

UCLA Family Medicine Ed Day

Prevention of Malnutrition in Older Adults

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Learning Objectives

- 1. Identify when and how to screen elderly patients for malnutrition**
- 2. Be familiar with common malnutrition screening and assessment tools**
- 3. Recognize the importance of interprofessional teams in the management and treatment of malnutrition**
- 4. Learn something you can use in clinic!**

Definitions

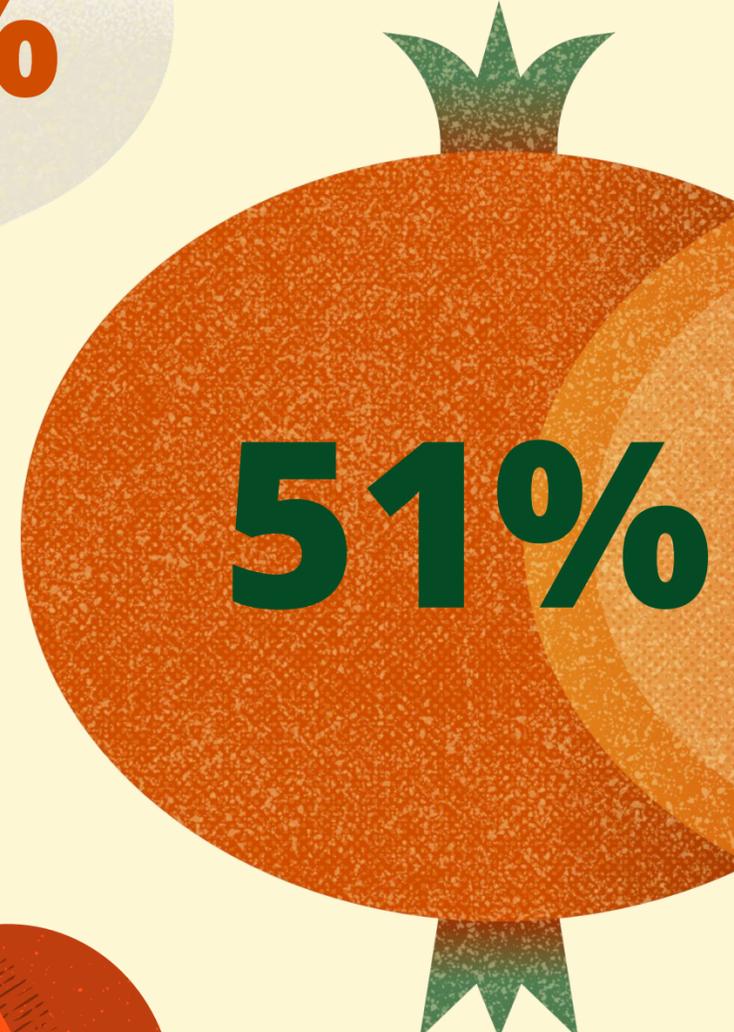
- **Malnutrition** can be defined as a “deficiency of energy and nutrients in the diet that causes a measurable clinical outcome or impact on body composition or function”
 - **Undernutrition** is defined as an inadequate intake of protein and/or calories
 - **Sarcopenia** is a progressive loss of skeletal muscle mass and function
 - **“Anorexia of aging”** is the reduced appetite and/or decreased food intake in older adults
 - **Normal BMI in older adults** is 23 to 30 kg per m², per Medicare definition
 - While malnutrition often refers to undernutrition, malnutrition can also refer to individuals with overnutrition
- 

Epidemiology & Impact

- Individuals aged 65 and older are the fastest-growing age group
- About **25%** of older adults aged 65 and older are considered malnourished or at risk of malnutrition
- Among older adults receiving home health care, **12%** were malnourished and **51%** were at risk of malnourishment
- Malnutrition in older adults can decrease quality of life and increase the risk of morbidity and mortality



25%



51%



12%

Physiological Changes: Reduced appetite, taste and smell changes, and digestive inefficiency

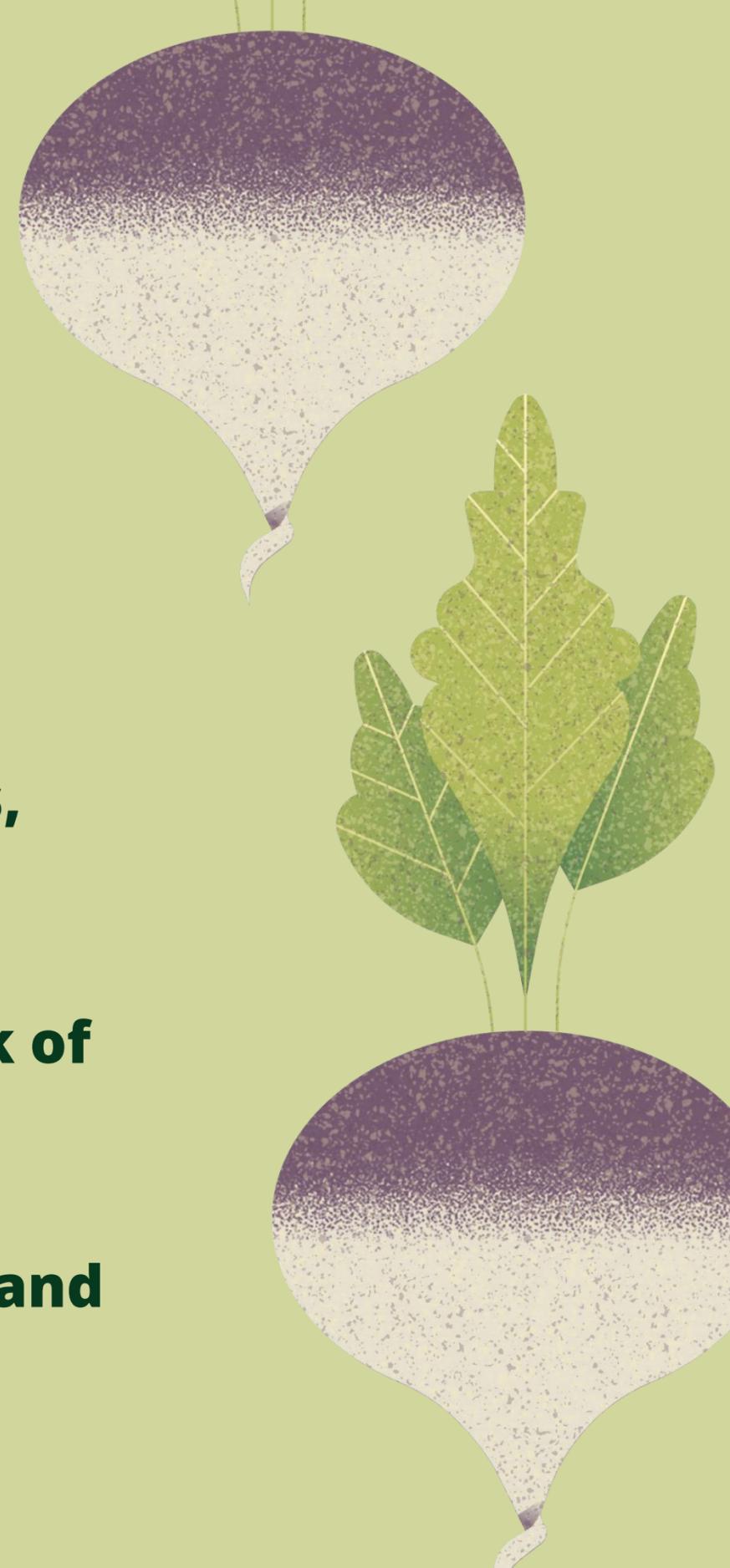
Chronic Conditions: Diabetes, cardiovascular disease, gastrointestinal disorders, kidney disease, and cancer

Psychological: Depression and cognitive impairment

Medications: Appetite suppressants, stimulants, diuretics, and drugs that affect nutrient absorption

Socioeconomic Factors: Isolation, limited income, and lack of access to nutritious food

Physical Limitations: Difficulty preparing meals, chewing and swallowing problems, and decreased mobility



Screening Tools

MNA: food intake, involuntary weight loss, mobility, psychological stress/acute disease, neuropsychological problems, and BMI

MUST: BMI, weight loss, and illness in relation to food intake

MST: Appetite status and weight loss

SNAQ: Appetite, food timing during the day, food preferences, and the daily number of meals

GNRI: Serum albumin and the relationships between current weight and ideal weight

SCREEN-14 (previously known as SCREEN-II): BMI, unintentional weight loss, changes in appetite, and the acute effects

When to screen?

Unintentional weight loss >5% in 6 months

BMI <20 (for older adults >65)

Poor dietary intake over the last week

Functional decline or impaired cognitive function

Screening Tools

Select Nutrition Screening Tools and Populations for Use in Adult Patients

Name of Screening Tool	Population	Applicable Settings	User
Mini Nutritional Assessment – Short Form (MNA [®] -SF)	Older adults (65+) ^{3,4}	Community, long-term care, rehabilitation, and hospital settings	Clinicians
Self-Mini Nutritional Assessment (Self-MNA [®])	Older adults (65+) ⁵	Community setting	Patients and Caregivers
Malnutrition Universal Screening Tool (MUST)	All adults ⁶	Hospital and community settings	Clinicians
Malnutrition Screening Tool (MST)	All adults ^{6,7}	All care settings	Clinicians
Nutrition Risk in the Critically Ill (NUTRIC)	All adults ⁶	Critical care settings	Clinicians
Nutrition Risk Score (NRS-2002)	All adults ^{6,8}	Hospital and critical care settings	Clinicians

Screening Tools: MNA-SF

- **Mini-Nutrition Assessment**
- **MNA has a long, short form (SF), and a self-administered version**
- **The MNA-SF is short and easy to administer**
- **Includes 6 elements: food intake changes, weight loss, mobility, acute illness, neuropsychological stress, and BMI or calf circumference**
- **A score of 11 or less suggests the patient is at risk of malnutrition or is malnourished**
- **MNA-SF is associated with poor clinical outcomes and can predict functional decline**

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.

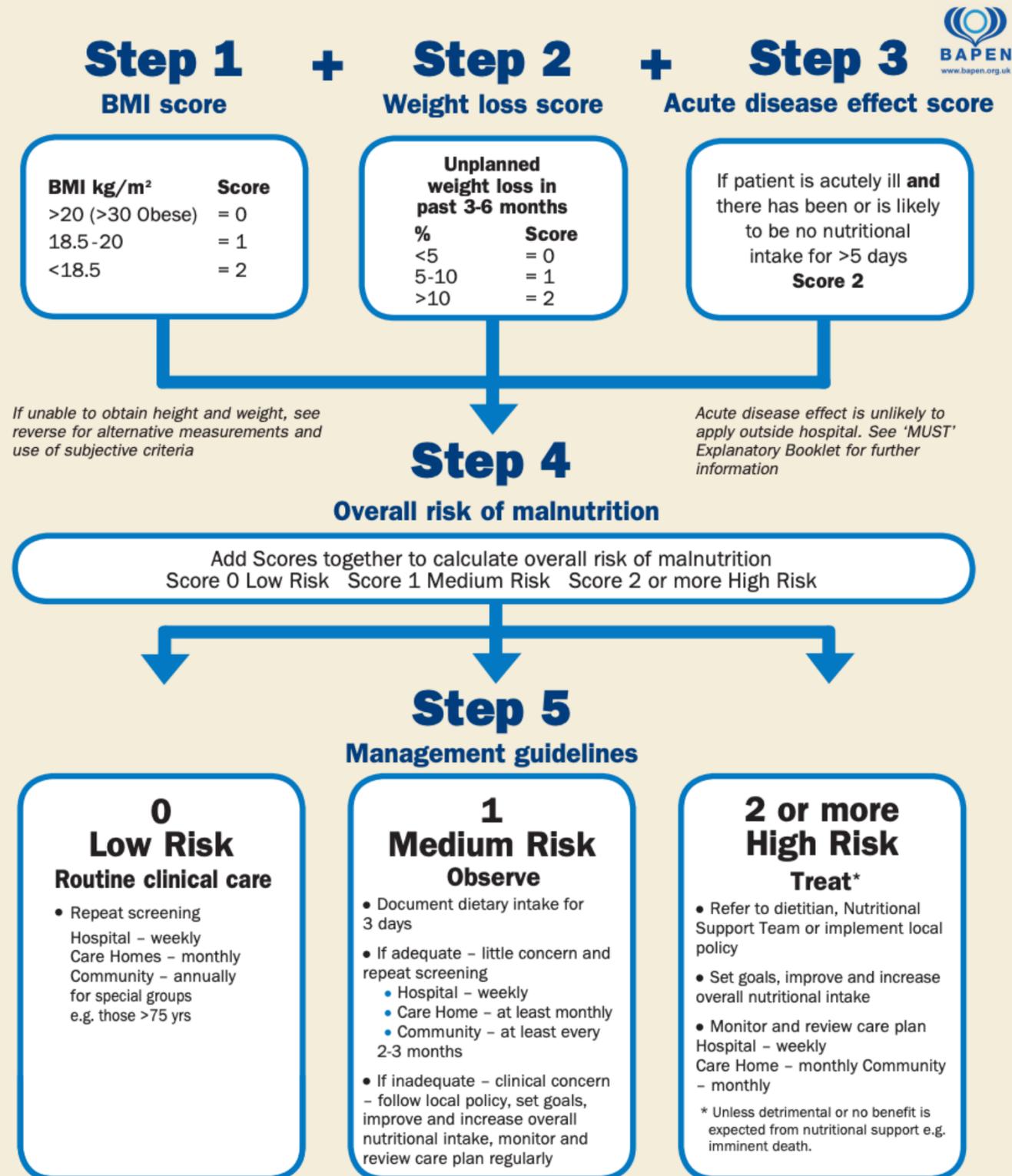
F2 Calf circumference (CC) in cm
0 = CC less than 31
3 = CC 31 or greater

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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Screening Tools: MUST



- **Malnutrition Universal Screening Tool**
- **Created by the British Association for Parenteral and Enteral Nutrition (BAPEN)**
- **Includes: BMI, history of involuntary weight loss, and the likelihood of future weight loss secondary to acute illness, considering the absence of food intake for more than 5 days**
- **MUST is a popular screening tool for hospitalized patients, but it can also be used in the community setting**
- **All risk categories require treatment of underlying conditions and nutritional guidance**

Screening Tools: MST

- **Malnutrition Screening Tool**
- **Short and easy to administer**
- **Includes questions about appetite, nutritional intake, and recent weight loss**
- **A total of 7 points**
- **Scores of 2 or less suggest the need for additional assessment**

STEP 1: Screen with the MST

1. Have you recently lost weight without trying?

No 0

Yes 2

If yes, how much weight have you lost?

2-13 lb (1-6 kg) 1

14-23 lb (6-10 kg) 2

24-33 lb (10-15 kg) 3

34- lb (15 kg) and more 4

Unsure 2

Weight loss score: _____

2. Have you been eating poorly because of a decreased appetite?

No 0

Yes 1

Appetite score: _____

Add weight loss and appetite scores

MST SCORE

STEP 2: Score to determine risk

MST = 0 or 1
NOT AT RISK

If length of stay exceeds 7 days, then rescreen , repeating weekly as needed

MST = 2 OR MORE
AT RISK

Eating poorly and/or recent weight loss

Rapidly implement nutrition intervention.
Perform nutritional consult within 24-72 hours depending on risk

STEP 3: Intervene with nutritional support for your patients at risk of malnutrition

Notes: _____

Screening Tools: SNAQ

My appetite is *

- very poor
- poor
- average
- good
- very good

When I eat *

- I feel full after eating only a few mouthfuls
- I feel full after eating about a third of a meal
- I feel full after eating over half a meal
- I feel full after eating most of the meal
- I hardly ever fell full

Food tastes *

- very poor
- bad
- average
- good
- very good

Normally I eat *

- Less than one meal a day
- One meal a day
- Two meals a day
- Three meals a day
- More than three meals a day

- **Simplified Nutritional Appetite Questionnaire**
- **Assess the risk of weight loss in the next 6 months**
- **The responses are reported on a scale ranging from “very bad” to “very good”**
- **Answers A-E; A = 1 point E = 5 points**
- **Patients with a score of 14 or less are at risk**

- **Assessment differs from nutritional screening in the amount of information obtained**
- **Mini Nutritional Assessment (MNA):** Includes 18 questions about weight, height, BMI, dietary intake, functional capacity, psychological factors, and medical history
- **Subjective Global Assessment (SGA):** Includes the patient's history (weight loss, changes in food intake, GI symptoms, and functional capacity), physical examination (decreased muscle mass, subcutaneous fat, ankle edema, sacrum, and ascites)
- **Patients often benefit from referral to a registered dietitian or nutritionist**

Nutritional Assessment





Treatment

Nutritional Support

- **Increase protein intake**
- **Monitor common micronutrient deficiencies of aging, including calcium, vitamin D, vitamin C, vitamin B12, vitamin B6, Fe, magnesium, folic acid, and zinc**
- **Oral Nutritional Supplements can increase calorie and protein intake, but should not be a replacement for whole foods**
- **Do not rely on appetite-stimulating medications**
- **Referral to a nutritionist or registered dietician**

Addressing Underlying Causes

- **Review and adjust medications**
- **Manage chronic diseases**

Family Support

- **Include caregivers who can assist with meal preparation and feeding**



Prevention

Support a Healthy Eating Pattern

- Encourage balanced, nutrient-dense meals rich in protein, fruits, vegetables, whole grains, and healthy fats
- Eat smaller, frequent meals if appetite is poor
- Ensure adequate hydration
- Focus on important nutrients including potassium, calcium, vitamin D, fiber and B12

Address Medical Needs

- Optimize management of chronic diseases
- Review medications that may impact appetite or nutrient absorption



Prevention Cont.

Make Physical Activity a Priority

- **Maintain a healthy weight**
- **Engage in regular physical activity to maintain muscle mass**
- **Aim for at least 150 minutes of moderate activity per week**
- **Move for 30 minutes every day**
- **Include weight-bearing exercises to promote bone health and prevent sarcopenia and frailty**

Find Social Support

- **Involve family and friends**
- **Get connected with other older individuals**
- **Use community resources**



Prevention:

Early interventions, social support, and proper nutrition can reduce the risk of malnutrition in older adults

Screening:

Routine screenings using tools like MNA-SF*, MUST, MST, and SNAQ are essential for early identification and intervention

Treatment:

Interprofessional healthcare teams are essential. Treatment involves nutritional support, medical management, and addressing underlying issues

Recommendations:

Regular screening, education, improved food access, and community involvement are key to reducing malnutrition in older adults

Key Takeaways



THANK YOU!

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Helpful videos:

MNA-SF: https://www.youtube.com/watch?v=9oT7pF_Gck8

MUST: <https://www.youtube.com/watch?v=2io-ehpmwRs>

SNAQ: <https://www.youtube.com/watch?v=sX9sa20d4EA>

Screening Tools for Adults:

<https://nutritioncare.org/nutrition-screening-tools-for-adults/>