

MALNUTRITION MATTERS: What Home Health Staff Can Do

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Common Assumptions About Aging:

- Nutritional deficiencies are just a part of aging and the disease state
- Intervention won't really do much good
- Nutrition assessment and treatment should be a routine part of care for all older people!

Protein Energy Malnutrition (PEM)

- PEM is a common, potentially serious and often under diagnosed condition among older individuals
- As people age there can be:
 - physiological decrease in food intake
 - age related decline in physical activity
 - decrease in BMR

These changes contribute to a disease condition called Anorexia of Aging

Among Elderly Living in the Community, PEM Results in:

- Reduced performance in basic & instrumental ADL's
- Increased hip fractures
- Delayed wound healing, pressure ulcers
- Susceptibility to infections
- Delayed recovery from acute illness

Malnutrition & Unintended Weight Loss Causes:

- Continued decline in health
- Reduced physical & mental functioning
- Use of more health care services
- Earlier nursing home admission
- Increased mortality

How Common is PEM in the Elderly?

- Up to 15% of community-dwelling & ambulatory elderly
 - 5 - 44% of home bound elderly
 - 12 - 50% of hospitalized elderly
 - 23 - 60% of institutionalized older individuals
- Estimates vary widely due to different criteria used to screen for and detect malnutrition

What Factors Contribute to PEM?

Four basic areas:

- Physiologic
- Pathologic
- Sociologic
- Psychologic

Pathologic

- Hypermetabolism – infections, COPD, AIDS, rheumatoid arthritis, hyperthyroidism & Parkinson’s all increase energy needs
- Anorexia – dentures, strokes, tremors, arthritis all interfere with ability to eat & prepare food
- Treatment of chronic diseases – diabetes, hypertension & CHF – dietary restrictions and medications affect food intake

Pathologic

- Swallowing – stroke, hiatal hernia can cause aspiration and food aversion
- Disorders of the GI tract – reflux, constipation, diarrhea, malabsorption

Sociologic

- Poverty - cost of housing, medications, food, fuel
- Inability to shop, prepare food, feed self (2% of 65-84 year olds need assistance feeding; 7% of 85-year-olds or older need help)
- Loss of social networks
- Elder abuse – can cause anorexia due to distress or there may be deliberate food withholding by the care giver

Psychologic

- **Multiple losses- death of loved ones, disability, financial losses, change in social status**
- **Depression – associated with increased corticotrophin releasing factor, a strong anorectic agent**
- **Dementia**

Physiologic

- **Loss of lean body mass**
- **Decreased BMR**
- **Decline in smell and taste - this results in decreased variety & increased use of sugar & salt**

Physical Activity Benefits

- **Physical activity may help maintain cognitive functions in older adults**

Benefits of Exercise in Older Adults

- **Cardiovascular improvements**
- **Type 2 Diabetes Mellitus**
- **Osteoporosis**
- **Osteoarthritis**
- **Neuropsychologic health**

Benefits of Exercise in Older Adults

- **Cancer**
- **Other benefits**

Sarcopenia



There are Various Ways to be Active at Any Age

- Don't have a lawn mower you sit on, have one that you push
- Walk your dog. Get one if you don't have one and walk it regularly
- Park your car at the far end of the supermarket
- Walk up a flight of stairs a little more often each day

There are Various Ways to be Active at Any Age

- Get yourself a remote phone and walk about each time you are chatting
- If your local store is nearby leave the car at home and walk to it
- Cancel your daily newspaper delivery and go out on foot each morning and buy it

There are Various Ways to be Active at Any Age

- If you find long walks boring or cumbersome, break them up into little ones. Walk around your block once four separate times a day. If each walk takes 7 minutes, times four means 28 minutes of extra walking each day

There are Various Ways to be Active at Any Age

- Every time there are adverts on TV get up and walk about for a couple of minutes. If you do that for two minutes each time, and do it just ten times a day, that's an extra 20 minutes' walking
- Hold on to doing as many household chores as you can. Only bring in paid help when you are really incapable of doing it any more

There are Various Ways to be Active at Any Age

- Stop using your garden sprinkler and use a hose-pipe
- If you regularly use the bus, get off at an earlier stop



What Tools Help to Determine Malnutrition in the Elderly?



History

- Wt. change over time -10 lbs. or more over 6 months is good indicator
- Dietary intake – recall or food diary
- Risk factors – poverty, social isolation, etc.
- Chronic Diseases
- Medications that cause anorexia
 - Digoxin
 - Theophylline
 - Non-steroidal anti-inflammatory
 - Psychotropics

Physical Exam

- Height & Weight
- Body Mass Index (BMI)
 - 24-29 for older individuals
 - below 24 is indicator of malnutrition in elderly (refer to BMI chart)
- Deficiency signs
 - skin, hair, nail, eyes, mouth or muscles

	Normal Weight	Over Weight	Obese	Extreme Obesity
BMI	Body Weight			
kg/m ²				
lb/in ²				
18	15.7	16.0	16.3	16.7
19	16.0	16.3	16.7	17.1
20	16.3	16.7	17.1	17.5
21	16.7	17.1	17.5	17.9
22	17.1	17.5	17.9	18.3
23	17.5	17.9	18.3	18.7
24	17.9	18.3	18.7	19.1
25	18.3	18.7	19.1	19.5
26	18.7	19.1	19.5	19.9
27	19.1	19.5	19.9	20.3
28	19.5	19.9	20.3	20.7
29	19.9	20.3	20.7	21.1
30	20.3	20.7	21.1	21.5
31	20.7	21.1	21.5	21.9
32	21.1	21.5	21.9	22.3
33	21.5	21.9	22.3	22.7
34	21.9	22.3	22.7	23.1
35	22.3	22.7	23.1	23.5
36	22.7	23.1	23.5	23.9
37	23.1	23.5	23.9	24.3
38	23.5	23.9	24.3	24.7
39	23.9	24.3	24.7	25.1
40	24.3	24.7	25.1	25.5
41	24.7	25.1	25.5	25.9
42	25.1	25.5	25.9	26.3
43	25.5	25.9	26.3	26.7
44	25.9	26.3	26.7	27.1
45	26.3	26.7	27.1	27.5
46	26.7	27.1	27.5	27.9
47	27.1	27.5	27.9	28.3
48	27.5	27.9	28.3	28.7
49	27.9	28.3	28.7	29.1
50	28.3	28.7	29.1	29.5

Lab Evaluations

- Serum Albumin
 - less than 3.5 mg/dL, strongly suggestive of PEM
 - less than 3.2 mg/dL, excellent predictor of mortality & morbidity every decline of .35 mg/dL, 24-56% increase in likelihood of dying
- Total Lymphocyte Count (TLC)
 - less than 1500 cells/mm, 4 X increase in mortality
 - less than 800 cells/mm, severe malnutrition

Screening/Diagnostic Tools

- Instant Nutritional Assessment (LAW)
 - Combines lymphocyte count, albumin & weight change
 - Widely used
 - Subjective Global Assessment (SGA)
 - Patient history, physical exam & clinician's judgment
- Reliability depends on experience of clinician

Screening/Diagnostic Tools

- **DETERMINE**
 - D - Disease
 - E - Eating Poorly
 - T - Tooth loss or oral pain
 - E - Economic hardship
 - R - Reduced social contact
 - M - Multiple medications
 - I - Involuntary weight loss or gain
 - N - Need of assistance with self care
 - E - Elderly person older than 80 years

Screening/Diagnostic Tools

Self administered list of 10 questions

Good screening and awareness tool,
not reliable diagnostic tool

Screening/Diagnostic Tools

- **SCALES**
 - combines 6 elements:
 - S - Sadness
 - C - Cholesterol
 - A - Albumin
 - L - Loss of weight
 - E - Eating problems
 - S - Shopping
 - Score of 3 or higher, high risk of malnutrition



Screening/Diagnostic Tools

- **Mini-Nutritional Assessment – (MNA)**
 - 18 items professional must administer
 - 98% accurate compared to comprehensive nutritional assessment
 - Tool of choice for many geriatric clinicians

Now What Do You Do?



Prompt Diagnosis Relies on A High Degree of Suspicion...

- We must learn not just to LOOK but to really SEE!
 - Has the individual lost weight?
 - Where do they fall on the BMI chart?
 - Are they able to eat?
 - Are they able to feed themselves?

Prompt Diagnosis Relies on A High Degree of Suspicion . .

- We must learn not just to LOOK but to really SEE!
 - How long does it take to complete a meal?
 - Do they eat a variety of foods or just the same things?
 - What textures can they eat?

. . . And A Team Approach

- Talk with other professionals within the health care system who ‘touch’ the client.
 - Have concerns been discussed with client, family, supervisor, physician?
 - Are there other services that the individual may be eligible for, like food stamps?

...And A Team Approach

- Talk with other professionals within the health care system who ‘touch’ the client.
 - Is a social worker already involved with the client?
 - Could a swallowing evaluation with a speech therapist be ordered?
 - Is a dietitian available through the local hospital, rehabilitation facility, etc.

Management of Malnutrition in Older People

- Treat depression
- Stop anorexogenic meds if possible
- Work with speech and/or occupational therapist for clients with Dysphasia
- Provision of meals: Meals on Wheels, Title III, or Elderly & Disabled Home Delivered Meals

Management of Malnutrition in Older People

- Feeding assistance
- Remove dietary restrictions if possible
- Manipulate texture/consistency
- Offer snacks

Nutritional Therapy is Important Part of Management of Malnourished Individuals



There is just no disease that improves with starvation.

Nutritional Therapy Can Take 3 Forms:

- Oral Caloric Supplementation
- Tube Feeding
- Parenteral Feeding

If the Gut Works, Use It!

- Increasing intake by mouth is preferred, if at all possible
 - If demands can't be met by p.o., short course of tube feeding may be indicated
 - Remember, aspiration of gastric contents is common even with precautions
 - Aspiration occurs in 44% of pts with NG tubes; 56% of pts with PEG
 - 40% of deaths related to tube feedings due to aspiration pneumonia

Changes in Vitamin/Mineral Needs

Inadequate intake of these vitamins and minerals can become problematic.

- B-12
- Vitamin D
- Calcium
- Iron
- Zinc
- Protein

Why Do These Nutrients Present Problems?

- B-12
 - Absorbed with intrinsic factor and gastric acid
 - Production of intrinsic factor and acid secretions often decreases with age

Vitamin B-12

- Adults 51 and older need 2.4 micrograms daily
- 10-15% over 60-years-old may have serious deficiency that is unrecognized and untreated
- B-12, with B-6 and Folate may prevent some loss of mental ability
- B-12 fortified foods and supplements can help meet needs

Why Do These Nutrients Present Problems?

- Vitamin D
 - Made with help of sunlight
 - Problems with mobility and safety concerns can limit time out doors

Vitamin D

- Requirement likely to increase to 1000 IU
- Increases absorption of calcium
- May decrease risk of some cancers, diabetes, protect physical performance, etc.

Why Do These Nutrients Present Problems?

- Calcium
 - Majority of bone mineralization completed before 35
 - Problems with lactose intolerance become more pronounced with age

Calcium

- Need at least 1200 mg. calcium for bone health after the age of 50
- Consume milk products
- If lactose intolerance is a problem, include calcium fortified products, such as orange juice, bread, pasta, etc.

Why Do These Nutrients Present Problems?

- Iron, Zinc and Protein
 - Best sources of iron, zinc, and protein is meat
 - Higher cost and dental problems with chewing meats can reduce intake

Dehydration is Problematic in Older Adults

- Total body water decreases with age
- Recognition and response to thirst is slowed
- Kidneys are less efficient in reabsorbing water

Dehydration is Problematic in Older Adults

- Dehydration can cause:
 - constipation
 - bladder problems
 - mental confusion
 - and, in bed ridden individuals, pressure sores

Ways to Improve Intake by Mouth

- Offer Snacks:
 - 2-3 small snacks can provide about 150 kcal and account for 14% increase in daily intake
 - Milk based drinks, if the individual isn't lactose intolerant
 - Supplements like Ensure and Boost

Ways to Improve Intake by Mouth

- Offer Snacks:
 - Add extra protein with addition of powdered milk, peanut butter, cheese, etc.
 - Nuts provide protein, walnuts also contain Omega 3 fatty acids (can be processed to fine meal consistency and sprinkled on foods)

Ways to Improve Intake by Mouth

- If possible, liberalize any diet restrictions
- Provide more seasoning to food (turmeric contains curcumin which has anti-inflammatory, anti-tumor, and antioxidant properties that may protect against some cancers, heart disease, arthritis, Alzheimer's, and ulcerative colitis)

Ways to Improve Intake by Mouth

- Use some 'super foods' high in antioxidants or omega 3 fatty acids
 - blueberries
 - kiwi
 - walnuts
 - fish

How We Live Has A Lot to do with How We Age and How We Die

