Protein Supplements for Patients in Long-Term Care: When and Why it is Appropriate

INTRODUCTION

Elderly patients in long-term care settings are at risk for malnutrition, pressure injuries, falls, sarcopenia, and healthcare-acquired infections. These residents may also have conditions such as obesity, shortness of breath, volume restriction, decreased appetite, low oral intake, and/or weight loss. This tool will help clinicians in a long-term care setting identify situations where concentrated liquid protein is appropriate for consideration as part of medical nutrition support therapy, and how to implement.

CLINICAL FACTS

- 29% of all patients aged 65 years and above discharged from US hospitals in 2016 were discharged to a nursing home or rehabilitation facility.
- Malnutrition is associated with a variety of health complications, including increased mortality, immune suppression, muscle wasting, longer length of hospital stay, and higher healthcare costs in older adults.\(^1,2\)
- Older adults need more dietary protein to support good health, promote recovery from illness, and maintain functionality.\(^3\)
- Older adults need to make up for age-related changes to protein metabolism and offset inflammatory and catabolic conditions associated with chronic and acute illnesses commonly associated with aging.\(^3\)
- Nursing home residents had the following nutrition parameters:
  - Up to 18.2% had a BMI of less than 20
  - Up to 7.7% had weight loss
  - Up to 8.2% had severe decrease in food intake\(^4\)
- Most older adults need a daily protein intake of 1.0-1.2 grams/kg/day and those who have acute or chronic disease need even more (1.2-1.5 grams/kg/day) except for those with severe kidney disease not on dialysis.\(^3\)
- A systematic review and meta-analysis demonstrated that geriatric rehabilitation patients with protein supplementation had better functional outcomes.\(^5\)

![Rate of malnutrition is highest in older adults](image-url)

**CLINICAL ACTIONS**

- Perform nutrition screening followed by completion of a nutrition assessment by the registered dietitian nutritionist in those identified at nutrition risk for malnutrition or diagnosed with malnutrition on admission to your facility.
- Recognize that older adults often eat poorly. Data suggests patients consume less than 50% of both protein and energy requirements from meals.6,7
- Avoid dietary restrictions and provide more liberal oral diets to promote greater nutrient intakes.8,9
- Initiate oral nutrition supplements (ONS) when oral intake is inadequate. Use of ONS can improve dietary intake and body weight and lower the risk of complications during the hospital stay.8
- Provide concentrated liquid protein when the patient is consuming adequate calories but not enough protein.
- Add concentrated liquid protein when the patient is eating enough calories and/or declines ONS.
- Incorporate exercise in combination with increased protein at individualized levels that are safe and tolerated.3
- Continue nutritional care and follow-up in malnourished patients through dietitian consultation. Hospital readmissions can be reduced with ongoing nutritional follow-up from a dietitian after hospital discharge.10

**CASE STUDY**

A 70-year-old male resident with some chronic diseases including COPD and CHF weighing 75 kg (165 lbs.) requires a minimum of 1.2 grams/kg/day which is 90 grams of protein. He is somewhat fluid restricted and has a limited appetite. To consume 90 grams of protein he would have to eat:

**Breakfast**
- 2 eggs and bowl of cereal = 14 gm

**Lunch**
- Cheeseburger on a roll = 29 gm

**Dinner**
- Chicken breast and 8 oz. of milk = 35 gm

Even if he was able to consume all of that, he would still need 12 more grams of protein. How can you make that happen?

- Provide concentrated liquid protein
- Have provider order concentrated liquid protein to be given with med pass and with meals
- Have physical therapy implement exercise program
- Have nutrition and nursing staff monitor weight, caloric and protein intake, volume, and appetite

**References**

10 Pedersen JL, Pedersen PU, Damsgaard EM. Nutritional follow-up after discharge prevents readmission to hospital - a randomized clinical trial. J Nutr Health Aging 2017;21(1):75-82.)
CLINICAL DECISION TREE FOR PROTEIN SUPPLEMENTATION IN LONG-TERM CARE PATIENTS

Resident is at risk and/or diagnosed with malnutrition

Registered Dietitian Nutritionist (RDN) Assessment & Evaluation: Consider these protein energy malnutrition (PEM) high risk red flags:

- Low overall po intake/appetite at meals
- Rarely consumes protein at meals/snacks
- Poor dentition
- Volume restriction

PEM red flags which increase risk of resident not meeting protein & nutrition needs:

Conditions which increase protein needs:

- Recent critical illness
- Compromised skin integrity/wounds present
- End stage renal disease requiring dialysis

Resident meeting protein needs?

- YES: Continue MNT & RDN re-evaluation per facility protocol
- NO: Resident meeting calorie needs?
  - YES: Add oral nutrition supplement (ONS) and concentrated liquid protein to MNT plan
  - NO: Resident not consuming enough ONS or fortified foods
    - Add concentrated liquid protein to MNT plan
    - Continue MNT & RDN re-evaluation per facility protocol

MNT = Medical Nutrition Therapy

Link to ASPEN EN Formula Guide:
EN Modular Products
nutritioncare.org/ENModularLiquid

Visit nutritioncare.org/MAW for more resources.