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United States IDDSI Reference Group Newsletter for June 2022

JUNE is DYSPHAGIA AWARENESS MONTH!

Research Highlight June 2022 by Sarai Logan and Andrea Charvet; The USIRG thanks you for this contribution!

June is Dysphagia Awareness Month. This month's research highlight combines 3 research studies to explore the relationship between dysphagia and malnutrition, and to evaluate whether offering elderly (>65 years old) patients with dysphagia a modified diet that is visually appealing and nutrient fortified will encourage them to eat and mitigate the risk of malnutrition.

Dysphagia is a complex condition that often affects the elderly population living independently and institutionalized. This condition encompasses the range of swallowing difficulties that can negatively affect food intake and correlate to malnutrition. Malnutrition is a term that signifies a disproportion regarding three essential elements: calories, macronutrients, and micronutrients. These elements heavily correlate to body composition and health outcomes. A large study of non-institutionalized elderly analyzed the correlation between oropharyngeal dysphagia, malnutrition, physical function, and cognitive status using the 10-Item Eating Assessment Tool and the Mini Nutritional Assessment (Tagliaferri et al., 2019). The authors found that dysphagia was significantly and independently associated with malnutrition and with physical function. Thus, it is important to screen for dysphagia in geriatric settings to prevent functional decline.

Once dysphagia is identified, nutrition treatment typically includes texture-modified diets (TMDs) to

allow for a more effective and safer intake. However, TMDs have been found to correlate to malnutrition and insufficient nutrient intake. Moreover, foods with modified textures have a lower amount of nutrients and calories and may contribute to poor appetite in the elderly population due to an unappealing factor. A study explored the relationship between TMDs and poor appetite in 208 elderly patients admitted to a rehab unit due to conditions such as stroke, musculoskeletal disease, or deconditioning (Shimizu et al., 2021). Participants were placed into two groups based on the International Dysphagia Diet Standardization Initiative (IDDSI) food texture level: (a) levels 3 to 5 were assigned to the texture-modified diet group (n=56) and (b) levels 6 and 7 were assigned to the normal diet group (n=152). Appetite was assessed using the Simplified Nutritional Appetite Questionnaire for the Japanese elderly, which consists of 4 domains: appetite, feeling of fullness, taste of food, and mood. Results showed that TMDs were independently associated with poor appetite, even after adjusting for swallowing function. A greater prevalence of poor appetite was found to be associated with a greater modification of food texture, with 100% of patients in IDDSI level 3 reporting poor appetite compared to 40.8% of patients in level 7. These findings indicate that consuming a texture-modified diet has a correlation to poor appetite. The authors suggest that appetite may be improved in patients on TMDs by improving the appearance, taste, flavor, and nutrients of the food.

As TMDs are indispensable for swallowing safety in the management of dysphagia, nutrient intake and adequacy in older adults on TMDs need to be evaluated. Notably, heterogeneity of studies and the absence of standardized tools to classify meal texture

can make it difficult to draw evidence-based conclusions regarding specific modifications in texture or individualized interventions. A systematic review and meta-analysis showed that texture-modified foods appear to have lower-nutrient density than regular diets; and, adults consuming TMDs have a lower energy and fluid intake compared to those on regular diets (Wu, Miles and Braakhuis, 2020). Shaping TMDs into regular food-like shapes significantly improved energy and protein intake compared to traditional TMDs. Additionally, supplementing and fortifying foods improved macro- and micronutrient intake. Findings indicate that enriching and modifying meal texture and consistency increased nutrient consumption, which may mitigate the risk of malnutrition.

Key Takeaways

- Screening for dysphagia is an important tool to mitigate malnutrition in the elderly.
- TMDs may have greater acceptance by patients undergoing dysphagia treatment when factors like appearance, taste, flavor, and nutrients are modified to a person's liking and needs, thus increasing appetite. Dysphagia may lead to poor nutrient intake and correlate to malnutrition for various reasons including: poor appetite, mechanical swallowing dysfunctions, comorbidities, unappetizing food presentation, and lower nutritional value of TMDs. Additional studies are needed to evaluate the effects of these modifications on appetite and possibly risk of malnutrition.
- The IDDSI Framework plays a significant role in the management of dysphagia and malnutrition as it provides a common terminology to describe food textures and drink thickness, promoting patient safety. There is an ongoing need for research and clinical use of a standardized tool such as IDDSI to facilitate data pooling from multiple studies and provide evidence-based practice guidance.

REFERENCES

Tagliaferri S, Lauretani F, Pelá G, Meschi T, Maggio M. The risk of dysphagia is associated with malnutrition and poor functional outcomes in a large population of outpatient older individuals. *Clin Nutr.* 2019 Dec;38(6):2684-2689. doi: 10.1016/j.clnu.2018.11.022. Epub 2018 Nov 30. PMID: 30583964.

Shimizu A, Fujishima I, Maeda K, Murotani K, Kayashita J, Ohno T, Nomoto A, Ueshima J, Ishida Y, Inoue T, Mori N. Texture-Modified Diets are Associated with Poor Appetite in Older Adults who are Admitted to a Post-Acute Rehabilitation Hospital. *J Am Med Dir Assoc.* 2021 Sep;22(9):1960-1965. doi: 10.1016/j.jamda.2021.05.018. Epub 2021 Jun 14. PMID: 34139151.

Wu XS, Miles A, Braakhuis A. Nutritional Intake and Meal Composition of Patients Consuming Texture Modified Diets and Thickened Fluids: A Systematic Review and Meta-Analysis. *Healthcare (Basel).* 2020 Dec 21;8(4):579. doi: 10.3390/healthcare8040579. PMID: 33371326; PMCID: PMC7767351.