Nutrition and Hydration

Current Awareness Bulletin

April 2025

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1. **TASTY trial: protocol for a study on the triad of nutrition, intestinal microbiota and rheumatoid arthritis**

Authors: Charneca, Sofia;Hernando, Ana;Almada-Correia, In;Polido-Pereira, et al.

Publication Date: 2025

Journal: Nutrition Journal

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2. **Complementarity of nutrition risk screening tools with malnutrition diagnosis in patients with cancer: A 12-month follow-up study assessing accuracy metrics and mortality**

Authors: de Miranda, Bruna,Luisa Gomes;Silva, Flavia Moraes;de Sousa, Iasmin Matias;Bertuleza; et al.

Publication Date: 2025

Journal: Nutrition in Clinical Practice : Official Publication of the American Society for Parenteral and Enteral Nutrition

Abstract: Background: The Global Leadership Initiative on Malnutrition (GLIM) criteria for diagnosing malnutrition were established to provide a standardized approach for diagnosing malnutrition in clinical practice using a nutrition screening tool (NST) as the first step for this process. This study aimed to compare the complementarity of NSTs with the GLIM criteria for malnutrition diagnosis in patients with cancer.; Methods: Hospitalized patients with different

cancer types were evaluated in a prospective cohort study in which they were initially screened using the Patient-Generated Subjective Global Assessment (PG-SGA), Protocol for Nutritional Risk in Oncology (PRONTO), Malnutrition Universal Screening Tool, Nutritional Risk Screening 2002, Malnutrition Screening Tool, and NutriScore for nutrition risk. Malnutrition diagnosis involved phenotypic and etiological criteria as proposed by the GLIM. Complementarity of NST to GLIM criteria was evaluated by calculating accuracy metrics and investigating association with 12-month mortality.; Results: Nutrition risk ranged from 14.8% (NutriScore) to 82.8% (PRONTO) and frequency of malnutrition from 13.8% (with NutriScore) to 88.9% (with PG-SGA). NutriScore presented the lowest negative predictive value (25.1%) whereas PG-SGA presented the highest (58.32%). Regardless of the NST applied, the risk of malnutrition and diagnosis of malnutrition according to the GLIM criteria, combined or isolated, increased the risk of 12-month mortality.; Conclusion: All NSTs presented low negative predictive value when their complementarity to GLIM criteria for malnutrition diagnosis was tested. Indeed, patients "at risk" presented similar increased risk of 12-month after discharge mortality in comparison with those at risk and malnourished by the GLIM criteria when all NSTs were applied. (© 2025 American Society for Parenteral and Enteral Nutrition.)

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3. Prehabilitation in surgery - an update with a focus on nutrition

Authors: Gillis, Chelsia and Weimann, Arved

Publication Date: 2025

Journal: Current Opinion in Clinical Nutrition and Metabolic Care

Abstract: Purpose of Review: Since the introduction of the prehabilitation concept for optimizing functional capacity before surgery 20 years ago, evidence and interest has grown considerably. This review summarizes the recent evidence and proposes questions for prehabilitation with special regard to the nutritional component.; Recent Findings: Several meta-analyses of multimodal prehabilitation (exercise, nutrition, and psychological support) have been published recently. These reviews suggest that preoperative conditioning can improve functional capacity and reduce the complication rate for many patient groups (risk of bias: moderate to low). A prerequisite is the identification of high-risk patients using suitable screening and assessment tools. Additionally, there are currently no standardized, clear recommendations for the organization and implementation of prehabilitation programs. The programs vary greatly in duration, content, and outcome measurement. Although the preoperative nutrition interventions enhanced outcomes consistently, there was no clear evidence for which nutritional intervention should be applied to whom over consistent time frame four to six weeks (timeframe consistent with most prehabilitation programs).; Summary: To advance our understanding of which prehabilitation interventions work best, how they work, and for whom they work best, additional low risk of bias and adequately powered trials are required. Nevertheless, our review presents evidence that prehabilitation should be offered before major surgery on a risk-stratified basis. (Copyright © 2025 Wolters Kluwer Health, Inc. All rights reserved.)

4. Enteral Nutrition in Hospitalized Adults

Authors: Gramlich, Leah and Guenter, Peggi

Publication Date: 2025

Journal: The New England Journal of Medicine

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5. Nutrition and diet in type 2 diabetes management

Authors: Harris, Sarah

Publication Date: 2025

Journal: British Journal of Nursing (Mark Allen Publishing)

Abstract: This article aims to provide health professionals involved in diabetes management with nutrition options to support their advice and guidance when speaking to patients. The review examines dietary strategies for managing type 2 diabetes, focusing on their impact on glycaemic control, weight loss and long-term health outcomes. Diets and nutrition options, including the Mediterranean and Nordic diets, low calorie consumption and medical nutrition therapy, can be effective in regulating blood glucose levels, improving lipid profiles and reducing the risk of cardiovascular disease. Health professionals need a comprehensive understanding of optimal nutrition plans to personalise dietary interventions and improve patient outcomes.

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6. Barriers and facilitators in the implementation of nutrition interventions to prevent or treat malnutrition in older adults: A scoping review

Authors: Launholt, Tine Louise;Larsen, Palle;Aadal, Lena and Kristensen, Hanne Kaae

Publication Date: 2025

Journal: Nutrition in Clinical Practice: Official Publication of the American Society for Parenteral and Enteral Nutrition

Abstract: Malnutrition among community-dwelling older adults (OAs) is prevalent, particularly in groups using healthcare services. Malnutrition burdens health, social, and aged-care systems in terms of expenses for hospital admissions and care in nursing homes and home care settings. Effective management requires early identification and multimodal interventions; however, studies report a significant gap between recommended nutrition interventions and current healthcare practices. Therefore, this study aimed to identify, present, and map existing evidence on barriers and facilitators in the implementation of nutrition interventions among OAs living in noninstitutional municipal healthcare settings. A scoping review following the

Joanna Briggs Institute guidelines and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews checklist were conducted. The study included evidence from bibliographic databases and gray-evidence sources that identify barriers and/or facilitators from stakeholder perspectives that influence the implementation of nutrition interventions for malnutrition prevention or treatment among OAs (≥65 years) in noninstitutional municipal healthcare settings. Stakeholders were OAs, informal caregivers, or healthcare professionals (HCPs). Thirty-seven articles were included and 10 categories identified. Barriers were (1) lack of knowledge and awareness among HCPs, (2) lack of resources, (3) lack of collaboration and communication, (4) missing links between healthcare settings, and (5) poor insight among OAs and caregivers. Facilitators were (1) education and training of HCPs, (2) self-care, (3) person-centered care, (4) technology in nutrition care, and (5) social and psychological factors. Findings from this review indicate an imperative need for targeted implementation strategies for developing evidence-based nutrition home care practice. (© 2025 The Author(s). Nutrition in Clinical Practice published by Wiley Periodicals LLC on behalf of American Society for Parenteral and Enteral Nutrition.)

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7. Advancements in the application of semi-solidified feeding in enteral nutrition for critically-ill patients: a comprehensive review

Authors: Liu, Qi;Zheng, Yi;Wang, Kunpeng;Zhong, Jihong and Yu, Xiao

Publication Date: 2025

Journal: Nutricion Hospitalaria

Abstract: Introduction: Enteral nutrition represents the primary modality of nutritional support for critically ill patients. However, challenges such as gastroesophageal reflux, diarrhea, and abdominal distension often manifest during its administration. Enteral nutrition semi-solidified feeding has emerged as a promising alternative, demonstrating notable efficacy. This study systematically explores the literature on semi-solidified enteral nutrition, discussing its conceptual framework, classifications, relative merits, and drawbacks compared to traditional enteral nutrition. Additionally, it illustrates clinical application and associated complications, offering valuable insights for the implementation of semi-solidified enteral nutrition in critically ill patients.

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8. Core elements and principles of nutrition models of care for people with cancer: A scoping review

Authors: Loeliger, J.;Ugalde, A.;Porter, J. and Kiss, N.

Publication Date: 2025

Journal: Clinical Nutrition

Abstract: The development and implementation of evidence-based cancer nutrition models of care into clinical practice is challenging and pragmatic guidance is lacking. This scoping review

aimed to identify the core elements and principles of nutrition models of care for people with cancer. MEDLINE Complete, CINAHL and Embase were systematically searched between 1 January 2003–8 November 2023. Studies were eligible for inclusion and data extraction if they reported on the implementation or evaluation of a nutrition model of care for adults with any cancer diagnosis. The protocol was prospectively registered on Open Science Framework (https://doi.org/10.17605/OSF.IO/RQVHJ) on 7 November 2023. The search identified 4599 papers, 28 studies met inclusion criteria. Studies were primarily conducted in Australia (71.4 %), within a hospital (96.4 %), metropolitan setting (89.3 %) and with various cancer diagnoses. Most studies described a nutrition screening process and 50 % used a valid and reliable assessment tool. Studies described provision of direct care by the dietitian (n = 26), primarily conducted in the outpatient setting (n = 26) and lesser in the inpatient setting (n = 12), and frequently face-to-face (n = 25) phone (n = 14), telehealth (n = 3)]. Ten core elements were identified that underpinned the models of care including: timely care driven by a care pathway, protocol or clinic (100.0 %); nutrition expertise and leadership (100.0 %); flexible and integrated (100.0 %); with multi-directional communication (96.4 %); accessible (92.9 %); stratified by risk (89.3 %); multidisciplinary engagement (85.7 %); across different care time-points and settings (85.7 %); supported by training/education (50.0 %) and data integration (25.0 %). Nutrition expert-led cancer nutrition models of care literature was primarily limited to metropolitan, hospital settings and many lacked valid nutrition assessment tools. Ten core elements were identified that underpinned nutrition care, with the most utilised being: timely care driven by a care pathway, protocol or clinic; nutrition expert-led; flexible and integrated; with multi-directional communication; accessible; and stratified by risk. There is great potential for an evidence-based model of nutrition care to improve the implementation and embedding of high-quality nutrition elements into the cancer pathway.

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9. **Reducing waste in parenteral nutrition: comparison of Surgical- and Standard-Aseptic Non-Touch Technique**

Authors: Malhi, Hardip and Fletcher, Jane

Publication Date: 2025

Journal: British Journal of Nursing (Mark Allen Publishing)

Abstract: The NHS accounts for approximately 4% of carbon emissions in England. Aseptic techniques are an area where the use of consumables, and subsequent waste, may be high. Traditionally, administration of parenteral nutrition (PN) has been performed using a so-called sterile technique. The aim of this study was to compare the volume of waste generated from a traditional 'sterile' technique (Surgical-Aseptic Non-Touch Technique (ANTT)), using sterile gloves and a dressing pack, and Standard-ANTT, using non-sterile gloves, a general aseptic field and a micro-critical aseptic field where necessary in the administration of PN. Two procedure trays were arranged representing consumable equipment used in each procedure. All items including packaging were weighed. Standard-ANTT demonstrated an estimated 52% reduction in waste and carbon emissions. There is a pressing need for nurses to review practice and consider where more sustainable choices can be made in the administration of PN.

10. Gut microbiome diversity and nutrition intake in post-stroke patients

Authors: Nagano, Fumihiko;Yoshimura, Yoshihiro;Wakabayashi, Hidetaka;Matsumoto, Ayaka;Shimazu, Sayuri;Shiraishi, Ai;Bise, Takahiro;Kido, Yoshifumi;Hamada, Takenori;Kuzuhara, Aomi;Yoneda, Kouki and Maeda, Keisuke

Publication Date: 2025

Journal: Geriatrics & Gerontology International

Abstract: Aim: This study aimed to investigate the association between energy intake and gut microbiome diversity in patients following stroke. Methods: A cross-sectional study was conducted with 156 patients following stroke aged ≥65 years admitted to a rehabilitation hospital (mean age, 78 ± 7 years; 69 women). Energy intake was calculated from average food consumption during the first week after admission. Gut microbiome diversity was assessed using three indices derived from 16S rRNA sequencing of stool samples: the Shannon index, operational taxonomic unit (OTU) richness and Faith's phylogenetic diversity (PD). Sex-stratified multiple linear regression analysis evaluated the association between energy intake and gut microbiome diversity, adjusting for confounders such as age, body weight, inflammation markers, nutritional status, and medication. Results: The study included 156 patients following stroke (mean age, 78 ± 7 years; 69 women). The median energy intake was 1600 (interquartile range IQR], 1400–1800] kcal/day for all participants. The median for gut microbiome diversity indices were Shannon index, 6.3 (IQR, 5.9–6.5); OTU richness, 217.3 (IQR, 181.9–258.1); and Faith's PD, 22.4 (IQR, 19.3–27.2). In women, energy intake was significantly positively associated with the Shannon index ($\beta = 0.233$, $P = 0.026$), OTU richness ($\beta = 0.228$, $P = 0.036$), and Faith's PD ($\beta = 0.212$, $P = 0.038$). In men, energy intake was significantly positively associated with the Shannon index ($\beta = 0.230$, $P = 0.027$), OTU richness ($\beta = 0.211$, $P = 0.040$), and Faith's PD ($\beta = 0.198$, $P = 0.043$). Conclusions: Adequate energy intake may play an important role in preserving gut microbiome diversity in patients. Further longitudinal studies are needed to confirm these associations, clarify causality, and explore underlying mechanisms. Geriatr Gerontol Int 2025; 25: 535–542.

11. Validation of the International Federation of Gynecology and Obstetrics nutrition checklist and obstetric Nutritional Risk Screening tool to identify risk of malnutrition in hospitalized pregnant women

Authors: Nguyen, Thi Thu Lieu;Doan, Thu Huyen;Nguyen, Minh Trang;Nguyen, Thi Phuong Anh;Tran, Ha Dong;Le, Thi Thanh Xuan;Le, Thi Huong;Luu, Thi My Thuc;Tran, Thi Tu Anh and Nguyen, Thi Van Anh

Publication Date: 2025

Journal: Nutrition and Health

Abstract: Background & Aims: Early detection of nutritional status in pregnancy is important to ensure healthy outcomes for pregnant women and children. Several malnutrition screening

tools were recommended to be used in pregnant women. Thus, the purpose of this study was to validate the International Federation of Gynecology and Obstetrics (FIGO) Nutrition Checklist and Obstetric Nutritional Risk Screening (NRS) by comparing their results with the reference standards. Methods: The two screening tools (FIGO Nutrition Checklist and obstetric NRS) were performed on 200 pregnant women at the National Hospital of Obstetrics and Gynecology. The validity of the two screening tools was assessed by (1) comparison with a composite diagnostic criteria; (2) comparison with Estimated Fetal Weight (EFW). The anthropometric (weight, height, and mid-upper arm circumference), 24-h dietary recall, EFW, hemoglobin, and serum albumin were measured. Cohen's κ-statistics, sensitivity, specificity, positive predictive value, negative predictive value, and area under the curve (AUC) were computed. Results: FIGO and NRS identified 21.5% and 15.5% of the pregnant women as being at risk of malnutrition, respectively. Based on the composite diagnostic criteria, 13.5% of the pregnant women were confirmed to be malnourished. When compared with composite diagnostic criteria, FIGO had a numerically lower specificity (87.28% vs 94.22%) and a numerically lower agreement (κ: 0.52 vs 0.68) than NRS but FIGO demonstrated a similar sensitivity (77.78%) and a similar AUC (0.825 vs 0.860) to NRS. Using EFW as a reference standard, FIGO had higher sensitivity (61.11% vs 55.56%) and a similar AUC to NRS (0.718 vs 0.720), but FIGO showed a numerically lower specificity (82.42% vs 88.46%) and a numerically lower agreement (κ: 0.27 vs 0.33) than NRS. Conclusion: This study supports the use of the FIGO nutrition checklist and obstetric NRS to identify risk of malnutrition in hospitalized pregnant women. These findings highlight the potential for these tools to be adapted for use in other healthcare systems and countries facing similar challenges in maternal nutrition assessment, particularly in resource-constrained settings.

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12. Combining Social Stories and Video Modelling for Teaching Mealtime Skills to Children with Intellectual Disability

Authors: Nosrati, Fatimah;Shafipoor, Mohaddeseh and Ghobari Bonab, Bagher

Abstract: This study aimed to investigate the effect of combining social stories and video modelling in a multimedia programme for teaching mealtime skills to students with mild intellectual disability. In a concurrent multiple-baseline design across participants and behaviours, three subsets of mealtime skills were taught through three social story sessions followed by three video modelling sessions. The outcome measure was a culturally appropriate index of mealtime skills developed for this study. The results showed that the scores, which were stable during the baseline phase, increased during the social story phase. The elevation continued or stabilised during the video modelling phase. It seems that the utilisation of social stories as an addition to video modelling may be an effective strategy for training daily life skills. This combination may help fill the inefficiencies observed in the video modelling method by incorporating social information into the training, allowing for more complicated skills to be trained.

13. 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

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14. 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

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15. Food insecurity amongst universal credit claimants: the benefits and nutrition study (BEANS), a cross-sectional online study

Authors: Thomas, Michelle;Rose, Peter;Coneyworth, Lisa;Harvey; et al.

Publication Date: 2025

Journal: European Journal of Nutrition

Abstract: Purpose: Increasing food insecurity (FIS) in the UK presents a major challenge to public health. Universal Credit (UC) claimants are disproportionately impacted by FIS but research on socio-demographic factors and consequent nutritional security is limited. Methods: A cross-sectional online survey (September 2021 - April 2022) assessed FIS in UC claimants (males and females, n = 328) (USDA 10 question module), dietary intake (females, n = 43; 3–4 × 24-hour dietary recalls) and coping strategies. Binary logistic regression tested sociodemographic variables influencing the odds of food insecurity. Diets ofUC were compared with national diet and nutrition survey (NDNS) participants and thematic analysis conducted for drivers and impacts of FIS. Results: FIS was experienced by 84.8% of UC respondents (73.8% very low food security). Equivalised income £300 week-1. Being unemployed (P = 0.004), travelling > 15 min to obtain food (P = 0.016), shopping less than twice per week (P = 0.001) and receiving < 47.7% of the minimum income standard (MIS) all increased risk of FIS. Diet quality of working age females was lower (45.9%) compared to those in the NDNS (49.6-55.8%; P < 0.05) characterised by limited protein sources, minimal fruit consumption and reliance on bread. Intakes of vitamin A, iron, selenium, potassium, iodine and magnesium were consistently below most NDNS cohorts. Participants felt impotent to make substantive changes to their diets due to poverty. Conclusion: During this study,

dependence on UC almost guaranteed recipients would be food insecure, consuming insufficient micronutrients to support health. MIS may provide a useful benchmark to prevent food poverty.

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16. Prevention and management of enteral nutrition-related diarrhea among adult inpatients: a best practice implementation project

Authors: Zhang, Xinyue;Du, Meijie;He, Mei;Wang, Mei;Jiang, Mengyao;Cai, Yue;Cui, Mengying and Wang, Ying

Abstract: Introduction: Diarrhea, the most common complication for patients during enteral nut. rition, poses a range of risks and care burdens. Medical staff are aware of the importance of proactively preventing and managing enteral nutrition-related diarrhea. However, clinical prevention and management methods are not standardized, and the scientific basis and effectiveness of these methods need to be further verified. Objectives: This project aimed to promote evidence-based practices for the prevention and management of enteral nutrition-related diarrhea among adult inpatients in a public tertiary hospital in China. Methods: This project was guided by the JBI Evidence Implementation Framework and used the JBI Practical Application of Clinical Evidence System (PACES) and the JBI Getting Research into Practice (GRiP) tools. Twelve audit criteria were developed to conduct a baseline audit to measure compliance with best practices. A barrier analysis was conducted, and strategies were implemented to overcome the barriers. The project was finalized with a follow-up audit to determine any changes in compliance with best practices. Results: The overall compliance rate for the audit criteria increased from 27.37% at baseline to 89.62% in the follow-up audit, with six criteria achieving a compliance rate of 100%. Conclusions: The implementation of evidence-based practices can effectively narrow the gap between current practice and best practice. This project improved the ability of medical staff to prevent and manage enteral nutrition-related diarrhea, as well as promoting evidence-based practice in the hospital. http://links.lww.com/IJEBH/A168

Sources Used:

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

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