Assessing Nutrition in Older Adults

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WHY: While poor nutrition is not a natural concomitant of aging, older adults are at risk for malnutrition due to physiological, psychological, social, dietary, and environmental risk factors. Weight loss in older adults is often associated with a loss of muscle mass and can ultimately impact functional status. Obesity also affects functional status and can cause or exacerbate chronic health problems such as hypertension (Hsiao, Mitchell, Coffman… Jensen, 2013). Malnutrition in older adults is associated with complications and premature death. The progression to malnutrition is often insidious and often undetected. The nurse plays a key role in prevention and early intervention of nutritional problems.

BEST TOOL: The Mini-Nutritional Assessment Short-Form (MNA®-SF) is a screening tool used to identify older adults (> 65 years) who are malnourished or at risk of malnutrition. The MNA®-SF is based on the full MNA®, the original 18-item questionnaire published in 1994 by Guigoz and colleagues. The most recent version of the MNA®-SF was developed in 2009 (Kaiser et al., 2009) and consists of 6 questions on food intake, weight loss, mobility, psychological stress or acute disease, presence of dementia or depression, and body mass index (BMI). When height and/or weight cannot be assessed, then an alternate scoring for BMI includes the measurement of calf circumference. Scores of 12-14 are considered normal nutritional status; 8-11 indicate at risk of malnutrition; 0-7 indicate malnutrition. An advantage of the tool is that no laboratory data are needed. An in-depth assessment and physical exam should be performed when patients are identified to be malnourished or at nutritional risk. A review of symptoms and objective clinical findings should be assessed in addition to the patient's cultural factors, preferences, social needs/desires surrounding meals. A 72-hour food diary recording the patent's consumption is another important supplement to the MNA®-SF.

TARGET POPULATION: The MNA®-SF provides a simple, quick method of identifying older adults who are at risk of malnutrition. The MNA®-SF should be completed quarterly for institutionalized older adults and yearly for normally nourished community-dwelling older adults.

VALIDITY AND RELIABILITY: The full MNA® has been validated in many research studies with older adults in hospital, nursing home, ambulatory care, and community settings. Studies have demonstrated internal consistency and inter-observer reliability to range from 0.51 to 0.89 (Guigoz, 2006). The MNA®-SF has a sensitivity of 89%, specificity of 82%, and a strong positive predictive value (Youden Index = 0.70) (Kaiser et al., 2009). When compared to the full MNA, the sensitivity (82.7% to 89.3%) and specificity (87.9 % to 91.6%) of the MNA®-SF to identify older adults at risk of malnutrition, and the sensitivity (82.7% to 100%) and specificity (94.1 % to 97.2%) of MNA®-SF to identify older adults with malnutrition is good (Kostka, Borowiak, & Kostka, 2014).

STRENGTHS AND LIMITATIONS: Unlike many other nutritional instruments, the full MNA®, and the MNA®-SF were developed to be user-friendly, quick, non-invasive, and inexpensive. The MNA®-SF takes about 5 minutes to complete and the questions can easily be incorporated into a complete geriatric assessment. The MNA® and MNA®-SF have been used extensively in clinical research in over 200 international studies (Cereda et al., 2016). A limiting factor may be accurate assessment of height and weight to obtain BMI in bedridden individuals. To that end, users of the MNA®-SF can substitute calf circumference for BMI. However, clinician lack of familiarity with the requirement of measuring calf circumference is a potential limitation (DiMaria-Ghalili & Guenter, 2008). Question A focuses on food intake (not artificial nutrition), and the appropriateness of the MNA®-SF for use in older adults who receive tube-feeding (Bauer, et al., 2008) or total parenteral nutrition needs to be considered. Patients receiving tube-feeding or total parenteral nutrition should be monitored by a dietitian or trained nutrition support professional.

MORE ON THE TOPIC:
Best practice information on care of older adults: https://consultgeri.org.
Mini Nutritional Assessment (MNA®) Home Page: Most recent research with excellent information for both nurses and older adults: www.mna-elderly.com.
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Mini Nutritional Assessment
MNA®

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Last name:	First name:

Sex:	Age:	Weight, kg:	Height, cm:	Date:

Complete the screen by filling in the boxes with the appropriate numbers. Total the numbers for the final screening score.

Screening

A **Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?**

0 = severe decrease in food intake
1 = moderate decrease in food intake
2 = no decrease in food intake ☐

B **Weight loss during the last 3 months**

0 = weight loss greater than 3 kg (6.6 lbs)
1 = does not know
2 = weight loss between 1 and 3 kg (2.2 and 6.6 lbs)
3 = no weight loss ☐

C **Mobility**

0 = bed or chair bound
1 = able to get out of bed / chair but does not go out
2 = goes out ☐

D **Has suffered psychological stress or acute disease in the past 3 months?**

0 = yes   2 = no ☐

E **Neuropsychological problems**

0 = severe dementia or depression
1 = mild dementia
2 = no psychological problems ☐

F1 Body Mass Index (BMI) (weight in kg) / (height in m^2)

0 = BMI less than 19
1 = BMI 19 to less than 21
2 = BMI 21 to less than 23
3 = BMI 23 or greater ☐

IF BMI IS NOT AVAILABLE, REPLACE QUESTION F1 WITH QUESTION F2.
DO NOT ANSWER QUESTION F2 IF QUESTION F1 IS ALREADY COMPLETED.

F2 Calf circumference (CC) in cm

0 = CC less than 31
3 = CC 31 or greater ☐

Screening score (max. 14 points)

12 - 14 points: Normal nutritional status
8 - 11 points: At risk of malnutrition
0 - 7 points: Malnourished ☐☐

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