 Elsevier Inc. All rights reserved.)

5. Developing a core outcome set for nutrition care in adult outpatients with irritable bowel syndrome (COS-RD-IBS study)

Authors: Jent, Sandra;Lüthi, Joya,Jelena Kristin;Meichtry, André;Bez, Natalie Sara;Bucher, Anita;Valentini, Luzia and Rogler, Gerhard

Publication Date: 2025

Journal: Clinical Nutrition ESPEN

Abstract: Background and Aims: Irritable bowel syndrome (IBS) is a frequent disorder thought to be caused by a disturbance of the gut-brain axis. Nutrition interventions are an essential pillar of its treatment. However, there is no consensus on which outcomes should be applied to assess the effectiveness of nutrition care in IBS. Standardized outcome sets, or "core outcome sets" (COS), have been proposed to harmonize outcomes in clinical research and practice. This project aims to develop a COS for dietitian-provided nutrition care in adults with IBS or food intolerances with intestinal symptoms, to be implemented in routine outpatient practice.; Methods: A comprehensive outcomes list was developed based on quantitative and qualitative studies, COS and guidelines on IBS, and important outcomes named by participants. Health service users, dietitians, gastroenterologists, and health care decision makers rated the outcomes in two Delphi survey rounds on their importance and ranked them in a third round. Data was analyzed by panel to account for the different views and sample sizes.; Results: A total of 192 participants registered for the Delphi process. The following 14 outcomes reached consensus in all panels after two rounds: perception of symptom triggering foods/nutrients, intake of trigger foods/nutrients, practicability of diet, adherence, digestive symptoms overall, abdominal pain, abdominal bloating, stool consistency, stool frequency, physical functioning related QoL, nutrition related QoL, social functioning related QoL, empowerment of self-care.; Conclusions: The Delphi process yielded in a 14 outcomes COS, which exceeds what is typically considered feasible in routine nutrition care. Further work is needed to refine the COS and to identify standardized measurement tools for each outcome.; Competing Interests: Conflicts of interest There are no conflicts of interest. (Copyright © 2025 The Authors. Published by Elsevier Ltd.. All rights reserved.)

6. Strategies to Maximize the Benefits of Evidence-Based Enteral Nutrition: A Narrative Review.

Authors: Kano K.I.;Yamamoto R.;Yoshida M.; et al

Publication Date: 2025

Journal: Nutrients

Abstract: Enteral nutrition (EN) has been reported to have some physiological importance for critically ill patients. However, the advantage of EN over parenteral nutrition remains controversial in recent paradigms. To maximize the benefits and efficiency of EN, implementing measures based on comprehensive evidence is essential. Here, we systematically reviewed EN-related studies and integrated them into the best and most up-to-

date EN practices. We extracted studies from 13 systematic reviews during the development of Japanese Critical Care Nutrition Guidelines, summarizing findings on the assessment of enteral feeding intolerance (EFI), the timing of EN, formula composition and nutrients, and method of administration in critically ill adult patients. Multifaceted EFI assessment may be needed in patients for high-risk patients. Early EN may reduce infectious complications, and initiating EN even earlier may offer an additional advantage. High protein intake (≥ 1.2 g/kg/day) could maintain muscle mass and physical function without increasing gastrointestinal complications. Probiotics, prebiotics, and synbiotics may serve as beneficial options for preventing infection and gastrointestinal complications, although their efficacy depends on the strains, types, and combinations used. For patients with EFI, post-pyloric feeding could be an effective approach, while intermittent feeding may be a safer approach. Both methods should be utilized to achieve nutritional targets. Integrating these nutritional interventions into EN strategies may help maximize their effectiveness and minimize complications. However, careful consideration regarding timing, dosage, nutrient selection, administration methods, and patient selection is required.

7. The Role of Nutrition in Perioperative Care

Authors: King, Alyssa

Publication Date: 2025

Journal: Support Line

Abstract: The growing interest and use of enhanced recovery protocols within the surgical setting has shed light on the importance of nutrition within the perioperative period. Nutrition components of surgical optimization typically include preoperative nutrition screening, adequate protein intake, avoiding prolonged fasting, and early postoperative feeding. Growing evidence additionally supports the use of elements such as immunonutrition, prehabilitation, and ongoing postoperative nutrition therapy to support optimal nutritional status in the perioperative period. There is a unique role for registered dietitian nutritionists to lead in the efforts of perioperative optimization and utilize their expertise in nutrition to support optimal outcomes in elective surgical patients.

8. Glucose Management in Hospitalized Adults Receiving Parenteral Nutrition: Strategies and Considerations

Authors: Levin, Katherine and Hormachea, Sarah

Publication Date: 2025

Journal: Support Line

Abstract: Glucose management in hospitalized adults receiving parenteral nutrition (PN) is a complex challenge that significantly impacts patient outcomes, particularly in those with underlying diabetes or stress-induced hyperglycemia. This review discusses the complex interplay between nutrition support and hyperglycemia, exploring the multifaceted approaches

to managing glucose levels in this patient population, and emphasizing the role of registered dietitian nutritionists in optimizing patient outcomes by tailoring PN regimens to balance nutritional needs with glycemic management. Strategies including continuous intravenous insulin infusion, subcutaneous insulin regimens, and the addition of insulin to PN solutions are discussed in detail. Existing guidelines from the American Society for Parenteral and Enteral Nutrition, the American Diabetes Association, and the American Association of Clinical Endocrinologists are analyzed to provide a framework for best practices. This article highlights the existing gaps in knowledge and proposes future use of emerging technologies such as continuous glucose monitoring and automated insulin delivery systems as tools for improving outcomes. The following findings underscore the need for a multidisciplinary approach in managing hyperglycemia in PN patients and offer practical recommendations for dietetics practitioners to enhance care delivery.

9. The History of Critical Care Nutrition: Seventy-Five Years of Evolution

Authors: Martindale, Robert G.;Hurt, Ryan T.;Mundi, Manpreet and McClave, Stephen A.

Publication Date: 2025

Journal: Critical Care Clinics

Abstract: In its infancy during the formation of the specialty of critical care medicine, the need for safe and effective nutritional therapy was recognized as a key component of the care for severely ill patients admitted to an intensive care unit. The origin of modern critical care nutrition can be traced back to the invention of total parenteral nutrition, which enabled the delivery of long-term nutritional support to critically ill adults who had insufficient absorption or access to the gastrointestinal tract. This report discusses the rationale for these innovations and summarizes the events leading up to our current state of patient management in critical care nutrition.; **Competing Interests:** Disclosure No funders of this manuscript and none of authors have research in this area of the article. No disclosures for this manuscript by any of authors. (Copyright © 2024 Elsevier Inc. All rights reserved.)

10. The impact of a tailored nutrition intervention delivered for the duration of hospitalisation on daily energy delivery for patients with critical illness (INTENT): a phase II randomised controlled trial

Authors: Ridley, Emma J.;Bailey, Michael;Chapman et al

Publication Date: 2025

Journal: Critical Care

11. How to educate patients and caregivers on end-of-life nutrition care and support.

Authors: Schwartz D.B.;Wolfe Citty S.;Barrocas A. and O'SullivanMaillet, J.

Publication Date: 2025

Journal: Nutrition in Clinical Practice

Abstract: Background: There are numerous articles, book chapters, and published guidelines on the topic of clinical ethics in the use of artificially administered nutrition and hydration, which often incorporates end-of-life (EOL) nutrition care and support. Components of clinical ethics involve the importance of ethical principles, patient-centered care, and shared decision-making. However, there is sparse information on how to educate patients and caregivers on this subject.

12. Eating behaviours in care-experienced children: A mixed-methods UK comparative cohort study to examine mealtime challenges

Authors: Snuggs, Sarah;Cowan, Polly;Jethwa, Bhakti and Galloway, Eleanor

Publication Date: 2025

Journal: Appetite

13. The Modern Approach to Total Parenteral Nutrition: Multidirectional Therapy Perspectives with a Focus on the Physicochemical Stability of the Lipid Fraction.

Authors: Sobol Z.;Chiczewski R. and WatrobskaSwietlikowska, D.

Publication Date: 2025

Journal: Nutrients

Abstract: With advancements in medical technology, biochemistry, and clinical practices, the modern approach to total parenteral nutrition (TPN) has been focused on precision, safety, and the optimization of metabolic and nutritional parameters based on the patient's needs. In the last decade, TPN mixtures have been transitioning from a lifesaving intervention for patients unable to receive enteral nutrition to a highly specialized therapy aimed at improving clinical outcomes, reducing complications, and personalizing care. Total parenteral nutrition has attracted great interest, and its adaptation to the patient's needs is a topic of interest in the scientific community. However, there are problems related to shortages in the supply of the concentrates required to balance TPN mixtures and to infections linked to the venous access devices that are necessary for administering nutrition. Adjusting the TPN composition to meet specific patient needs requires specialist knowledge, as the ingredients available on the market differ in terms of excipients and this may increase the risk of physicochemical incompatibilities, particularly the destabilization of the lipid fraction. It is common clinical practice to inject drugs into the parenteral nutrition bag, and hence there is a high demand for confirmation of the compatibility of a given drug with the TPN composition. However, methods

used in clinical practice still differ from the modern solutions proposed in scientific research. In order to ensure patient safety with the use of advanced therapy, continuous education and monitoring of the latest scientific research related to TPN is required. The integration of artificial intelligence (AI) into clinical nutrition represents a paradigm shift in the management of total parenteral nutrition (TPN). As TPN transitions from a standardized, one-size-fits-all approach to a highly personalized therapy, we must examine the challenges and future directions of AI-driven TPN to provide a comprehensive analysis of its impact on clinical practice.

14. How Sustainable Are Hospital Menus in the United Kingdom? Identifying Untapped Potential Based on a Novel Scoring System for Plant-Based Provision

Authors: Isabelle Sadler, Alexander Bauer, Shireen Kassam

Publication Date: 2025

Journal: Journal of Human Nutrition and Dietetics

Abstract

Background: Adopting plant-forward diets is essential for achieving climate targets. As the second-largest provider of public sector meals in the UK, the National Health Service (NHS) can significantly reduce its environmental impact by transitioning to plant-forward menus, contributing to its goal of being a net-zero healthcare service by 2045. This study evaluates the extent to which NHS hospitals currently align with sustainable practices by assessing the plant-forward nature of in-patient menus.

Methods: Green Plans from 40 hospital trusts were analysed to assess commitment to plant-forward, lower-emission menus. Freedom of Information requests were sent to 50 NHS trusts, and 36 menus from the spring/summer season of 2024 were analysed. A novel scoring system was developed to assess the hospital menus, with subscores reflecting the availability of plant-based meals, ruminant-meat meals, and menu strategies to encourage plant-forward choices.

Results: Green Plans showed limited commitment to increasing plant-based food options. Hospital menus scored poorly overall (average score of 20/100, range: 9-38). The lowest subscores were observed in the provision of fully plant-based meals and nudging techniques. The provision of ruminant meat varied (subscore range: 0-100) and all hospitals included processed meat on their menu. Hospitals with outsourced catering scored higher than those with in-house catering.

Conclusion: Despite national recommendations to shift towards plant-forward diets, NHS hospitals currently show little commitment and provide limited offerings in this regard. The novel scoring system offers a practical framework for monitoring progress and guiding hospitals towards environmentally sustainable, plant-forward menus.

Sources Used:

The following databases are used in the creation of this bulletin: Amed, British Nursing Index, Cinahl & Medline.

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