

## Lesson VI-1

### **NUTRITION & ASSESSMENT IN LATER YEARS Nutritional Needs and Nutrition-Related Concerns**

#### **OBJECTIVES:**

In this lesson, the student will:

1. Describe physiologic and other changes that occur with aging.
2. Discuss the nutritional implications of these changes.
3. Describe the nutrient needs of older adults.
4. Discuss factors that influence the food choices of older adults and factors that adversely affect nutritional status.

#### **ASSIGNMENTS:**

**MATERIALS:** Videotape: *Nutrition for the Over 50 Gang*

The fastest growing segment of the U.S. population are persons 60 years of age or older. In this country age 65 has been arbitrarily used as the transition point from middle age to old age. However, the process of aging happens gradually over time starting from about age 30. The rate of aging also varies considerably among individuals. This explains why some individuals seem young for their chronological ages while others seem older. Healthy lifestyle behaviors, discussed in the lesson on adulthood, seem to have a significant influence on how one ages physiologically, i.e. physiologic age.

#### **I. PHYSIOLOGICAL AND PHYSICAL CHANGES**

The physiological changes that occur with aging affect nutritional status just as growth and development do earlier in the life cycle. Many physical changes can also affect the older adult's ability to eat adequately.

##### **A. Body Composition**

The following changes in body composition occur due to hormonal changes, but to a certain degree good nutrition and physical activity can minimize these changes.

- decrease in lean body mass resulting in decrease in basal metabolic rate (BMR),
- increase in body fat and redistribution from subcutaneous to internal fat,
- decrease in bone mass or density,
- decrease in height due to thinning of disks between vertebrae and of the vertebrae itself, and

- decrease in total body water due to a decrease in extracellular water.

Nutritional implications include:

- decrease in BMR plus a reduction in activity level will require less calories to maintain weight,
- decrease in bone mass places individuals at risk for osteoporosis so calcium intake should be optimal, and
- decrease in total body water makes older persons more at risk of dehydration.

## **B. Gastrointestinal Tract**

- decrease in motility resulting in longer emptying of the stomach, due to loss of strength and elasticity of intestinal walls with aging, and
- reduced production and secretion of hydrochloric acid, pepsin, and gastric mucus, and
- decreased production of saliva.

Nutritional implications include:

- less saliva results in dry mouth and decreased initial digestion of starches,
- decreased absorption of vitamin B<sub>12</sub>, biotin, calcium, iron, and possibly zinc, and
- common occurrence of constipation. In addition to decreased motility, other factors that contribute to constipation are: diet low in fiber and fluids, lack of exercise, side effects of drugs, laxative abuse, and irregular bowel habits.

## **C. Cardiovascular System**

- decrease in the size of the heart and changes in the relative size of the chambers within the heart, and
- loss of elasticity in blood vessels.

Implications include:

- decreased ability of heart muscle to use oxygen so that physical stress is not as well tolerated, and
- more difficult for the heart to pump blood through the blood vessels.

## **D. Renal System**

Decrease in size of the kidneys and occurrence of functional abnormalities result in decreased renal blood flow and ability to clear drugs and metabolic wastes from the blood. Nutritional implications due to these changes are:

- decreased efficiency in handling sodium resulting in sodium retention or excessive losses, and

- decreased ability to handle protein waste products such as creatinine, urea, etc.

#### **E. Nervous System**

- reduction in actual number of taste buds,
- decrease in sense of smell, and
- loss of memory, especially short term memory.

Nutritional implications include:

- lack of taste may lead to decrease in food intake, and
- lack of sense of smell contributes decreased ability to taste and enjoy food.

#### **F. Physical Changes**

The following physical changes can also limit the ability of the older adult to obtain adequate nourishment.

- loss of teeth and/or gum disease,
- failing eyesight, and
- limitation or loss of mobility.

#### **G. Psychological Changes**

Anxiety, apathy, forgetfulness, and depression are not inevitable changes in aging but are common in older adults. All such changes affect the individual's ability and willingness to eat. Support and companionship of family and friends, especially at mealtimes, help improve appetite and food intake at these times.

#### **H. Socio-economic Changes**

Ninety-five percent of older adults live within the community with a spouse, a family member or friend, or alone. Only 5% live in long-term care facilities. Although the older population is better off economically compared to previous generations, poverty is still a problem in about 20% of people over 65 years old. Black and Hispanic older adults are more likely to be poor than white older adults.

Inadequate food and nutrition is commonly encountered in people of low socioeconomic status. Studies also show that malnutrition and risk of nutrient deficiencies are high in older adults who are least educated, who are living alone in federally funded housing (indicator of low income), who are males living alone, and who have recently experienced a change in lifestyle.

## II. NUTRIENT NEEDS OF OLDER ADULTS

The current Recommended Dietary Allowances (RDA) for older adults have been questioned on several issues. The concerns include the following:

- RDA for adults over age 50 have been derived from those for young adults since there have been very limited number of studies on older adults. (The current RDAs for ages 25 to 50 are essentially the same as for those 51 and older except for iron, thiamin, niacin, and riboflavin. For older women, iron is reduced from 15 mg. to 10 mg. due to cessation of menstrual-associated iron loss; thiamin niacin, and riboflavin are reduced for older men and women to parallel the decrease in energy requirements after age 50.)
- Combine all adults 51 and older into one group in terms of nutrient needs. No adjustments are made although nutrient needs of 50-60 year olds may be very different from adults 80 years or older. \*
- Difficulty in defining "healthy aging" on which to base the RDA which is intended to meet the "needs of practically all healthy persons."

\* *The Dietary Reference Intakes (DRI) revision currently under way includes two age categories: 51 to 70 years and older than 70 years*

Despite these limitations, the current RDA for older adults can be used as guidelines. However, what is more important when evaluating nutrient needs is to consider each older adult as an individual and take into account his/her general health, physical activity, and presence or absence of chronic disease. Only the nutrients that have been shown to be limiting in the food intake of older adults will be discussed.

### C. Water

Older adults are at risk of dehydration since total body water decreases with aging. Additional factors that increase risk in older adults include a reduced sensation of thirst, conscious restriction of fluids in those who have lost bladder control, difficulty in drinking without help, or ingestion of high protein supplements without adequate fluids.

Water recommendation: 1 to 1.5 oz/kg. actual body weight. Older adults should drink a minimum of 6 to 8 glasses of fluid each day. Milk and juices can be counted as part of this fluid but NOT beverages containing caffeine or alcohol due to their diuretic effect. In order to remember and keep track of fluid intake, older adults should measure out the recommended amount of water in a container to keep in the refrigerator to drink throughout the day.

## **D. Energy (kcalories)**

Energy needs decrease with age due to a reduction in basal metabolic rate, and reduced physical activity in most. As a rule, adult kcalorie needs decline approximately 5% per decade beginning around age 30. The RDA for energy decreases for both males and females starting at age 51. Because of the lower kcalorie needs to maintain weight, older adults need to select mostly nutrient-dense foods.

## **C. Protein**

Total body nitrogen decreases in aging even in well-nourished adults. This decrease is largely due to loss of skeletal muscle.

The current RDA for protein is 0.8 gm./kg. body weight/day, which is the same as for those ages 25-50. However, it appears from at least one study that this amount of protein, even good quality protein, does not assure positive protein balance in many older adults. A suggested safe protein intake for older adults would be 1.0 to 1.25 gm./kg. body weight/day.

## **D. Carbohydrates**

Fifty-five percent of kcalories should come from carbohydrates. Adequate carbohydrate is needed to support the use of protein for tissue growth and repair and not for energy.

Most of the carbohydrates should come from complex carbohydrate foods such as whole grain breads/cereals, vegetables, and fruits. These foods also provide essential vitamins, minerals, as well as fiber.

## **E. Vitamins**

### **1. Vitamin D**

Dietary intakes and serum levels of vitamin D in older adults are less than optimal. There are several factors that place older adults at risk of vitamin D deficiency: (a) limited or no milk intake (vitamin D fortified milk is a significant source of the vitamin), (b) limited exposure to sunlight, (c) use of calcium supplements rather than consuming dairy products as sources of calcium, and (d) age-related decrease in the skin's ability to synthesize vitamin D and the kidneys' ability to convert it to its active form.

The current AI of 10 mcg. (51-70 years) and 15 mcg. (71yrs and older) does not seem to be adequate to preserve optimal vitamin D status in older adults with very limited exposure to sunlight. However, because of the danger of toxicity, vitamin D supplements containing more than 10 mcg. should not be used.

2. Vitamin B<sub>6</sub>  
Dietary intakes and serum/enzyme levels of vitamin B<sub>6</sub> are low in many older adults. The low levels can be due to: (a) decreased intake of meat, poultry, or fish, (b) instability of the vitamin to heat processing making pre-prepared foods poor sources, and (c) some prescription drugs interfere with B<sub>6</sub> absorption.

The current DRI for older adults are 1.7 mg/day for men and 1.5mg/day for women.

3. Vitamin B<sub>12</sub>  
Older adults may be at risk of vitamin B<sub>12</sub> deficiency, particularly those with atrophic gastritis (both intrinsic factor and gastric acid levels are reduced). Since intrinsic factor is required for B<sub>12</sub>

absorption, and gastric acid is required to release B<sub>12</sub> from foods for absorption, the absorption of the vitamin is impaired when levels of either or both substances are reduced.

The DRI recommends that adults 51 years and older need 2.4 mcg. of B<sub>12</sub> daily, preferably from fortified foods and supplements which are better absorbed than naturally occurring vitamin B<sub>12</sub> in foods.

## **F. Minerals**

1. Iron  
Most healthy older adults maintain adequate iron status on the RDA intake of 10 mg./day. However, older women on low energy intakes and older adults with other risk factors are at risk of iron deficiency. These factors include: (a) reduced stomach acid secretion, (b) regular use of antacids, (c) use of certain drugs that bind iron, e.g. cholestyramine, (d) liberal use of fiber, (e) excessive aspirin use leading to GIT bleeding, and (f) any disease condition that causes chronic blood loss. If any of these factors are present, assessment of iron status is indicated.
2. Calcium  
The RDA for calcium remains controversial. The calcium AI for ages 51 and older is 1200 mg. daily. Some researchers have shown that calcium intake of 1000 mg. to 1500 mg. per day can actually increase bone density in post-menopausal women. In fact, a National Institutes of Health (NIH) panel has concluded that women over 50 who are not on estrogen replacement and all adults over 65 need 1500 mg. of calcium daily.

Controversy or not regarding calcium needs, one thing is certain: the calcium intakes of older adults, especially women, are well

below the RDA. The lowest calcium intakes in the NHANES III survey were in older black women with median values of 399 mg.

Many older adults who cannot tolerate fresh milk because of lactose intolerance should be counseled to eat other calcium-rich foods. For others, low-fat dairy products, such as adding nonfat dry milk to recipes, provide the needed calcium and vitamin D.

3. Zinc

The diets of older adults are frequently low in zinc. Levels of zinc in the diet are determined by total energy intake, total money spent for food, and food choices. The richest sources of zinc, meat, fish, and poultry, relatively cost more money. Other factors that place older adults at risk of zinc deficiency are less efficient absorption, and use of medications that can reduce zinc absorption or increase its excretion.

Zinc is necessary for taste acuity, wound healing, and the immune response. Nevertheless, older adults should be cautioned against self-medication with zinc supplements, which can actually depress the immune function and lower HDL-cholesterol (the "good" cholesterol).

### **III. FACTORS THAT INFLUENCE FOOD CHOICES**

The food choices of older adults reflect lifelong attitudes and food habits. In addition, their food choices are also influenced by the changes that accompany the experience of getting old in our society. The good news is that surveys in the U.S. show that older adults in general are eating reasonably adequate diets. Some of the major factors influencing food selection patterns are discussed.

#### **A. Psychologic Factors**

- Loneliness. Eating is a social activity. Some older adults may adjust poorly to eating alone after the loss of a spouse or friends. Men living alone have been shown to eat poorer-quality diets than those living with spouses.
- Retirement. Usually more time to spend in planning and preparing meals.
- Mental awareness. Individuals who have mental disorders or organic brain syndrome can be confused, irritable and suffer from dementia. These individuals need to be supervised to make sure they eat adequately.

#### **B. Physiologic Factors**

- Sensory changes. The decline in the sense of taste and smell may decrease food acceptance and quantity of food eaten.

- Dental problems. Tooth loss and gum disease alter food choices.
- Physical health. Limited vision or impaired mobility make it difficult to shop for groceries and prepare meals. These limitations result in the use of pre-prepared food that are often high in sodium and fat and low in vitamins and trace minerals.
- Special diets. Whether prescribed for a chronic condition or self-prescribed, these diets influence food choices.

### **C. Socioeconomic Factors**

- Income. Many older adults live in poverty. Low income affects food selection in several ways: (a) less money to spend for food, (b) inadequate preparation, storage and cooking facilities, (c) more likely to live in inner cities or rural areas where food is more expensive.
- Availability of transportation. Without adequate transportation, older adults will have to buy groceries from nearby food stores where quality and selection is limited at much higher prices.
- Storage and cooking facilities. Limits the availability and variety of foods eaten.
- Education. Many older adults are interested in their health and respond well to health and nutrition education. Health and nutrition information are provided in senior centers, senior housing complexes, or health care facilities.  
(Appendix J/Handout gives suggestions for shopping and cooking for one.)

## **IV. ADVERSE INFLUENCES ON OLDER ADULTS NUTRITION**

A lot of the psychologic, physiologic and socioeconomic factors discussed above adversely affect nutritional status. In addition, there are other factors that impact older adults' nutritional status.

### **A. Drug-nutrient interactions**

About 25% of all over-the-counter (OTC) and prescription medications are taken by adults over the age of 65. Some older adults take several medications at a time. While these medications usually enable people to enjoy longer quality lives, they can also affect nutritional status adversely. The harmful effects increase if medications are taken over a prolonged period of time, or if the person is in poor nutritional status already. Drugs affect nutrition in the following ways:

- decrease or increase food intake by depressing or stimulating appetite,
- reduce absorption of nutrients,
- alter the metabolism and excretion of nutrients.

## **B. Smoking and alcohol use**

Alcohol is the most common drug that affects nutrition in older adults. Alcohol depresses the appetite, displaces nutrient-dense foods from the diet, and decreases the absorption of thiamin, folate and vitamin B<sub>12</sub>.

## **C. Health fraud and quackery**

Older adults are targets of health claims and quackery promising a "cure" and/or longevity. Many unsuspecting older adults have fallen victims of unqualified health care providers.

The major areas of health fraud and quackery include:

- anti-aging and sex rejuvenation,
- cancer "treatments",
- arthritis "treatments",
- heart disease "treatments", and
- "diagnostic" tests

## **D. Supplement use**

Older adults are also the targets of advertisements for supplements and "health foods" promising good health and longevity. Nutrient supplements are used by about half of all women over 65 and by about one-fifth of older men. However, the supplements being taken were often not the nutrients that are deficient in the user's diet.

Nutrient supplements can be beneficial when recommended by a physician or registered dietitian to remedy a documented deficiency like vitamin D and calcium for osteoporosis or iron for iron-deficiency. Older adults who eat less than 1500 kcalories a day may also benefit from a one-a-day multiple vitamin-mineral supplement - not high potency, megadoses of single vitamins. This is particularly true of vitamin A supplementation. Older adults are less able to clear vitamin A from the blood; therefore, as little as twice the RDA can have toxic effects.

Health care providers should encourage all adults to be informed on health and nutrition issues to be able to make sound decisions about their health.

## Lesson VI-2

### **NUTRITION & ASSESSMENT IN LATER YEARS** **Nutrition Screening & Assessment: Adults 60 Years and Older**

#### **OBJECTIVES:**

In this lesson, the student will:

1. Discuss the factors that contribute to poor nutritional status in the older adult.
2. Identify the common nutrient deficiencies in the older adult.
3. Use the Nutrition Screening Initiative as a screening checklist to assess nutritional risks.
4. Identify the most useful nutrition assessment parameters for this age group.

#### **ASSIGNMENTS:**

**MATERIALS:** Take-home Assignment (1).  
Handout: *Determine Your Nutritional Health*

#### **I. NUTRITIONAL RISK FACTORS**

Persons 60 years of age or older make up the fastest growing segment of the population in the United States. Many social, physiological and economic factors influence food and nutrient intake in older people. Unfortunately, many of these factors also place a large number in this age group at risk of malnutrition.

The following are the common factors that place the older adult in the United States at increased nutritional risk, as developed by the Nutrition Screening Initiative, which is discussed later.

The warning signs or risk factors can easily be remembered by the acronym DETERMINE, as follows:

**Disease.** Conditions that affect food intake or nutrient utilization.

Examples include:

- arthritis
- diabetes mellitus
- high blood pressure
- heart disease
- depression
- loss of memory
- recent hospitalization or surgery

**Eating poorly.** This can be defined as:

- fewer than two meals per day,
- few fruits, vegetables or milk products,
- lack of variety in foods, or
- three or more drinks of alcoholic beverages daily.

**Tooth loss/mouth pain.** This may be caused by:

- missing, loose or decayed teeth,
- ill-fitting dentures,
- sore or bleeding gums, or
- unhealed mouth sores.

**Economic hardship.** Nutritional risk increases in those who spend less than \$25-\$30 weekly for food.

**Reduced social contact.** Those who are lonely and eat alone may lack the incentive to cook and eat.

**Multiple medications.** Prescribed as well as over-the-counter medications can decrease appetite, decrease absorption, affect utilization and/or increase excretion of certain nutrients. Some examples include:

- *aspirin* (salicylates) - prolonged use can cause gastrointestinal bleeding and subsequent iron-deficiency anemia.
- *laxatives* deplete the body of sodium and potassium.
- aluminum hydroxide *antacids* can cause phosphate depletion and increase bone loss.
- most *diuretics* also cause loss of potassium.
- *digoxin* causes anorexia and nausea.

**Involutionary weight loss or gain.** This may indicate not only increased nutritional risk, but a medical problem.

**Needs assistance in self care.** Limited mobility, physical frailty and/or loss of sight hinder the ability to shop for food and cook.

**Elder years above age 80.** As age increases, risk of frailty and health problems increase.

## II. COMMON NUTRIENT DEFICIENCIES

Vitamins and minerals are the nutrients most likely to be lacking in an older person's diet and are also most adversely affected by multiple medications commonly encountered in this age group. Therefore, it is not surprising that the nutrient deficiencies seen in older adults include: vitamin B-6, vitamin B-12, folic acid, vitamin D, and calcium.

## III. NUTRITION SCREENING INITIATIVE

The nutrition professional has the important task of identifying those older adults at nutritional risk, so that early intervention can prevent further deterioration in health.

As a joint project, the American Academy of Family Physicians, the American Dietetic Association and the National Council on the Aging developed *Determine Your Nutritional Health* (Figure VI-2) as a tool to identify older adults at nutritional risk. It is a checklist of nine factors that affect the nutritional status of older adults.

This checklist has been adopted by many long-term care facilities to perform nutrition screening on long-term care residents upon admission.

Older adults with scores of 6 or higher should be referred to a nutrition or other health professional for assessment and intervention.

## INTERMEDIATE LEVEL OF NUTRITION ASSESSMENT

Intermediate nutrition assessment must be done on any older adult who is identified as being at high nutritional risk, i.e., a score of 6 or higher on the Nutrition Screening Initiative checklist.

Since the process of aging brings about physiological changes, standards used to assess nutrition status also change. Many of the measurements and standards used to evaluate the nutritional status of young or middle-aged adults are unreliable when used in older adults. Accurate assessment and interpretation will depend to a large extent on using appropriate age-specific parameters and standards.

### I. ANTHROPOMETRIC DATA

Useful anthropometric measurements for older adults include the following:

- height,
- current and usual weight, and
- history of recent weight change(s).

In collecting and interpreting assessment data, the effects of aging on body composition and anthropometric measurements must be taken into

consideration. Changes in aging include:

- \* Weight: Men steadily gain weight until about age 45, while women gain until age 60. Then average weights decline or plateau.
- \* Height: Decreases with age due to bone disease, vertebral collapse or postural changes.
- \* Body fat: Increases. There is also redistribution from subcutaneous fat to internal fat, and between different subcutaneous sites.
- \* Lean body mass: Decreases. This is mainly due to loss in skeletal muscle.
- \* Skinfold: Often pendulous and difficult to measure due to loss of elasticity.

### INTERPRETATION:

Measurements of weight and height can be evaluated as follows:

- A. Compare with average height-weight tables for men and women 65 years of age and over.
- B. Calculate body mass index (BMI). This is the preferred method because body composition changes at different rates in older adults.

$$\text{BMI} = \frac{\text{Weight in lbs}}{(\text{ht in inches} \times \text{ht in inches})} \times 705$$

< 21	Underweight
21 to 27	Normal Weight
>27	Overweight

NOTE: This standard is for older adults. In younger adults, normal value for BMI is 20 to 25.

- C. Calculate percent of recent weight change.

$$\% \text{ Weight Change} = \frac{\text{Weight Change}}{\text{Usual Weight}} \times 100$$

<u>Time Period</u>	<u>Significant % Weight Change</u>
1 week	1 - 2%
1 month	5.0%
3 months	7.5%
6 months	10.0%

## II. BIOCHEMICAL DATA

Biochemical assessment of older adults should include tests of iron status (hemoglobin and hematocrit), protein (serum albumin), and glucose status (blood glucose). Vitamin deficiencies, if suspected, should be confirmed using appropriate biochemical tests.

If disease conditions are suspected, laboratory screening tests to determine organ function are ordered.

Some factors to keep in mind in the biochemical assessment of older adults are:

- nutrition-related anemia, mostly due to dietary intake, malabsorption or a disease state, are more common in older than in younger adults;
- adults over 60 who present unexplained weight loss, fatigue, depression, dementia or irregular heartbeat should be screened for thyroid function since thyroid hormones decrease with aging;
- a sudden drop in serum cholesterol in a short period of time may indicate recent inadequate intake;
- serum albumin is a simple and reliable index of long-term protein-calorie status in older adults;
- hydration status as well as disease conditions can influence test results and must be considered when interpreting results;
- whenever available, specific biochemical standards for older adults must be used for comparing test results; and
- interpretation of biochemical data in older adults is extremely complex.

## III. CLINICAL DATA

Clinical assessment in the intermediate assessment of older adults should include the following:

- A. Medical history: Factors affecting nutrition such as weight and appetite changes, gastrointestinal disturbances (diarrhea, constipation, nausea, vomiting, indigestion), changes in sensory abilities, oral health. Record of medications taken, both prescription and over-the-counter drugs, smoking and drinking habits. Disease conditions present.
- B. Social history: Include information on living situation and other factors that may detract from the ability to get food. Some examples include whether the individual lives alone or with someone, socio-economic situation, ability to care for self, do food shopping and preparation, and manage medications, etc.

- C. Physical examination: Careful examination should focus on:
- physical signs of malnutrition, being careful to differentiate from signs of aging;
  - mouth and gums for ability to chew and swallow;
  - signs of muscle wasting and edema, which may indicate protein-calorie deficits;
  - presence of pallor, fatigue and weakness which may indicate iron deficiency;
  - signs of adequate hydration status; and
  - determination of mental status.

#### IV. DIETARY DATA

A food frequency and/or a 24-hour recall are used to collect data on food intake. Information collected should include:

- past and current diet modifications,
- kinds and amounts of foods eaten and how often,
- size and number of servings in each food group,
- problems with chewing or swallowing,
- fluid intake,
- amount of alcohol consumed,
- food intolerances or allergies,
- kind and frequency of physical activity, and
- approximate amount of money spent on food weekly.

**Figure VI-2**  
**Determine Your Nutritional Health**

The Warning Signs of poor nutritional health are often overlooked. Use this checklist to find out if you or someone you know is at nutritional risk.

*Read the statements below. Circle the number in the “yes” column for those that apply to you or someone you know. For each “yes” answer, score the number in the box. Total your nutritional score.*

	<b>YES</b>
I have an illness or condition that made me change the kind and/or amount of food I eat.	2
I eat fewer than 2 meals per day.	3
I eat few fruits or vegetables, or milk products.	2
I have 3 or more drinks of beer, liquor or wine almost every day.	2
I have tooth or mouth problems that make it hard for me to eat.	2
I don't always have enough money to buy the food I need.	4
I eat alone most of the time.	1
I take 3 or more different prescribed or over-the-counter drugs a day.	1
Without wanting to, I have lost or gained 10 pounds in the last 6 months.	2
I am not always physically able to shop, cook and/or feed myself.	2
<b>TOTAL</b>	

*Total your nutritional score. If it's —*

- 0-2**            **Good!** Recheck your nutritional score in 6 months.
- 3-5**            **You are at moderate nutritional risk.** See what can be done to improve your eating habits and lifestyle. Your office on aging, senior nutrition program, senior citizens center or health department can help. Recheck your nutritional score in 3 months.
- 6 or more**    **You are at high nutritional risk.** Take this checklist next time you see your doctor, dietitian or other qualified health or social service professional. Talk with them about any problems you may have. Ask for help to improve your nutritional health.

From: *Nutrition Screening Initiative*, American Academy of Family Physicians, American Dietetic Association, National Council on Aging.

## **ASSIGNMENT VI-2 - Case Study of an Elderly Man**

Directions: Read the following case of an elderly client. Then, apply what you just learned from the on *Nutrition & Assessment in Later Years* to answer the following questions the following questions. (15 points)

Mr. T. Is a 76 year-old widower who lives alone. He has steadily been losing weight since he lost his wife a year ago. At 5 feet 8 inches tall, he currently weighs 124 pounds. His previous weight was 150 pounds.

In talking to Mr. T, you realize that he is reluctant to talk about food, let alone eat it. "My wife always did the cooking before, and I ate well. Now, I just don't feel like eating." You find out that he skips breakfast, has soup and bread for lunch, and a cold-cut sandwich or a frozen dinner for supper.

Mr. T has lost several teeth and does not eat any raw fruits or vegetables because he finds them difficult to chew. He lives on a meager but adequate income. He seldom sees friends or relatives.

1. Calculate Mr. T's BMI and determine his weight status (category).
2. Calculate his % weight loss. Is it significant?
3. Using Figure VI-2 *Determine Your Nutritional Health*, screen Mr. T's nutritional risk (low, moderate or high risk). List the factors that put him at nutritional risk.
4. List the nutrients that are likely to be deficient in his diet.
5. Suggest ways that Mr. T can improve his food intake and his lifestyle.