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
- 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 intake4
- 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

**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.\(^10\)

**References**


**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?**

- **This resident has the following red flags for protein energy malnutrition: volume restriction, limited/decreased appetite**
- **RDN assessment = need for 1.2 gm/kg/day of protein. This resident may struggle to meet the recommended 90 grams protein daily with food.**
- **Consider concentrated liquid protein**

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

Continued
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**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 concentrated liquid protein to MNT plan
      - Add concentrated liquid protein to MNT plan
        - Continue MNT & RDN re-evaluation per facility protocol
    - NO: Add oral nutrition supplement (ONS) and concentrated liquid protein to MNT plan
      - 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.