

**VANDERBILT DIETETIC INTERNSHIP PROGRAM**  
**GERIATRIC ROTATION**  
**GERIATRIC READINGS WORKSHEET**

**PATHOPHYSIOLOGY OF AGING AND TARGETING MALNUTRITION IN THIS POPULATION**

1. The loss of age-related muscle is known as \_\_\_\_\_.
2. Malnutrition in the aging population involves a complex interaction of \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ factors.
3. Starting around the age of 40 years, \_\_\_\_\_ decreases by \_\_\_\_% until the age of \_\_\_\_\_ years, when losses rapidly increase to \_\_\_\_\_% per decade.
4. Poor intake and weight loss can accelerate muscle loss and lead to complications such as \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
5. The definition of frailty in the older patient is \_\_\_\_\_ and \_\_\_\_\_.
6. Hormonal changes are not associated with sarcopenia. True \_\_\_\_\_ False \_\_\_\_\_
7. The elderly population generally has higher levels of circulating cytokines, which \_\_\_\_\_, and \_\_\_\_\_.
8. Physical activity may prevent the progression of age-related muscle loss. What are the recommendations for:
  - aerobic exercise \_\_\_\_\_
  - resistance training \_\_\_\_\_
9. Malnutrition among the elderly in the acute care setting ranges from \_\_\_\_\_% to \_\_\_\_\_%, and from \_\_\_\_\_% to \_\_\_\_\_% in the community setting. This places this population at greater risk for \_\_\_\_\_ and \_\_\_\_\_.
10. Risk for readmissions to the hospital, longer length of stay, and placement in long-term care settings are not associated with declining nutritional status. True \_\_\_\_\_, False \_\_\_\_\_
11. There are several treatable causes of weight loss in the elderly, as shown by the "Meals on Wheels" mnemonic. An abbreviated version that can be used to quickly identify causes for poor nutritional status in an elderly individual are: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
12. What are the A.S.P.E.N guidelines 6 criteria for diagnosing malnutrition?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
13. A screening tool developed and validated for those 65 years and older is the Mini Nutrition Assessment (MNA). What are the BMI recommendations for this population? \_\_\_\_\_
14. The Mifflin-St. Jeor equation used for calculation of calorie needs resulted in values closest to indirect calorimetry. In addition, the Academy Evidence Library contains additional recommendations for determining energy needs. These are:  
Females \_\_\_\_\_  
Males \_\_\_\_\_

15. Why do the elderly require a higher protein intake?

\_\_\_\_\_

16 .Protein requirements are:

-Average healthy older individual \_\_\_\_\_

-acutely or chronically ill individual \_\_\_\_\_

-those with marked malnutrition or severe illness \_\_\_\_\_

17. The general recommendations for protein intake per meal of older individuals is \_\_\_\_\_.

18. Oral Nutrition Supplements are beneficial for the following groups:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

19. According to ESPEN, the following groups may benefit from tube feeding:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

20. Enteral nutrition is not warranted among those with advanced/terminal dementia or to reduce the risk for aspiration pneumonia. True\_\_\_\_\_ False\_\_\_\_\_

21. When is a PEG tube preferred to an NGT? \_\_\_\_\_

22. Do the elderly benefit from fiber containing formulas? \_\_\_\_\_

Why? \_\_\_\_\_

23. Are appetite stimulants currently approved by the FDA for use in the elderly in the USA? \_\_\_\_\_

24. \_\_\_\_\_ is an \_\_\_\_\_ that has been shown to promote intake and weight gain among the elderly.

25. Is megace an ideal medications use for appetite stimulation in the elderly? \_\_\_\_\_

26. The use of oral nutrition supplementation can reduce the readmission rate of high risk populations, including the elderly. True\_\_\_\_\_ False\_\_\_\_\_

### MICRONUTRIENT NEEDS IN THE ELDERLY

27. Studies show that 66.2% of recent hospitalized elderly are at high nutritional risk for malnutrition or had the presence of malnutrition, but those > 85 years were assessed at \_\_\_\_\_%.

28. What nutrients are of particular concerns for elderly women?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

29. Vitamin A deficiency most commonly manifests as \_\_\_\_\_, but can also include \_\_\_\_\_ and \_\_\_\_\_.

30. Vitamin A toxicity is most evident in changes in skin and mucosa. These include \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

More serious complications include \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

31. Vitamin A deficiency can be seen in diarrheal illness, especially those that last for months.  
True \_\_\_\_\_ False \_\_\_\_\_

32 Absorption of thiamine occurs in the \_\_\_\_\_ and \_\_\_\_\_.

33. Thiamine deficiency is commonly referred to as beriberi and has 2 forms. What are the 2 forms and describe their symptoms.

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34. Wernicke encephalopathy is usually seen most often in \_\_\_\_\_.  
It's symptoms are \_\_\_\_\_. \_\_\_\_\_, and \_\_\_\_\_.  
This is the most common manifestation of B1 deficiency in the United States.

35. Strict vegetarians are not at risk for development of vitamin B-12 deficiency.  
True \_\_\_\_\_ False \_\_\_\_\_

36. Most Vitamin B-12 deficiencies arise from a loss of intestinal absorption. What disease states might cause this?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

37. Studies report significant associations between Vitamin B-12 deficiency and risk for dementia or global cognitive decline. True \_\_\_\_\_ False \_\_\_\_\_

38. Higher serum folate levels are associated with higher homocystein levels in older adults. True \_\_\_\_\_ False \_\_\_\_\_

39. What population group is at higher risk for vitamin C deficiency? \_\_\_\_\_

40. What is one physiologic reason older individuals are at risk for vitamin D deficiency?

\_\_\_\_\_

41- Vitamin D deficiency is associated with falls, fractures, poorer cognitive function, depression, and cardiovascular death. True \_\_\_\_\_ False \_\_\_\_\_

42. What are the vitamin D recommendations for reducing fractures in institutionalized individuals? \_\_\_\_\_

43. Taking an iron supplement with what vitamin enhances absorption? \_\_\_\_\_

44. Dietary calcium is preferred over supplemental calcium for what reason?

\_\_\_\_\_  
\_\_\_\_\_.

## ENTERAL NUTRITION FOR OLDER ADULTS IN HEALTHCARE COMMUNITIES

45. According to Medicare Part B coverage, what criteria must be met to qualify for standard tube feeding reimbursement?

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46. One evidence-based recommendations is that feeding tubes should be inserted for 4 conditions. These are:

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47. Enteral nutrition delays mortality for individuals with end-stage dementia. True\_\_\_\_\_ False\_\_\_\_\_

48. Research indicates that one key to preventing aspiration in all patients (including those fed enterally) is good oral hygiene. True\_\_\_\_\_ False\_\_\_\_\_

49. What is the Academy of Nutrition and Dietetics position on ethical decision to be tube fed or not?

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50. Before recommending a feeding tube, the physician and interdisciplinary team should determine whether the patient/residents treatment goals are curative, rehabilitative, or palliative. Assessment criteria include:

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51. The nutritional treatment guidelines for patients with pressure ulcers are:

calories\_\_\_\_\_

protein\_\_\_\_\_

fluid\_\_\_\_\_

52. What should be recommended for older adults receiving a volume of enteral formula that does not meet 100% of the DRI? \_\_\_\_\_

53. Routine protocols for monitoring and evaluation of patients on enteral nutrition include:

- limiting hang time for closed systems to 24 - 48 hours
- avoid mixing medication with formula
- assessing weights on a regular basis--at least weekly
- flushing tubes before and after intermittent feedings, before and after checking residuals, before and after medication administration