

October 2022 Nutrition Research Review

Impact of Calorie Intake and Refeeding Syndrome on the Length of Hospital Stay of Patients With Malnutrition: A Systematic Review and Meta-Analysis

Publication: Clinical Nutrition

Authors: Peiqi Liu, Li Chen, Tangsheng Zhong, Meishuang Zhang, Tianjiao Ma, Huimin Tian

Publish Date: September 2022

Abstract: This systematic review and meta-analysis explored the effects of refeeding syndrome and initial calorie intake on the length of stay in patients with malnutrition. Eighteen studies involving 3868 participants were included in this review. The results showed that the pooled length of stay of 2965 patients with refeeding syndrome in 11 studies was 25.55 (95% CI, 20.20-30.90) days. The pooled impact of refeeding syndrome on length of stay of 2634 patients in 10 studies was weighted mean difference (WMD) = 2.91 (95% CI, -0.18 - 6.00; P = 0.065) days. The pooled effect of higher calorie intake of 1234 patients in 8 studies was WMD = -3.04 (95% CI, -5.10 to -0.99, P = 0.003) days. This review showed that higher initial calorie intake may help shorten the length of stay in patients with malnutrition.

<https://pubmed.ncbi.nlm.nih.gov/35964424/>

Using an Interactive Nutrition Technology Platform to Predict Malnutrition Risk

Publication: Journal of Human Nutrition and Dietetics

Authors: Erin Fisher, Georgina Luscombe, David Schmidt, Leanne Brown, Kerith Duncanson

Publish Date: September 2022

Abstract: This retrospective observational study investigated the Nutrition Dashboard's (an interactive nutrition technology platform that displays food provision and intake data to categorize nutrition risk of hospital patients) ability to identify malnutrition compared to the Malnutrition Screening Tool (MST). The results showed that in 216 individuals (1783 hospital-stay days) those in the highest risk Nutrition Dashboard Category were 1.93 times more likely to have a MST score indicating risk compared to the lowest Nutrition Dashboard Category (unadjusted odds ratio 1.93, 95% CI, 1.17-3.19, p<0.01). When patient weight was added to the model, lower weight became the only significant predictor of MST≥2 (P<0.01) This study indicates a role for nutrition intake technology in malnutrition screening.

<https://pubmed.ncbi.nlm.nih.gov/36083834/>

GLIM in Nursing Homes; Practical Implications

Publication: Clinical Nutrition

Authors: Marian A.E. de van der Schueren, Jos W. Borkent, Gijs W. Spaans, Annemarie Nijhof, Marleen Manders

Publish Date: September 2022

Abstract: Few papers have described malnutrition prevalence rates according to the Global Leadership in Malnutrition (GLIM) criteria in nursing homes, likely due to practical reasons such as missing data on body composition, dietary intake, or acute disease/inflammation. This study collected data from 5 different nursing homes to describe malnutrition prevalence rates according to the Global Leadership Initiative on Malnutrition (GLIM). Food intake measurements occurred over 3 days, and intakes below 90% of energy or protein requirements were regarded as insufficient. The GLIM diagnosis was based on body weight loss and/or low body mass index (BMI) in combination with insufficient food intake. Additionally, the authors examined the sensitivity of GLIM with the question from the Mini Nutritional Assessment Short Form (MNA-SF) on insufficient food intake (GLIMMNA) versus GLIM with measured food intake. The study results showed that in 176 participants, 21.0% were categorized as malnourished according to GLIM. There was evidence of insufficient food intake in 81.3% (N = 143) of residents and only 39% of those (N=56) scored positive on the MNA-SF question regarding low food intake. GLIMMNA diagnosed 17.0 % of residents as malnourished. Sensitivity of GLIMMNA for GLIM was 62.2%, and specificity 95.0% ($\kappa=0.61$).

[https://www.clinicalnutritionjournal.com/article/S0261-5614\(22\)00328-4/fulltext](https://www.clinicalnutritionjournal.com/article/S0261-5614(22)00328-4/fulltext)

Postdischarge Nutrition in Preterm Infants

Publication: Neoreviews

Authors: Allan Lucas, Jan Sherman, Mary Fewtrell

Publish Date: August 2022

Abstract: The field of postdischarge nutrition for preterm infants arose when concerns that using diets suitable for term infants — breastfeeding without fortification or standard formulas — might not meet the postdischarge nutritional needs of infants born preterm, who often exhibited growth restriction and evidence of undernutrition. A decade ago, there were already 27 randomized controlled trials (RCTs) of nutritional supplementation from which an eligible subsample of trials have provided evidence on whether nutritional fortification of human milk or nutrient-enriched formula favorably affects postdischarge growth in these infants. These RCTs also allowed exploration of the quality of growth, bone mineralization, and the ad libitum-fed infant's own regulation of milk volume and nutrient intake. Importantly, such RCTs, augmented by observational data on the links between growth and neurodevelopment, have allowed exploration of the potential impact

of postdischarge nutrition on neurocognitive function. However, the interpretation of published data and the implication for practice has proven difficult and contentious. In this review, we examine, and to an extent reanalyze, existing evidence to elucidate its strengths and limitations, with the goal of adding more clarity to the ways in which this sizeable body of clinical scientific research may have a positive impact on the postdischarge nutritional approach to infants born preterm.

<https://pubmed.ncbi.nlm.nih.gov/35909107/>