Promoting Nutrition and Wellness For Persons with Developmental Disabilities

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THE NORTH DAKOTA STATEWIDE DEVELOPMENTAL DISABILITIES STAFF TRAINING PROGRAM

July, 2015

Minot State University Center of Excellence
Promoting Nutrition and Wellness for Persons with Developmental Disabilities

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a University Center of Excellence on Developmental Disabilities
at Minot State University

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Lesson 1: What is Wellness?

Objectives: Upon completion of this lesson, DSPs will be able to:

- Define wellness
- Describe the following dimensions of wellness
  - Physical
  - Social/Psychological
  - Spiritual
  - Emotional
  - Intellectual
  - Occupational
- Describe how to assist people with disabilities in each of the dimensions of wellness

Traditionally, wellness has been thought of as the “absence of disease.” The problem with this definition is that it creates an attitude that “disability” and “wellness” cannot coexist. Using this definition, one cannot be “well” if you have a disability. Health promotion literature now focuses on defining wellness as “the best possible functioning of each individual” regardless of health status or disability. Health is a means to attaining quality of life, rather than a goal in itself. Wellness is seen as a continuum or scale that is very individualized. Each of us defines our own wellness; there is not one definition of wellness for everyone.

Many people think about "wellness" in terms of physical health only (i.e., weight, blood pressure). Wellness, however, is much more than physical health. It is a lifestyle; an ongoing process to reach one’s full potential by integrating body, mind, and spirit. Wellness is seen as a holistic concept that encompasses many dimensions:

**Physical Wellness** includes a variety of healthy behaviors that increase longevity and quality of life. It is achieved by making choices that positively impact flexibility, fitness, energy level, and strength. The choices we make are related to regular exercise, healthy diet, adequate rest, intentional and responsible sexual choices, medical self-care and appropriate use of medical systems, responsible use of alcohol and other drugs, and protecting oneself from injuries and harm (i.e., wearing seat belts).

**Emotional/Psychological Wellness** is the ability to understand your own feelings, accept your limitations, and achieve emotional stability. It refers to the ability to feel and talk about emotions such as happiness, sadness, and anger and to manage related behaviors. It means having the ability to love and be loved and to achieve a sense of fulfillment in life. This also includes the ability to practice stress management techniques and cope with change.

**Spiritual Wellness** involves possessing a set of guiding beliefs, principles, or values that provide a sense of meaning and purpose. Spiritual wellness can be derived through nature, art, music, religion, meditation, or good deeds performed for others.

**Social Wellness** refers to our ability to relate well to others and to develop and fulfill social roles in our community. It emphasizes interdependence and cooperation with others. It is the process of creating and maintaining healthy relationships through the choices we make. It is
determined by our communication skills, ability (and opportunity) to form and maintain healthy and meaningful relationships with others, and our existing support network of friends and family members. Social wellness includes the sense of belonging felt by those who contribute to their community and share their talents and skills with others.

**Intellectual Wellness** encourages creative, stimulating mental activities. It includes the ability to make decisions and solve problems. It includes openness to new ideas and learning new skills, a sense of humor, creativity, and curiosity. Intellectual wellness is not dependent on intelligence or ability, but rather the presence of opportunities to use our minds, such as keeping up-to-date on current events, opportunities for creativity, activities that exercise our minds, and opportunities to share our ideas with others. Exercising our minds regularly is just as important as exercising our bodies.

**Occupational/Career Wellness** involves making use of your skills and talents in order to gain purpose, happiness, and personal growth. The occupationally well individual contributes her/his unique skills/talents to work that is meaningful and personally rewarding. Optimal occupational wellness leads to a positive attitude and satisfaction with one’s entire lifestyle.

While this module will primarily be concerned with the physical aspect of wellness, it is important to remember that wellness for all people encompasses every aspect of a person’s life. The quality of life and health of the people you support is determined by the integration of all aspects of wellness. An imbalance in any one dimension of wellness will affect the others.

**Wellness Assessment**
Determine if you are balancing the dimensions of wellness by filling out the questions in the Appendix. Check the choice that best reflects your current behavior. Although this is not a scientific questionnaire, it will help you become more aware of your current level of wellness and what changes, if any, you might want to make.
Are You Balancing the Dimensions of Wellness?

Assess your current dimensions of wellness by filling out the questions below, checking the choice that best reflects your current behavior. Although this is not a scientific questionnaire, it will help you become more aware of your current level of wellness and what changes, if any, you might want to make. To take the survey online and view the results go to [http://cps.uwsp.edu/hphd/wellquiz/].

### Social wellness is the process of creating and maintaining healthy relationships.

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<tr>
<th>never</th>
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<tbody>
<tr>
<td>I communicate honestly and directly. I resolve conflict in a healthy, timely manner.</td>
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<tr>
<td>I treat every person with respect.</td>
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<tr>
<td>I maintain a strong mutual, interdependent social support system.</td>
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### Physical wellness is the process of having a flexible, aerobically fit body.

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<td>I maintain a consistent exercise regime consisting of flexibility and muscular strengthening exercises and at least 30 minutes of aerobic exercise daily.</td>
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<tr>
<td>I manage stress and do some activity that elicits the &quot;relaxation response&quot; for at least 15 min./day.</td>
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<tr>
<td>I take proactive steps to avoid and prevent injury, illness and disease (including sexually transmitted diseases).</td>
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### Emotional wellness is the process of creating and maintaining a positive realistic self concept and enthusiasm about life.

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<tr>
<td>I recognize that I create my own feelings and am responsible for them.</td>
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<tr>
<td>I accept and appreciate my worth as a human being.</td>
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<td>I can realistically assess my limitations and cope effectively with stress and ego.</td>
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### Career wellness is the process of making and maintaining choices that are meaningful and contributes to your personal growth as well as work.

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<tr>
<td>I have chosen a job role that I enjoy and that matches my values and lifestyle.</td>
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<td>I balance work with play and other aspects of my life.</td>
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<tr>
<td>My work benefits individuals and or society.</td>
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### Intellectual wellness is the process of using your mind to create a greater understanding of yourself and the universe.

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<tr>
<td>I view learning as a lifelong process and question my views &amp; change them in accordance with new information.</td>
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<tr>
<td>I take risks, learn from my mistakes and question authority.</td>
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<tr>
<td>I seek opportunities that challenge my critical thinking skills.</td>
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### Spiritual wellness is the process of "experiencing life" while seeking meaning and purpose in human existence. Spirituality allows one to have consistency between values and behaviors.

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<td>I have a deep appreciation for the depth of life, death and understanding universal human connection or consciousness.</td>
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<tr>
<td>I integrate my &quot;spiritual practice&quot; within everyday life of work, family and relationships.</td>
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<tr>
<td>I have a consistency between my beliefs, values and behaviors.</td>
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Adapted from: University of Wisconsin Stevens Point Employee Wellness Program "Are You Balancing the 7 Dimensions of Wellness?" retrieved from [http://cps.uwsp.edu/hphd/wellquiz/]
Lesson 1 Feedback Questions

1. Define wellness.

2. List lifestyle choices that determine our level of physical health.

3. What do you do (or could you do) to maintain your own wellness in each of the dimensions described in this lesson?
   a. Physical
   b. Social/Psychological
   c. Spiritual
   d. Emotional
   e. Intellectual
   f. Occupational

4. What can you do to assist people with developmental disabilities to attain or maintain each of the following dimensions of wellness? Think of a specific person and give a specific example that is appropriate to their preferences, interests, and personal outcomes for health and wellness.
   a. Physical
   b. Social/Psychological
   c. Spiritual
   d. Emotional
   e. Intellectual
   f. Occupational
Lesson 2: Health and Wellness Among Persons with Disabilities

Objectives: Upon completion of this lesson, DSPs will be able to:

- Compare the data on health and wellness for persons with disabilities to those who do not have disabilities
- List four factors considered important to health and wellness by people with disabilities
- Describe health promotion for people with disabilities
- List strategies people with disabilities use to maintain emotional well-being
- Determine the reliability of health information on the Internet

Health Threats for People with Disabilities. The nation’s blueprint for promoting health, Healthy People 2010 (CDC, 2001), identified the most significant preventable threats to health and established national goals to reduce these threats. It challenged the nation, individuals, communities, and professionals to take specific steps to ensure that good health and long life are enjoyed by all citizens. Previous publications of the nation’s blueprint for promoting health contained no explicit sections on disability. In contrast, an entire section of Healthy People 2010 recognized the importance of health promotion and disease prevention in the lives of the 54 million Americans with disabilities. Of the 467 objectives in HP2010, 207 include people with disabilities.

Baseline data on health and wellness in the HP2010 report indicated people with disabilities have:

- High rates of emergency room visits and hospitalizations for their primary disabling condition
- Low rates of formal patient education
- Low rates of treatment for mental illness
- Activity limitations and difficulties with personal care
- Preventable secondary conditions (e.g., fractures, amputation, unemployment)
- Early deaths from their primary disabling conditions (e.g., asthma)
- Early deaths from co-morbidities (e.g., diabetes-related cardiovascular disease or kidney failure)

Baseline data on gaps and disparities in health and wellness found that when compared with people without disabilities, people with disabilities have:

- Less health insurance coverage and use of the health-care system (e.g. Pap test, mammography, oral health exams)
- Higher rates of chronic conditions (e.g. diabetes, depression/sadness, elevated blood pressure and blood cholesterol, obesity, and tooth loss)
- Lower rates of social participation (e.g. regular education classrooms, high school completion, employment, social events, and community-organized or employee-sponsored health events)
- Lower rates of recommended health behaviors (e.g. smoking cessation, cardiovascular, strengthening, and flexibility activities)
The report defined health promotion for people with disabilities as: (1) the promotion of healthy lifestyles and a healthy environment, (2) the prevention of health complications (medical secondary conditions) and further disabling conditions, (3) the preparation of the person with a disability to understand and monitor his or her own health and health care needs, and (4) the promotion of opportunities for participation in life activities (Rimmer, 1999).

How do People with Disabilities Define Health and Wellness? Until recently, disability was often equated with illness, and it brought to mind the dependence, lack of productivity, and physical inactivity that are associated with illness. New models of health and wellness specific to people with disabilities are broadening our understanding of what it means to live healthy and well while living with a long-term disability. There is a growing recognition of both the possibility and the importance of living well with a disability.

In order to understand health promotion practices for people with disabilities and what helps or hinders them in maintaining healthy lives, researchers from the University of Oregon conducted focus groups with people with disabilities (Oschwald & Powers, 2002). Questions for 19 focus groups asked how participants defined health and wellness, as well as how they defined facilitators and barriers to being healthy and well. People in this study described health and wellness as both physical and emotional states of well-being. Other key elements of wellness for people with disabilities include:

- the ability to perform necessary and desired activities on a daily basis;
- independence and ability to control one’s life;
- opportunities for self-determination regarding choices, opportunities, activities;
- not being held back by pain.

Focus group participants said emotional well-being affects stress level and mental health. They mentioned the importance of personal attitudes, frame of mind and outlook on life on a person’s overall quality of health. People with disabilities in this study identified ways they promote and maintain personal health and wellness, which include:

- developing self-acceptance and coping strategies;
- staying active, including participating in physical activity and exercise;
- contributing through paid work or volunteer activities;
- setting personal goals.

Health no longer can be defined merely in terms of medical needs or absence of disease. Providing wellness information and supports for healthy lifestyles can improve quality of life and personal outcomes for persons with disabilities (Liberty & Schoonmaker, 1990). In keeping with person-centered planning approaches and consumer empowerment, the University of Montana’s Rural Institute (1998) recommends service providers must “assume that people with disabilities can lead healthy and independent lives, and are often the best managers of their own health.” Putting this philosophy into practice means that personal health and wellness preferences and goals are addressed in each person-centered plan.

Finding and Assessing the Reliability of Health Information on the Internet. Health information can help people make decisions and gain more control over their lives. The Internet is an ever-
expanding source of health information. Exploring it can be an overwhelming task for consumers and staff. Guidelines for determining the reliability of information on the web adapted from the Internet Healthcare Coalition (2002) and National Health Law Program (NHeLP) include:

- Find a Website that has a person, institution or organization in which you already have confidence (i.e., American Dietetics Association). The sponsor and/or author of the website should be easily identifiable and contact information should be readily available.
- Know the sponsor/author's credentials. Trustworthy sites are often sponsored by persons or groups who are recognized authorities in their fields, or they have expert editorial boards that review and validate information.
- Always check several sites and compare the results. Question websites that credit themselves as the sole source of information on a topic as well as sites that discredit other reputable sources of knowledge.
- Don't be misled by a comprehensive list of links. Any website can link to another and this in no way implies endorsement from either site.
- Determine if the site is used to sell products? Is political, religious, or commercial information included on the site? A good question to ask is: “Does the author or authors have anything to gain from proposing one particular point of view over another?“
- Look for sites that are current. Because health information changes so rapidly, unless a site is updated frequently, the information may be useless. Make sure that all clinical content includes the date of publication or modification.
- Avoid any online physician who proposes to diagnose or treat you without a proper physical examination and consultation regarding your medical history.
- Make sure that your privacy is protected. Read the website's privacy statement and make certain that any personal medical or other information you supply will be kept absolutely confidential.
- Use your common sense! Be suspicious of promises that sound too good to be true or “miracle cures” and always read the fine print.

The health and wellness sites listed below may be useful to staff and people receiving support. Some are specific to the needs of people with disabilities and others are designed for the general population.

**Healthfinder --Gateway to Reliable Consumer Health Information**
[http://www.healthfinder.gov/] healthfinder® is an award-winning Federal Web site, developed by the U.S. Department of Health and Human Services together with other Federal agencies. Since 1997, healthfinder® has been recognized as a key resource for finding the best government and nonprofit health and human services information on the Internet. Healthfinder® links to carefully selected information and Web sites from over 1,800 health-related organizations.

**The Wellness Guide Online.** [http://www.wellnessguide.org/toc.htm] UC Berkley’s Center for Community Wellness works in partnership with diverse communities, families and individuals, to develop resources, programs and collaborations that empower people to lead healthier lives. The “Staying Well” section of the guide offers easy to read information on Emotional Health, Eating Well, Exercise and Relaxation, Living with Technology, Health Care, Sexuality and Relationships, Family Planning Decisions, Violence and Abuse, Alcohol, Tobacco and Other Drugs, Disasters and Emergencies.
**Tips for Living Well Newsletter** [http://www.bccpd.bc.ca/wdi/tips/index.html] The Wellness & Disability Initiative (WDI) provides health and wellness information in plain language and alternative formats. They serve people with disabilities, family members, caregivers, healthcare workers and educators.

**HealthCareCoach.com** [http://www.healthcarecoach.com/]. National Health Law Program (NHeLP) has officially launched this site dedicated to helping consumers get the most out of their health care. The web page features hundreds of articles with information about everything from keeping health care costs down and coping with emergencies to dealing with denied claims and what people can do when they lose coverage.


**American Dietetic Association** [www.eatright.org] Nutrition information, resources, and access to Registered Dietitians provided by ADA and the National Center for Nutrition and Dietetics.

**The National Center on Physical Activity and Disability (NCPAD)** [http://www.ncpad.org/default.htm] The Website provides a searchable, on-line database of information regarding all aspects of physical activity as well fact sheets and bibliographies on topics related to specific disabilities and physical activity.

**Independent Living Research Utilization (ILRU)** [http://www.ilru.org/index.htm] This site includes fact sheets and links on health, wellness, and managed care issues. In addition several previous webcasts on wellness issues for persons with disabilities can be accessed at the site’s archive @http://www.ilru.org/online/archive/index.html

**Health & Wellness Resource Center** This online database is accessible through your local or state library electronic reference services. Contact your librarian for information on how to access the database in your area. The database content includes articles on fitness, pregnancy, medicine, nutrition, diseases, public health, occupational health and safety, alcohol and drug abuse, HMOs, prescription drugs, and other health topics from reference books, periodicals, and full-text articles from the Health sections of newspapers world wide.

**MEDLINEplus** [http://medlineplus.gov/] Health information from the world's largest medical library, the National Library of Medicine. Health professionals and consumers alike can depend on it for information that is authoritative and up to date. MEDLINEplus has extensive information from the National Institutes of Health and other trusted sources on over 500 diseases and conditions. There are also lists of hospitals and physicians, a medical encyclopedia and dictionaries, health information in Spanish, extensive information on prescription and nonprescription drugs, health information from the media, and links to thousands of clinical trials. MEDLINEplus is updated daily and can be bookmarked at the URL: medlineplus.gov. There is no advertising on this site, nor does MEDLINEplus endorse any company or product.
Lesson 2 Feedback Questions

1. When compared to the general population, people with disabilities have:
   a. ________ (High/Low) rates of emergency room visits and hospitalizations for their primary disabling condition
   b. ________ (High/Low) rates of formal patient education
   c. ________ (High/Low) rates of treatment for mental illness
   d. ________ (More/Less) health insurance coverage and use of the health-care system (e.g. Pap test, mammography, oral health exams)
   e. ________ (Higher/Lower) rates of chronic conditions (e.g. diabetes, depression/sadness, elevated blood pressure and blood cholesterol, obesity, and tooth loss)
   f. ________ (Higher/Lower) rates of social participation (e.g. regular education classrooms, high school completion, employment, social events, and community-organized or employee-sponsored health events)
   g. ________ (Higher/Lower) rates of recommended health behaviors (e.g. smoking cessation, cardiovascular, strengthening, and flexibility activities)

2. Healthy People 2002 defined health promotion for people with disabilities as:
   a. the promotion of healthy ________ and a healthy ________
   b. the prevention of ________
   c. teaching the person to ________ & ________ his/her health and health care needs
   d. opportunities for ________

3. List four factors considered important to health and wellness by people with disabilities:
   a.
   b.
   c.
   d.

4. List some strategies people with disabilities use to maintain emotional well-being:
   a.
   b.
   c.
   d.
   e.

5. List guidelines for determining the reliability of information on Internet:
   a.
   b.
   c.
   d.
   e.
   f.
Lesson 3: NUTRITION

Objectives: Upon completion of this lesson, DSPs will be able to:
- Define good nutrition in simple terms, including the five food groups and the basic nutrients.
- Explain the MyPlate visual to a person with an intellectual disability.
- List the five food groups and the recommended range of servings.
- Support individuals with intellectual disabilities to adopt healthy eating habits.
- Assist individuals who are on a special ordered diet.
- List three of the factors which can affect nutritional status of people with disabilities.
- Describe methods to use at meal time which will promote a relaxed, healthy eating experience.
- Use food safety practices.

WHAT IS GOOD NUTRITION?

Good nutrition means eating a diet containing all the nutrients your body needs to provide energy for everyday activities as well as to maintain good health. Your body needs foods from a variety of sources to provide all the required nutrients.

A. MyPlate: Let’s Eat for the Health of It

It is recommended that we eat foods from the basic five food groups each day. The foods in each group provide key nutrients which your body needs in order to maintain good health. To assist with this, the USDA has now added MyPlate, a familiar mealtime visual, a place setting, to remind us not only to include the five food groups, but what portion each of the food groups our plates should contain based on the 2010 Dietary Guidelines for Americans. The information in this section is from http://www.choosemyplate.gov/.

Build a healthy plate. Before you eat, think about what goes on your plate or in your cup or bowl. Foods like vegetables, fruits, whole grains, low-fat dairy products, and lean protein foods contain the nutrients you need without too many calories. Try some of these options:
- Make half your plate fruits and vegetables.
- Switch to skim or 1% milk.
- Make at least half your grains whole.
• Vary your protein food choices.
• Keep your food safe to eat - learn more at www.FoodSafety.gov.

Cut back on foods high in solid fats, added sugars, and salt. Many people eat foods with too much solid fats, added sugars, and salt (sodium). Added sugars and fats load foods with extra calories you don't need. Too much sodium may increase your blood pressure.
  • Choose foods and drinks with little or no added sugars.
  • Look out for salt (sodium) in foods you buy - it all adds up.
  • Eat fewer foods that are high in solid fats.

Eat the right amount of calories for you. Everyone has a personal calorie limit. Staying within yours can help you get to or maintain a healthy weight. People who are successful at managing their weight have found ways to keep track of how much they eat in a day, even if they don't count every calorie.
  • Enjoy your food, but eat less.
  • Cook more often at home, where you are in control of what's in your food.
  • When eating out, choose lower calorie menu options.
  • Write down what you eat to keep track of how much you eat.
  • If you drink alcoholic beverages, do so sensibly - limit to 1 drink a day for women or to 2 drinks a day for men.

Be physically active your way. Pick activities that you like and start by doing what you can, at least 10 minutes at a time. Every bit adds up, and the health benefits increase as you spend more time being active.

B. Five Food Groups

The food groups that should be included on our plates are:

• **Fruit** (2-4 servings per day). Any fruit or 100% fruit juice counts as part of the Fruit Group. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut-up, or pureed.
  **MyPlate reminder:** Make half your plate fruits and vegetables.

• **Vegetables** (3-5 servings per day). Any vegetable or 100% vegetable juice counts as a member of the Vegetable Group. Vegetables may be raw or cooked; fresh, frozen, canned, or dried/dehydrated; and may be whole, cut-up, or mashed. Vegetables are organized into 5 subgroups, based on their nutrient content.
  **MyPlate reminder:** Make half your plate fruits and vegetables.

• **Grains** (6-11 servings per day). Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples of grain products. Grains are divided into 2 subgroups, whole grains and refined grains.
  o **Whole grains** contain the entire grain kernel — the bran, germ, and endosperm.
  o **Refined grains** have been milled, a process that removes the bran and germ. This is done to give grains a finer texture and improve their shelf life, but it also
removes dietary fiber, iron, and many B vitamins. Most refined grains are enriched. This means certain B vitamins (thiamin, riboflavin, niacin, folic acid) and iron are added back after processing. Fiber is not added back to enriched grains. Check the ingredient list on refined grain products to make sure that the word "enriched" is included in the grain name.

○ Some food products are made from mixtures of whole grains and refined grains.

**MyPlate reminder:** Make at least half of your grains whole grains.

- **Protein foods** (2-3 servings per day). All foods made from meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts, and seeds are considered part of the Protein Foods Group. Beans and peas are also part of the Vegetable Group. Select a variety of protein foods to improve nutrient intake and health benefits, including at least 8 ounces of cooked seafood per week. Meat and poultry choices should be lean or low-fat. Young children need less, depending on their age and calorie needs. The advice to consume seafood does not apply to vegetarians. Vegetarian options in the Protein Foods Group include beans and peas, processed soy products, nuts, and seeds.

**MyPlate reminder:** Amount of protein needed varies according to age, gender, activity, etc. Refer to MyPlate.gov for the chart listing amounts.

- **Dairy** (2-3 services per day). All fluid milk products and many foods made from milk are considered part of this food group. Most Dairy Group choices should be fat-free or low-fat. Foods made from milk that retain their calcium content are part of the group. Foods made from milk that have little to no calcium, such as cream cheese, cream, and butter, are not. Calcium-fortified soymilk (soy beverage) is also part of the Dairy Group.

**MyPlate reminder:** Switch to fat-free or low-fat (1%) milk.

**Fats, Oils & Sweets** (Use sparingly). In addition to these five basic groups, other foods (fats, oils, and sweets) may be used sparingly to add flavor to food.

**C. The Ten Tips Nutrition Education Series** provides consumers and professionals with high quality, easy-to-follow tips. These tips and ideas are a starting point toward a healthy diet. Read the following materials from the Ten Tips Nutrition Education Series:

- Choose My Plate
- Build a Healthy Meal
- Focus on Fruits
- Add More Vegetables to Your Day
- Make Half Your Grains Whole
- Got Your Dairy Today
- With Protein Foods, Variety is Key

More topics can be found online: [http://www.choosemyplate.gov/healthy-eating-tips/ten-tips.html](http://www.choosemyplate.gov/healthy-eating-tips/ten-tips.html)
Making food choices for a healthy lifestyle can be as simple as using these 10 Tips.
Use the ideas in this list to balance your calories, to choose foods to eat more often, and to cut back on foods to eat less often.

1 Balance calories
Find out how many calories YOU need for a day as a first step in managing your weight. Go to www.ChooseMyPlate.gov to find your calorie level. Being physically active also helps you balance calories.

2 Enjoy your food, but eat less
Take the time to fully enjoy your food as you eat it. Eating too fast or when your attention is elsewhere may lead to eating too many calories. Pay attention to hunger and fullness cues before, during, and after meals. Use them to recognize when to eat and when you’ve had enough.

3 Avoid oversized portions
Use a smaller plate, bowl, and glass. Portion out foods before you eat. When eating out, choose a smaller size option, share a dish, or take home part of your meal.

4 Foods to eat more often
Eat more vegetables, fruits, whole grains, and fat-free or 1% milk and dairy products. These foods have the nutrients you need for health—including potassium, calcium, vitamin D, and fiber. Make them the basis for meals and snacks.

5 Make half your plate
Fruits and vegetables
Choose red, orange, and dark-green vegetables like tomatoes, sweet potatoes, and broccoli, along with other vegetables for your meals. Add fruit to meals as part of main or side dishes or as dessert.

6 Switch to fat-free or low-fat (1%) milk
They have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less saturated fat.

7 Make half your grains whole grains
To eat more whole grains, substitute a whole-grain product for a refined product—such as eating whole-wheat bread instead of white bread or brown rice instead of white rice.

8 Foods to eat less often
Cut back on foods high in solid fats, added sugars, and salt. They include cakes, cookies, ice cream, candies, sweetened drinks, pizza, and fatty meats like ribs, sausages, bacon, and hot dogs. Use these foods as occasional treats, not everyday foods.

9 Compare sodium in foods
Use the Nutrition Facts label to choose lower sodium versions of foods like soup, bread, and frozen meals. Select canned foods labeled "low sodium," "reduced sodium," or "no salt added."

10 Drink water instead of sugary drinks
Cut calories by drinking water or unsweetened beverages. Soda, energy drinks, and sports drinks are a major source of added sugar, and calories, in American diets.
10 tips for healthy meals

A healthy meal starts with more vegetables and fruits and smaller portions of protein and grains. Think about how you can adjust the portions on your plate to get more of what you need without too many calories. And don’t forget dairy—make it the beverage with your meal or add fat-free or low-fat dairy products to your plate.

1. Make half your plate veggies and fruits
   - Vegetables and fruits are full of nutrients and may help to promote good health. Choose red, orange, and dark-green vegetables such as tomatoes, sweet potatoes, and broccoli.

2. Add lean protein
   - Choose protein foods, such as lean beef and pork, or chicken, turkey, beans, or tofu. Twice a week, make seafood the protein on your plate.

3. Include whole grains
   - Aim to make at least half your grains whole grains. Look for the words “100% whole grain” on the food label. Whole grains provide more nutrients, like fiber, than refined grains.

4. Don’t forget the dairy
   - Pair your meal with a cup of fat-free or low-fat milk. They provide the same amount of calcium and other essential nutrients as whole milk, but less fat and calories. Don’t drink milk? Try soy milk (soy beverage) as your beverage or include fat-free or low-fat yogurt in your meal.

5. Avoid extra fat
   - Using heavy gravies or sauces will add fat and calories to otherwise healthy choices. For example, steamed broccoli is great, but avoid topping it with cheese sauce. Try other options, like a sprinkling of low-fat parmesan cheese or a squeeze of lemon.

6. Take your time
   - Savor your food. Eat slowly, enjoy the taste and textures, and pay attention to how you feel. Be mindful. Eating very quickly may cause you to eat too much.

7. Use a smaller plate
   - Use a smaller plate at meals to help with portion control. That way you can finish your entire plate and feel satisfied without overeating.

8. Take control of your food
   - Eat at home more often so you know exactly what you are eating. If you eat out, check and compare the nutrition information. Choose healthier options such as baked instead of fried.

9. Try new foods
   - Keep it interesting by picking out new foods you’ve never tried before, like mango, lentils, or kale. You may find a new favorite! Trade fun and tasty recipes with friends or find them online.

10. Satisfy your sweet tooth in a healthy way
    - Indulge in a naturally sweet dessert dish—fruit! Serve a fresh fruit cocktail or a fruit parfait made with yogurt. For a hot dessert, bake apples and top with cinnamon.

Go to www.choosemyplate.gov for more information.
10 tips
Nutrition Education Series

Focus on Fruits
10 tips to help you eat more fruits

Eating fruit provides health benefits. People who eat more vegetables and fruits as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases. Fruits provide nutrients vital for health, such as potassium, dietary fiber, vitamin C, and folate (folic acid). Most fruits are naturally low in fat, sodium, and calories. None have cholesterol. Any fruit or 100% fruit juice counts as a part of the Fruit Group. Fruits may be fresh, canned, frozen, or dried, and may be whole, cut up, or puréed.

1. Keep visible reminders
   Keep a bowl of whole fruit on the table, counter, or in the refrigerator.

2. Think about taste
   Buy fresh fruits in season when they may be less expensive and at their peak flavor. Add fruits to sweeten a recipe.

3. Think about variety
   Buy fruits that are dried, frozen, and canned (in water or 100% juice) as well as fresh, so that you always have a supply on hand.

4. Don’t forget the fiber
   Make most of your choices whole or cut-up fruit, rather than juice, for the benefits that dietary fiber provides.

5. Be a good role model
   Set a good example for children by eating fruit every day with meals or as snacks.

6. Include fruit at breakfast
   At breakfast, top your cereal with bananas, peaches, or strawberries, add blueberries to pancakes, drink 100% orange or grapefruit juice or, try a fruit smoothie with fat-free or low-fat yogurt.

7. Try fruit at lunch
   At lunch, pack a tangerine, banana, or grapes to eat, or choose fruits from a salad bar. Individual containers of fruits like peaches or applesauce are easy and convenient.

8. Experiment with fruit at dinner, too
   At dinner, add crushed pineapple to coleslaw, or include orange sections, dried cranberries, or grapes in a tossed salad.

9. Snack on fruits
   Dried fruits make great snacks. They are easy to carry and store well.

10. Keep fruits safe
    Rinse fruits before preparing or eating them. Under clean, running water, rub fruits briskly to remove dirt and surface microorganisms. After rinsing, dry with a clean towel.

Go to www.choosemyplate.gov for more information.
add more vegetables to your day

10 tips to help you eat more vegetables

It's easy to eat more vegetables! Eating vegetables is important because they provide vitamins and minerals and most are low in calories. To fit more vegetables into your meals, follow these simple tips. It is easier than you may think.

1. Discover fast ways to cook
Cook fresh or frozen vegetables in the microwave for a quick and easy addition to any meal. Steam green beans, carrots, or broccoli in a bowl with a small amount of water in the microwave for a quick side dish.

2. Be ahead of the game
Cut up a batch of bell peppers, carrots, or broccoli. Pre-package them to use when time is limited. You can enjoy them on a salad, with hummus, or in a veggie wrap.

3. Choose vegetables rich in color
Brighten your plate with vegetables that are red, orange, or dark green. They are full of vitamins and minerals. Try acorn squash, cherry tomatoes, sweet potatoes, or collard greens. They not only taste great but are also good for you, too.

4. Check the freezer aisle
Frozen vegetables are quick and easy to use and are just as nutritious as fresh veggies. Try adding frozen corn, peas, green beans, spinach, or sugar snap peas to some of your favorite dishes or eat as a side dish.

5. Stock up on veggies
Canned vegetables are a great addition to any meal, so keep on hand canned tomatoes, kidney beans, garbanzo beans, mushrooms, and beets. Select those labeled as "reduced sodium," "low sodium," or "no salt added."

6. Make your garden salad glow with color
Brighten your salad by using colorful vegetables such as black beans, sliced red bell peppers, shredded radishes, chopped red cabbage, or watercress. Your salad will not only look good but taste good, too.

7. Sip on some vegetable soup
Heat it and eat it. Try tomato, butternut squash, or garden vegetable soup. Look for reduced- or low-sodium soups.

8. While you're out
If dinner is away from home, no need to worry. When ordering, ask for an extra side of vegetables or side salad instead of the typical fried side dish.

9. Savor the flavor of seasonal vegetables
Buy vegetables that are in season for maximum flavor at a lower cost. Check your local supermarket specials for the best-in-season buys. Or visit your local farmer's market.

10. Try something new
You never know what you may like. Choose a new vegetable—add it to your recipe or look up how to fix it online.

Go to www.ChooseMyPlate.gov for more information.
make half your grains whole

10 tips to help you eat whole grains

Any food made from wheat, rice, oats, cornmeal, barley, or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples. Grains are divided into two subgroups, whole grains and refined grains. Whole grains contain the entire grain kernel—the bran, germ, and endosperm. People who eat whole grains as part of a healthy diet have a reduced risk of some chronic diseases.

1 make simple switches
To make half your grains whole grains, substitute a whole-grain product for a refined-grain product. For example, eat 100% whole-wheat bread or bagels instead of white bread or bagels, or brown rice instead of white rice.

2 whole grains can be healthy snacks
Popcorn, a whole grain, can be a healthy snack. Make it with little or no added salt or butter. Also, try 100% whole-wheat or rye crackers.

3 save some time
Cook extra bulgur or barley when you have time. Freeze half to heat and serve later as a quick side dish.

4 mix it up with whole grains
Use whole grains in mixed dishes, such as barley in vegetable soups or stews and bulgur wheat in casseroles or stir-fries. Try a quinoa salad or pilaf.

5 try whole-wheat versions
For a change, try brown rice or whole-wheat pasta. Try brown rice stuffing in baked green peppers or tomatoes, and whole wheat macaroni in macaroni and cheese.

6 bake up some whole-grain goodness
Experiment by substituting buckwheat, millet, or oat flour for up to half of the flour in pancake, waffle, muffin, or other flour-based recipes. They may need a bit more leavening in order to rise.

7 be a good role model for children
Set a good example for children by serving and eating whole grains every day with meals or as snacks.

8 check the label for fiber
Use the Nutrition Facts label to check the fiber content of whole grain foods. Good sources of fiber contain 10% to 19% of the Daily Value; excellent sources contain 20% or more.

9 know what to look for on the ingredients list
Read the ingredients list and choose products that name a whole-grain ingredient first on the list. Look for "whole wheat," "brown rice," "bulgur," "buckwheat," "oatmeal," "whole-grain cornmeal," "whole oats," "whole rye," or "wild rice."

10 be a smart shopper
The color of a food is not an indication that it is a whole-grain food. Foods labeled as "multi-grain," "stone-ground," "100% wheat," "cracked wheat," "seven-grain," or "bran" are usually not 100% whole grain products, and may not contain any whole grain.

Go to www.ChooseMyPlate.gov for more information.
**10 tips for choosing protein**

**with protein foods, variety is key**

1. **Vary your protein food choices**
   - Eat a variety of foods from the Protein Foods Group each week. Experiment with main dishes made with beans or peas, nuts, soy, and seafood.

2. **Choose seafood twice a week**
   - Eat seafood in place of meat or poultry twice a week. Select a variety of seafood—include some that are higher in omega-3 fatty acids and low in mercury, such as salmon, trout, and herring.

3. **Make meat and poultry lean or low fat**
   - Choose lean or low-fat cuts of meat like round or sirloin and ground beef that is at least 90% lean. Trim or drain fat from meat and remove poultry skin.

4. **Have an egg**
   - One egg a day, on average, does not increase risk for heart disease, so make eggs part of your weekly choices. Only the egg yolk contains cholesterol and saturated fat, so have as many egg whites as you want.

5. **Eat plant protein foods more often**
   - Try beans and peas (kidney, pinto, black, or white beans; split peas; chickpeas; hummus), soy products (tofu, tempeh, veggie burgers), nuts, and seeds. They are naturally low in saturated fat and high in fiber.

6. **Nuts and seeds**
   - Choose unsalted nuts or seeds as a snack, on salads, or in main dishes to replace meat or poultry. Nuts and seeds are a concentrated source of calories, so eat small portions to keep calories in check.

7. **Keep it tasty and healthy**
   - Try grilling, broiling, roasting, or baking—they don’t add extra fat. Some lean meats need slow, moist cooking to be tender—try a slow cooker for them. Avoid breaded meat or poultry, which adds calories.

8. **Make a healthy sandwich**
   - Choose turkey, roast beef, canned tuna or salmon, or peanut butter for sandwiches. Many deli meats, such as regular bologna or salami, are high in fat and sodium—make them occasional treats only.

9. **Think small when it comes to meat portions**
   - Get the flavor you crave but in a smaller portion. Make or order a smaller burger or a “petite” size steak.

10. **Check the sodium**
    - Check the Nutrition Facts label to limit sodium. Salt is added to many canned foods—including beans and meats. Many processed meats such as ham, sausage, and hot dogs are high in sodium. Some fresh chicken, turkey, and pork are brined in a salt solution for flavor and tenderness.

*What counts as an ounce of protein foods? 1 ounce lean meat, poultry, or seafood; 1 egg; 1/4 cup cooked beans or peas; 1/2 ounce nuts or seeds; 1 tablespoon peanut butter.*

10 tips to help you eat and drink more fat-free or low-fat dairy foods

The Dairy Group includes milk, yogurt, cheese, and fortified soymilk. They provide calcium, vitamin D, potassium, protein, and other nutrients needed for good health throughout life. Choices should be low-fat or fat-free—to cut calories and saturated fat. How much is needed? Older children, teens, and adults need 3 cups a day, while children 4 to 8 years old need 2 1/2 cups, and children 2 to 3 years old need 2 cups.

1. "skim" the fat
   Drink fat-free (skim) or low-fat (1%) milk. If you currently drink whole milk, gradually switch to lower fat versions. This change cuts calories but doesn't reduce calcium or other essential nutrients.

2. boost potassium and vitamin D, and cut sodium
   Choose fat-free or low-fat milk or yogurt more often than cheese. Milk and yogurt have more potassium and less sodium than most cheeses. Also, almost all milk and many yogurts are fortified with vitamin D.

3. top off your meals
   Use fat-free or low-fat milk on cereal and oatmeal. Top fruit salads and baked potatoes with low-fat yogurt instead of higher fat toppings such as sour cream.

4. choose cheeses with less fat
   Many cheeses are high in saturated fat. Look for "reduced-fat" or "low-fat" on the label. Try different brands or types to find the one that you like.

5. what about cream cheese?
   Regular cream cheese, cream, and butter are not part of the dairy food group. They are high in saturated fat and have little or no calcium.

6. ingredient switches
   When recipes such as dips call for sour cream, substitute plain yogurt. Use fat-free evaporated milk instead of cream, and try ricotta cheese as a substitute for cream cheese.

7. choose sweet dairy foods with care
   Flavored milks, fruit yogurts, frozen yogurt, and puddings can contain a lot of added sugars. These added sugars are empty calories. You need the nutrients in dairy foods—not these empty calories.

8. caffeinating?
   If so, get your calcium along with your morning caffeine boost. Make or order coffee, a latte, or cappuccino with fat-free or low-fat milk.

9. can't drink milk?
   If you are lactose intolerant, try lactose-free milk, drink smaller amounts of milk at a time, or try soymilk (soy beverage). Check the Nutrition Facts label to be sure your soymilk has about 300 mg of calcium. Calcium in some leafy greens is well absorbed, but eating several cups each day to meet calcium needs may be unrealistic.

10. take care of yourself and your family
    Parents who drink milk and eat dairy foods show their kids that it is important. Dairy foods are especially important to build the growing bones of kids and teens. Routinely include low-fat or fat-free dairy foods with meals and snacks—for everyone's benefit.

Go to www.ChooseMyPlate.gov for more information.
Find your balance between food and physical activity.

Becoming a healthier you isn't just about eating healthy—it's also about physical activity. Regular physical activity is important for your overall health and fitness. It also helps you control body weight by balancing the calories you take in as food with the calories you expend each day.

- Be physically active for at least 30 minutes most days of the week.
- Increasing the intensity or the amount of time that you are physically active can have even greater health benefits and may be needed to control body weight. About 60 minutes a day may be needed to prevent weight gain.
- Children and teenagers should be physically active for 60 minutes every day, or most every day.

Consider This: If you eat 100 more food calories a day than you burn, you'll gain about 1 pound in a month. That's about 10 pounds in a year. The bottom line is that to lose weight, it's important to reduce calories and increase physical activity. Physical activity simply means movement of the body that uses energy. Walking, gardening, briskly pushing a baby stroller, climbing the stairs, playing soccer, or dancing the night away are all good examples of being active. For health benefits, physical activity should be moderate or vigorous and add up to at least 30 minutes a day.

Moderate physical activities include:
- Walking briskly (about 3 ½ miles per hour)
- Hiking
- Gardening/yard work
- Dancing
- Golfing (walking and carrying clubs)
- Bicycling (less than 10 miles per hour)
- Weight training (general light workout)

Vigorous physical activities include:
- Running/jogging (5 miles per hour)
- Bicycling (more than 10 miles per hour)
- Swimming (freestyle laps)
- Aerobics
- Walking very fast (4 ½ miles per hour)
- Heavy yard work, such as chopping wood
- Weight lifting (vigorous effort)
- Basketball (competitive)

Some physical activities are not intense enough to help you meet the recommendations. Although you are moving, these activities do not increase your heart rate, so you should not count these towards the 30 or more minutes a day for which you should strive. These include walking at a casual pace, such as while grocery shopping, and doing light household chores.

Get the most nutrition out of your calories.

There is a right number of calories for you to eat each day. This number depends on your age, activity level, and whether you're trying to gain, maintain, or lose weight.* You could use up the entire amount on a few high-calorie items, but chances are you won't get the full range of vitamins and nutrients your body needs to be healthy.
Choose the most nutritionally rich foods you can from each food group each day—those packed with vitamins, minerals, fiber, and other nutrients but lower in calories. Pick foods like fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products more often. * 2,000 calories is the value used as a general reference on the food label. But you can calculate your number at www.health.gov/dietaryguidelines.

Don't give in when you eat out and are on the go.
It's important to make smart food choices and watch portion sizes wherever you are—at the grocery store, at work, in your favorite restaurant, or running errands. Try these tips:

- At the store, plan ahead by buying a variety of nutrient-rich foods for meals and snacks throughout the week.
- When grabbing lunch, have a sandwich on whole-grain bread and choose low-fat/fat-free milk, water, or other drinks without added sugars.
- In a restaurant, opt for steamed, grilled, or broiled dishes instead of those that are fried or sautéed.
- On a long commute or shopping trip, pack some fresh fruit, cut-up vegetables, string cheese sticks, or a handful of unsalted nuts—to help you avoid impulsive, less healthful snack choices.

Nutrition Facts Labels

Most packaged foods have a Nutrition Facts label. For a healthier you, use this tool to make smart food choices quickly and easily. Try these tips:

- Keep these low: saturated fats, trans fats, cholesterol, and sodium.
- Get enough of these: potassium, fiber, vitamins A and C, calcium, and iron.
- Use the % Daily Value (DV) column when possible: 5% DV or less is low, 20% DV or more is high.

Check servings and calories. Look at the serving size and how many servings you are actually consuming. If you double the servings you eat, you double the calories and nutrients, including the % DVs.

Make your calories count. Look at the calories on the label and compare them with what nutrients you are also getting to decide whether the food is worth eating. When one serving of a single food item has over 400 calories per serving, it is high in calories.

Don't sugarcoat it. Since sugars contribute calories with few, if any, nutrients, look for foods and beverages low in added sugars. Read the ingredient list and make sure that added sugars are not one of the first few ingredients. Some names for added sugars (caloric sweeteners) include sucrose, glucose, high fructose corn syrup, corn syrup, maple syrup, and fructose.

Know your fats. Look for foods low in saturated fats, trans fats, and cholesterol to help reduce the risk of heart disease (5% DV or less is low, 20% DV or more is high). Most of the fats you
eat should be polyunsaturated and monounsaturated fats. Keep total fat intake between 20% to 35% of calories.

**Reduce sodium (salt), increase potassium.** Research shows that eating less than 2,300 milligrams of sodium (about 1 tsp of salt) per day may reduce the risk of high blood pressure. Most of the sodium people eat comes from processed foods, not from the saltshaker. Also look for foods high in potassium, which counteracts some of sodium's effects on blood pressure.

**Play it Safe with Food.**

Foods that are safe from harmful bacteria, viruses, parasites, and chemical contaminants are vital for healthful eating. *Safe* means that the food poses little risk of foodborne illness. Farmers, food producers, markets, food service establishments, and other food preparers have a role to keep food as safe as possible. However, we also need to keep and prepare foods safely in the home, and be alert when eating out.

Follow the steps below to keep your food safe. Be very careful with perishable foods such as eggs, meats, poultry, fish, shellfish, milk products, and fresh fruits and vegetables.

**Clean. Wash hands and surfaces often**

Wash your hands with warm soapy water for 20 seconds (count to 30) before you handle food or food utensils. Wash your hands after handling or preparing food, especially after handling raw meat, poultry, fish, shellfish, or eggs. Right after you prepare these raw foods, clean the utensils and surfaces you used with hot soapy water. Replace cutting boards once they have become worn or develop hard-to-clean grooves. Wash raw fruit and vegetables under running water before eating. Use a vegetable brush to remove surface dirt if necessary. Always wash your hands after using the bathroom, changing diapers, or playing with pets. When eating out, if the tables, dinnerware, and restrooms look dirty, the kitchen may be, too—so you may want to eat somewhere else.

**Separate. Separate raw, cooked, and ready-to-eat foods while shopping, preparing, or storing**

Keep raw meat, poultry, eggs, fish, and shellfish away from other foods, surfaces, utensils, or serving plates. This prevents cross-contamination from one food to another. Store raw meat, poultry, fish, and shellfish in containers in the refrigerator so that the juices don't drip onto other foods.

**Cook. Cook foods to a safe temperature**

Uncooked and undercooked animal foods are potentially unsafe. Proper cooking makes most uncooked foods safe. The best way to tell if meat, poultry, or egg dishes are cooked to a safe temperature is to use a food thermometer. Several kinds of inexpensive food thermometers are available in many stores. Reheat sauces, soups, marinades, and gravies to a boil. Reheat leftovers thoroughly to at least 165° F. If using a microwave oven, cover the container and turn or stir the food to make sure it is heated evenly throughout. Cook eggs until
whites and yolks are firm. Don't eat raw or partially cooked eggs, or foods containing raw eggs, raw (unpasteurized) milk, or cheeses made with raw milk. Choose pasteurized juices. The risk of contamination is high from undercooked hamburger, and from raw fish (including sushi), clams, and oysters. Cook fish and shellfish until it is opaque; fish should flake easily with a fork. When eating out, order foods thoroughly cooked and make sure they are served piping hot.

**Chill. Refrigerate perishable foods promptly**

When shopping, buy perishable foods last, and take them straight home. At home, refrigerate or freeze meat, poultry, eggs, fish, shellfish, ready-to-eat foods, and leftovers promptly. Refrigerate within 2 hours of purchasing or preparation—and within 1 hour if the air temperature is above 90º F. Refrigerate at or below 40º F, or freeze at or below 0º F. Use refrigerated leftovers within 3 to 4 days. Freeze fresh meat, poultry, fish, and shellfish that cannot be used in a few days. Thaw frozen meat, poultry, fish, and shellfish in the refrigerator, microwave, or cold water changed every 30 minutes. (This keeps the surface chilled.) Cook foods immediately after thawing. Never thaw meat, poultry, fish, or shellfish at room temperature. When eating out, make sure that any foods you order that should be refrigerated are served chilled.

**Follow the label**

Read the label and follow safety instructions on the package such as "KEEP REFRIGERATED" and the "SAFE HANDLING INSTRUCTIONS."

**Serve safely**

Keep hot foods hot (140º F or above) and cold foods cold (40º F or below). Harmful bacteria can grow rapidly in the "danger zone" between these temperatures. Whether raw or cooked, never leave meat, poultry, eggs, fish, or shellfish out at room temperature for more than 2 hours (1 hour in hot weather 90º F or above). Be sure to chill leftovers as soon as you are finished eating. These guidelines also apply to carry-out meals, restaurant leftovers, and home-packed meals-to-go.

**When in doubt, throw it out**

If you aren't sure that food has been prepared, served, or stored safely, throw it out. You may not be able to make food safe if it has been handled in an unsafe manner. For example, a food that has been left at room temperature too long may contain a toxin produced by bacteria—one that can't be destroyed by cooking. So if meat, poultry, fish, shellfish, or eggs have been left out for more than 2 hours, or if the food has been kept in the refrigerator too long, don't taste it. Just throw it out. Even if it looks and smells fine, it may not be safe to eat. If you have doubt when you're shopping or eating out, choose something else. For more information, contact USDA's Meat and Poultry Hotline, 1-800-535-4555, or FDA's Food Information Line, 1-888-SAFE FOOD. Also, ask your local or state health department or Cooperative Extension Service Office for further guidance.
Summary of Safe Food Handling

Know how to prepare, handle, and store food safely to keep you and your family safe:
- Clean hands, food-contact surfaces, fruits, and vegetables. To avoid spreading bacteria to other foods, meat and poultry should not be washed or rinsed.
- Separate raw, cooked, and ready-to-eat foods while shopping, preparing, or storing.
- Cook meat, poultry, and fish to safe internal temperatures to kill microorganisms.
- Chill perishable foods promptly and thaw foods properly.

About Alcohol.

If you choose to drink alcohol, do so in moderation. Moderate drinking means up to 1 drink a day for women and up to 2 drinks for men. Twelve ounces of regular beer, 5 ounces of wine, or 1½ ounces of 80-proof distilled spirits count as a drink for the purpose of explaining moderation. Remember that alcoholic beverages have calories but are low in nutritional value. Generally, anything more than moderate drinking can be harmful to your health. And some people, or people in certain situations, shouldn't drink at all. If you have questions or concerns, talk to your doctor or healthcare provider.
Feedback Exercise Lesson 3

1. Define good nutrition.

2. Explain the MyPlate visual.

3. List the five food groups and the recommended range of servings from each group.

4. Fill in the blanks for 10 tips for a healthy plate.
   a. Balance ______.
   b. Enjoy your food but eat _____.
   c. Avoid oversized ______.
   d. Eat _____ vegetables, fruits, whole grains, and fat-free or 1% milk.
   e. Make ____ your plate fruits and vegetables.
   f. Switch to fat—free or low-fat ____.
   g. Make half your grains ____ grains.
   h. Compare ______ in foods.
   i. Drink ____ instead of sugary drinks.

5. What kinds of protein are recommended?

6. Eating _____ may cause you to eat too much.

7. Why are whole or cut-up fruit better choices than juice?

8. Describe how to keep fruits safe.

9. What color vegetables are the richest sources of vitamins and minerals?

10. (Frozen/canned) vegetables are as nutritious as fresh veggies.

11. What should you look for on the label of canned vegetables?

12. Select products that name a whole-grain ingredient ____ on the list.

13. What terms indicate a whole grain:
   ___ multi-grain
   ___ stone-ground
   ___ cracked wheat
   ___ brown rice
   ___ whole-grain corn meal
   ___ wild rice
   ___ seven-grain
   ___ bran
   ___ oatmeal
   ___ 100% wheat
14. Good sources of fiber provide ____ to ___ of the Daily Value; excellent sources contain ____ or more.

15. Nuts and seeds are a concentrated source of _______, so eat small portions.

16. It is important to ____ the food sources from each food group.

17. Ground beef should be at least ____% lean.

18. Older children, teens, and adults need ___ cups of milk a day.

19. Most discretionary calorie allowances are very small, between ________ calories, especially for those who are not physically active.

20. It is recommended that most adults be physically active for at least ______ minutes most days of the week.

21. List four physical activities that you like that would meet the definitions of moderate or vigorous activity.

22. When one serving of a single food item has over______ calories per serving, it is high in calories.

23. When reading a nutrition label make sure that added sugars are not one of the ________ few ingredients.

24. When looking at the nutrition label, look for foods:
   a. Low in:
   b. With enough:

25. Foods should be kept colder than ________ or hotter than__________.

26. Moderate drinking means up to ___ drink a day for women and up to ______ drinks for men.

27. Signs and symptoms of foodborne illness may appear within _____ of eating a contaminated food or may not develop for up to __________.

28. Precautions for keeping food safe include
   a. Wash your hands with warm soapy water for _________ before handling food or food utensils; after handling or preparing ________; after using the _____; or playing with _____.
   b. Separate ________, ________, and __________ foods while shopping, preparing or storing ________.
   c. Use a food ______________. Reheat leftovers to at least __________.
   d. Refrigerate within ________ hours of purchase or preparation _______ hours if the air temperature is above 90 degrees. Refrigerate below _________. Use refrigerated leftovers within ________ days. Thaw frozen meat, poultry, fish, and shellfish in the __________, __________, or in cold water changed every ____________.
   e. Keep hot foods ___________ and cold foods ______________.
   f. When in doubt, ______________
Lesson 4: Nutritional Needs of Individuals with Developmental Disabilities

Objectives: Upon completion of this lesson, DSPs will be able to:
- List reasons why some people with disabilities may have more complex or specialized nutritional needs.
- List secondary conditions that may result from poor nutrition in people with developmental disabilities.
- Identify supports that can minimize nutritional risk factors for people with developmental disabilities.
- Explain how medication affects nutritional status.
- Describe nutritional practices that promote good oral health.
- Describe typical treatments for gastroesophageal reflux.
- List strategies for preventing constipation.
- Identify appropriate strategies to support individuals who are underweight.
- Provide support to individuals who need assistance with feeding and swallowing.
- Create a pleasant mealtime experience for people receiving support.

The nutritional needs of people with developmental disabilities are similar to the needs of the general population. However, some people with disabilities may have more complex or specialized nutritional requirements. Digestion, absorption, metabolism, and excretion can be compromised by genetic abnormalities (i.e., Down syndrome, and Prader-Willi) and other developmental disabilities, surgery, and interactions between medications and foods (American Dietetics, 1995).

Obesity is common in individuals with developmental disabilities. Energy needs are sometimes lower because of reduced metabolism, low muscle tone, and lack of physical activity. Another contributing factor to excess weight is the use of high calorie foods for rewards in behavior intervention plans.

In other situations, supplying enough calories/nutrients may be difficult to achieve if the fine and gross motor skills required for eating independently and the oral motor skills necessary for swallowing, drinking, and eating are impaired by physical impairments or cognitive disabilities (Cloud, H, 1997).

Poor nutrition may also make people with developmental disabilities more prone to developing the following secondary conditions (Humphries, Traci, Seekins, & Brusin, 2002):
- weight problems
- bladder dysfunction
- fatigue
- bowel dysfunction
- depression
- physical fitness/conditioning problems
- dental/oral hygiene problems
- sleep problems
- gastrointestinal dysfunction
- urinary tract infections
- side effects from medications
- allergies and allergic reactions
- cardiovascular/circulatory problems
- diabetes
- osteoporosis
- cancer

Many of these secondary conditions are also associated with under-nourishment or over-nourishment in the general population of the US.

*Table 1* notes selected disabilities associated with frequently reported nutrition problems. Sometimes people have two or more conditions (e.g., cerebral palsy and epilepsy, Down syndrome and congenital heart disease) further complicating nutritional needs (American Dietetics Association, 1997).

<table>
<thead>
<tr>
<th>Syndrome or disability</th>
<th>Altered growth, underweight, obesity</th>
<th>Altered energy need</th>
<th>Altered nutrient needs, nutrient deficient</th>
<th>Constipation/diarrhea</th>
<th>Feeding problems</th>
<th>Drug-nutrient interactions</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebral palsy</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>Orthopedic problems</td>
</tr>
<tr>
<td>Epilepsy</td>
<td></td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>✔</td>
<td></td>
<td>Gum hypertrophy</td>
</tr>
<tr>
<td>Muscular dystrophy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Myelomeningocele</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Down syndrome</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td>Gum disease</td>
</tr>
<tr>
<td>Prader-Willi syndrome</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental retardation of unknown etiology</td>
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<td>✔</td>
<td></td>
<td></td>
<td>✔</td>
<td></td>
<td>Pica</td>
</tr>
<tr>
<td>Autism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pica</td>
</tr>
</tbody>
</table>

From *Nutrition in Comprehensive Program Planning for Persons with Developmental Disabilities* (1997) by American Dietetic Association

Individuals with disabilities who are at increased risk for nutrition-related problems may benefit from periodic assessment and ongoing monitoring by a dietitian. However, requirements for professional monitoring may not exist in less restrictive settings (supported living arrangements). Lack of standards often means lack of financial support to the individual or the team in meeting nutritional
needs. This can result in unsanitary food handling practices, poor quality diets, inappropriate intake of energy and nutrients, or lack of appropriate training to support the development of healthy lifestyles.

The severity of nutritional risks varies depending on factors unique to the person (i.e., age, level of functioning, severity of the disability, general state of health) as well as environmental and social conditions including issues related to the training and supervision of support staff. Maladaptive behaviors, insufficient staff training, inconsistent approach among staff, and limited financial resources may also contribute to poor nutrition.

These nutritional risk factors can be minimized through well-planned and coordinated supports. Teams may need to consider the following to help meet the person's evolving needs throughout the life span:

- Training in wellness and nutrition for individuals with disabilities and support staff
- Positive behavioral supports to encourage healthy lifestyles and adequate nutrition
- Environmental and schedule modifications to enhance mealtime experiences and increase opportunities for physical activity
- Individualized teaching plans to build skills (self-feeding, cooking, meal planning, etc.)
- Adaptive utensils and customized equipment for positioning and feeding
- Specialized nutrition products and formulas
- Involvement of appropriate specialists (i.e., occupational therapist, dietician, behavior analyst) to provide assessment, direct therapy, and staff training

**Impact of Medication on Nutrition**

Persons with developmental disabilities are more likely to be taking prescribed medication for seizure disorders, chronic infections, gastrointestinal problems, and poor circulation (Humphries, et al). Any of the common medications prescribed for these conditions taken over a long period of time can affect the nutritional status of an individual. Various medications can influence nutritional needs through side effects such as:

- changes in the sense of taste
- decreases or increases in appetite (stimulants, anti-depressants, anti-psychotics)
- dry mouth (anti-depressants)
- nausea or vomiting (antibiotics, anti-cancer medications)
- diarrhea or constipation (sedatives, anti-psychotics, anti-depressants)
- interference with the way the body absorbs or uses vitamins or minerals (anti-convulsants, antibiotics)

To minimize the effect of medication and food interactions, it is important to read the labels to determine if the medication should be taken on an empty stomach, before eating, after eating or with food. Some medications are to be taken with a lot of water. Many medications interact with certain types of foods such as dairy products or alcohol. Read the label and check with the pharmacist for any possible interactions or side effects.

Long-term medication such as an anti-seizure medication can deplete the calcium in the body and lead to weak bones. It is necessary to follow the dietician’s/physician’s recommendations for supplementing the diet with calcium rich foods (i.e., milk) or calcium supplements.
Dental Concerns

Poor oral hygiene, missing teeth, teeth grinding, cavities, and gum disease are common in people with developmental disabilities. Abnormal oral development and poor dental health can affect food intake and nutritional status. Likewise, diet may affect the development and progression of tooth decay and gum disease. In addition to regular dental care, daily flossing, and brushing with fluoride toothpaste, the following strategies can promote good oral health:

- Provide plenty of liquids with meals and between meals.
- Limit sticky foods and sweets, especially between meals.
- If possible, brush right after eating. If brushing is not possible, at least rinse with water.
- Maintain a varied diet of easy to chew foods for people missing or without teeth.

Gastrointestinal Concerns

Rumination. Rumination is the voluntary or involuntary regurgitation and re-chewing of partially digested food that is either re-swallowed or expelled. This regurgitation appears effortless, may be preceded by a belching sensation, and typically does not involve vomiting or nausea. While rumination is usually a voluntary, self-stimulatory behavior, a medical evaluation may be needed to rule out any organic causes. Rumination can cause potentially life-threatening medical conditions such as weight loss, malnutrition, chemical imbalance, tooth decay, and aspiration pneumonia. Rumination is estimated to be the primary cause of death in 5-10% of individuals who ruminate (Ellis & Schnoes, 2001).

A functional analysis to determine if rumination serves as a self-stimulation or is attention seeking can be used to develop a behavioral intervention plan consistent with the individual’s rights and agency policy. Self-stimulation often is association with re-consumption of ruminate, however, little or no re-consumption of ruminate is more likely attention seeking behavior. The behavior may begin as self-stimulation but becomes reinforced because of the attention it attracts. The following nonaversive interventions have proven to be successful when carefully planned by a professional and consistently implemented by all who are in contact with the person:

- Food satiation (i.e., unlimited quantities of thick food)
- Small bites of normal amounts of food over an extended eating time, if self-stimulation is identified
- Reinforcement of incompatible behaviors
- Reinforcement of other behaviors
- Special feeding techniques
- Self-hypnosis with relaxation
- Guided imagery (a form of mind/body therapy that seeks to make beneficial physical changes in the body by repeatedly visualizing them)
- Complete chewing
- Relaxation while eating
- Weight reduction
- Stress management
- Throat clearing
- Sipping water between bites
- Decreasing caffeine and alcohol consumption

Aversive behavioral strategies (i.e., contingent exercise, overcorrection, unpleasant tastes,) may be
considered by the team if the individual's health is jeopardized or the individual's health status has
had a rapid and dramatic change and if agency policy allows (Ellis & Schnoes, 2001).

Gastroesophageal reflux (GER). GER is a condition in which the esophagus and/or throat becomes
irritated or inflamed because food and digestive fluids back up from the stomach. It is caused by
inadequate closure of the muscle between the stomach and esophagus. Normally, that ring of muscle
relaxes during swallowing to allow food to pass. It then tightens to prevent flow in the opposite
direction. With GER, however, the sphincter relaxes between swallows, causing a burning,
uncomfortable sensation. GER can lead to conditions which can be life threatening (e.g., aspiration).
Several contributing factors associated with GER include:

- Lifestyle - Use of alcohol or cigarettes, obesity, poor posture (slouching)
- Medications - Calcium channel blockers, theophylline (Tedral, Hydrophed, Marax, Bronchial,
  Quibron), nitrates, antihistamines
- Diet - Eating fatty foods, chocolate, large meals, eating before bedtime
- Other medical conditions - Hiatal hernia, pregnancy, diabetes

Following a medical evaluation to determine risk factors for aspiration, one of more the following
treatments may be recommended (Simic, 2002 & Novak, et al):

- Eating small, frequent meals
- Avoiding fatty greasy foods, chocolate, caffeine, peppermint, spicy foods, citrus fruits and
  juices, tomato products, carbonated beverages and alcohol
- Remaining upright during and after meals
- Thickening liquids by adding thickening agents
- Avoiding eating within 3 hours of bedtime
- Elevating the head of the bed 6 inches with blocks
- Losing excess weight
- Keeping meal times calm and free of distractions
- Maintaining good posture

Constipation. People with developmental disabilities frequently experience constipation (decrease in
the frequency of bowel movements accompanied by increased consistency and difficulty in passing
stools), if they are taking medications such as pain relievers, antacids, anticholenergics,
anticonvulsants, iron supplements, and antipsychotics. Constipation is also associated with Down
syndrome, cerebral palsy, seizure disorders, spina bifida, or encephalopathy (brain damage).

Suggestions for preventing constipation include (Novak, et al & Azer, 2002):

- Increase fluids, especially water and fruit juices. Drink 6-8 glasses of water daily in addition
to beverages with meals. Popsicles, fruit ices and gelatin are also good sources of water.
- If thin fluids are difficult for the person to swallow, use thicker juices such as prune juice or tomato juice, or thickening agents.
- Increase fiber or bulk while maintaining or increasing fluid intake. Increase fiber slowly to prevent discomfort from gas. Too much fiber without adequate liquids can worsen constipation.
- Limit poor sources of fiber that contribute to constipation (i.e., pudding, cheese, and meats).
- Replace white bread with whole grain products. Other fiber rich foods include fresh fruits and vegetables, beans, and whole grains (bran, oatmeal, granola).
- Encourage the person to go to the bathroom at the same time every day—preferably after meals—and take enough time.
- Laxatives and stool softeners should only be used with a physician’s order. Excessive use of laxatives may make constipation worse.
- Increase activities such as walking. Ask a physical therapist to address activity that uses lower abdominal muscles in individuals who are not ambulatory.
- Complete daily exercises such as the knee-to-chest position. Such positions may activate bowel movements. Spend about 10-15 minutes in this position, breathing in and out deeply during the exercise.

**Diarrhea.** Diarrhea is defined as loose, watery stools occurring more than three times in one day. It is a common problem that usually lasts a day or two and goes away on its own without any special treatment. However, prolonged diarrhea can be a sign of other problems. Diarrhea can cause dehydration, which means the body lacks enough fluid to function properly.

Diarrhea may be caused by a temporary problem, such as an infection, or a chronic problem, such as an intestinal disease. A few of the more common causes of diarrhea are: bacterial infections; reaction to medicines (i.e., antibiotics, blood pressure medications, and antacids containing magnesium); intestinal diseases or functional bowel disorders (irritable bowel syndrome); and food intolerances (e.g., milk).

Follow agency policy for contacting medical personnel when symptoms of diarrhea persist. Medication may be prescribed in combination with diet restrictions/recommendations. Dietary therapy for diarrhea can include low fiber foods such as white rice, applesauce, dry toast, and bananas. Limiting fat and eating yogurt can also help.

**Underweight/Undernutrition**

Lesson 3 gives dietary information on healthy food choices for maintaining weight and/or losing weight. For some people with a developmental disability, however, it may be difficult to maintain a healthy weight and/or gain weight. Being underweight can diminish the individual’s quality of life. Those at risk for being underweight include people with eating or swallowing problems, those who are frequently ill, and those with cystic fibrosis or athetoid cerebral palsy (Novak, et al).

Recommendations to support individuals who are underweight include:
- Offer small, frequent meals. By spreading out food choices during the day, the person can enjoy meals and snacks without feeling overstuffed.
• Praise and encourage eating and keep the mealtime experience pleasant and calm. Never force food, punish or scold a person for refusing to eat.
• Select calorie-rich foods from each group of the Food Guide Pyramid, plus fats, oils, and sweets in moderation. Concentrate on calories. However, rather than choosing rich desserts and fried foods, the emphasis should be on foods that pack other nutrients, such as protein, vitamins, and minerals, in addition to calories. The American Dietetics Association recommends that people trying to gain weight aim for the higher number of servings from each group shown in the Pyramid.
  o In the Bread Group, choose granola, bagels, biscuits, and cornbread.
  o In the Fruit Group, choose canned fruit in syrup, dried fruits, and fruit nectars.
  o In the vegetable group, choose avocado, olives, potatoes, peas, corn, and squash.
  o In the Meat Group, choose beef, pork, lamb, poultry, salmon, swordfish, omelets, nuts, peanut butter, and dried beans.
  o In the Milk Group, choose milk, fruited yogurt, hard cheeses, ice cream, pudding, custard, and milkshakes.
• Add extra calories to foods that will not add bulk to the diet
  o Add powdered milk to mashed potatoes, soups, ground meats, cooked cereal, yogurt or ice cream-based shakes and fruit smoothies
  o Dip crackers, chips, and fresh vegetables in high-calorie dips made with cream cheese, sour cream, mashed beans, or salad dressings.
  o Add eggs to casseroles, pancakes or waffles
  o Add butter or margarine to pudding, casseroles, sandwiches, and vegetables
  o Add cheese or cream cheese to sandwiches, casseroles, potatoes, soup, or vegetables.
  o Use whole milk instead of water in cooked cereals and soup or when baking
  o Use gravies, creamed sauces, and cheese sauces on noodles, potatoes, meats, and rice.
• Encourage snacks but space them throughout the day to avoid spoiling the appetite for later meals.

Eating Difficulties or Delays

Managing Food Texture and Consistency. Modified diets are determined by physician’s orders and individual preferences. If you question the person’s ability to tolerate more texture, follow your agency policy to make those concerns known. Changes in textures can improve quality of life and opportunities for more independence. These changes are often a lengthy process and require the resources of a dietician, occupational therapist, or speech therapist, and physician.

When assisting a person to make the transition to textured foods, begin with liquid or pureed textures that are well tolerated. Using flavors the person enjoys (i.e., peaches), gradually vary the texture from pureed to mashed, chopped, and finally regular texture (sliced peaches). The texture of food may be increased with the addition of cereal or crackers. At first there may be sensitivity to the different texture. Encourage the person to continue trying, offering small amounts until the person develops the ability to accept the various textures (Novak, Bujold, & Brodsky Perkins).

Oral Hypersensitivity. The mouth, lips and tongue are very sensitive. The nervous system of individuals with oral hypersensitivity interprets touch as threatening or negative. This can be a serious problem for feeding and a threat to nutrient intake. It can result in clenched teeth, gagging, turning
head away and grimacing when food is presented. A specialist such as an occupational therapist can provide suggestions to assist with desensitizing the person to touch and improve the eating experiences. Such programs usually consist of identifying the person’s sensory needs and developing a program that incorporates touch into daily routines and may include sensory stimulation prior to mealtime.

**Direct Therapy for Feeding and Swallowing Problems.** Direct therapy attempts to improve eating and swallowing problems by improving the function of oral structures (jaw control, lip control, bite reflex, tongue and chewing). A speech therapist or an occupational therapist will design specific recommendations for each individual and train staff in how to implement the procedures. General recommendations include (McGowan, 2000; Galaviz, 1989; Meyer Rehabilitation Institute, 1991):

- Sit facing the person so they can see the food and you can see their facial expressions. If you stand, the person has to tip their head back to see you and can choke on their food. Never stand behind to assist with eating.
- Offer small amounts and allow enough time for the person to swallow between bites.
- If the person cannot close their lips, don’t scrape food off the upper teeth. Instead, give a spoonful of food, wait a second, and assist them to close their lips. If necessary, use the molars to take food off the spoon.
- When presenting liquids, the head should be in the midline and slightly forward. Never pour liquids in an open mouth. Limit the amount to what the person can swallow. Give time for them to swallow. Intersperse liquids during the meal. Do not save all liquids for the end of the meal.
- Avoid putting the entire spoon into the mouth of a person with tonic bite reflex. If the person clamps down on the spoon, try to bring the head forward a little and wait until the bite relaxes. Don’t try to pull the spoon out or force the jaw open. Don’t use plastic utensils or Styrofoam cups and avoid metal spoons. Rubber or nylon coated utensils protect the teeth if biting is stimulated.
- If the person has difficulty opening their mouth, a cue may be necessary to tell the person that food is coming and that it is time to open their mouth. This can be done by tapping lightly on the lower lip and then waiting a few seconds for a response. Another strategy is to firmly press downward on the person’s lower lip with a spoon. Keep the spoon level. These strategies may also help to relax the muscles around the mouth.
- If tongue thrust occurs, present food from the front or side using firm downward pressure on the tongue. Avoid the tip of the tongue. Instead, place food in the middle portion over by the molars.

**Tube Feedings.** Tube feedings are provided when nutritional needs cannot be met by oral feedings or when food or liquid is being drawn into the lungs (aspiration), causing pneumonia. Nutrients (either a special liquid formula or pureed food) are delivered through a tube inserted in the nose to the stomach (nasogastric feeding) or through a tube surgically placed to bypass the upper digestive tract (a gastrostomy creates an opening into the stomach). The feeding tube is then inserted through the surgically-created opening.

Nasogastric feedings are used for short term feeding therapy such as during an illness or in preparation for surgery. Gastrostomy feedings are used when people have central nervous system damage or abnormalities in the upper digestive tract. If it is medically safe to do so, the person may
continue to receive food by mouth. Tube feedings can be given in meal or snack-sized amounts at regularly schedule times or by drip feeding, giving continuously over time by pump.

Constipation, diarrhea or vomiting can be caused by obstruction in the tube, speed of the feeding, temperature of the feeding, amount given, or type of formula. Report these conditions according to your agency policy. Carefully follow time recommendations for medications as tube feedings can interfere with the effectiveness of some medications (Novak, et al).

**Meeting the Nutritional Needs of Seniors with Developmental Disabilities**

Aging affects most parts of the gastrointestinal (digestive) system. The most obvious change is the loss of teeth. The senses also change. As the ability to smell decreases, there is a related decrease in the ability to taste food. As a result of decreased saliva production and wave in the esophagus action, it is more difficult to swallow.

<table>
<thead>
<tr>
<th>Areas of Change</th>
<th>Types of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentition</td>
<td>Lack of healthy teeth or properly fitting dentures affects nutrition and diet. It’s especially difficult to eat fresh fruit and vegetables without good dentition.</td>
</tr>
<tr>
<td>Sense of Taste</td>
<td>The threshold of taste and smell increases with age. More stimulation is needed, for example, for something salty to taste salty. Due to this, food does not taste as good as it once did and appetite can decrease.</td>
</tr>
<tr>
<td>Esophagus</td>
<td>A common complaint is difficulty swallowing. It may be caused by thickening of the lining of the esophagus or by decrease in the amount of saliva. Diseases more common to older persons are cancer of the esophagus and hiatal hernia. The hernia can cause heartburn, chest pains and belching. Risk factors in cancer of the esophagus include smoking or drinking, being over 55 years of age, black, a male, or a city dweller.</td>
</tr>
<tr>
<td>Stomach</td>
<td>A decrease in the secretion of gastric juices produces certain problems. These include indigestion and peptic or duodenal ulcers. Indigestion produces heart burn and pain in the stomach. Ulcers can be thought of as open sores on the stomach. Pain may be alleviated by eating or by medications prescribed by the physician.</td>
</tr>
<tr>
<td>Intestinal Tract</td>
<td>Constipation can be produced by loss of abdominal muscle tone and/or taking medications such as antacids, diuretics or sedatives. Constipation can be complicated by being confined to bed or immobility. Diverticulosis, an intestinal disease, is aggravated by constipation.</td>
</tr>
<tr>
<td>Hemorrhoids</td>
<td>Hemorrhoids are blood vessels which become swollen by straining when constipated, lifting heavy objects, chronic coughing, being overweight or by pressure from a rectal tumor. Two signs are pain and rectal bleeding. Rectal bleeding is also a sign of cancer, therefore a physician should be consulted when this condition occurs.</td>
</tr>
</tbody>
</table>
Implications:
The effectiveness of dentures is estimated to be only 12% of one’s own teeth. Consequently, the denture wearer must chew food much longer in order to reach the same level of mastication. Chewing difficulties may lead to dietary modifications that include softer foods, reducing dietary bulk and potentially creating digestive problems such as constipation. The changes in the gastrointestinal system may affect not only the person’s ability to eat some food but also their appetite. Changes in eating habits can also lead to problems with poor nutrition.

Suggestions:

- Provide soft, easy to chew foods.
- Ensure good dental hygiene.
- Serve small, frequent, and attractive meals.
- Serve the large meal early in the day.
- Create a relaxed atmosphere.
- Increase liquids, fruits, vegetables, and grains.
- Increase exercise.
- Avoid foods with seeds (e.g. tomatoes).
- Refrain from regular use of enemas or laxatives.
- Consider texture and consistency of foods as needed.

Mealtime Considerations
Creating a calm, quiet mealtime in a relaxed environment can help people enjoy the meal and eat better. Eating dinner together is not only nutritionally important, it can also help develop social skills in a comfortable setting. Creating a comfortable mealtime experience begins with menu planning and preparation. It also includes proper positioning, food presentation (i.e., appearance, consistency, and temperature), controlling environmental stimuli (i.e., noise, odors, distractions), teaching independence (i.e., eating, cooking), modeling social skills (i.e., manners, communication), and, in some cases, positive behavioral supports.

Planning and Preparing the Meal. Include the individual in the meal planning, shopping for ingredients, and meal preparation as much as possible. Experiencing the sounds and smells of food preparation, taking part in cooking, setting the table, and helping with cleanup can increase mealtime anticipation, provide a sense of accomplishment and develop skills.

Honor the individual’s food preferences but encourage a variety of choices from all food groups. Introducing new foods with familiar favorites may increase food acceptance. Never force food or punish consumers for refusing to eat a food. If an individual does not speak, observe for other signs that indicate food preferences/dislikes (i.e., refusals, facial expressions).
Positioning. While eating, the person should feel well supported with their body upright, head slightly forward with shoulders inline with the hips. The arms should be in front, resting on the table, in the lap or on the arms of the chair. Hips should be symmetrical and flexed at least 90 degrees. A lap belt or adaptive equipment may be used to help maintain correct positioning. Knees should be flexed at 90 degrees and the feet should be resting on a flat, firm surface to provide stability. If the person uses a wheelchair, the brakes should be locked. Since it is possible for a person to move back 24-36 inches during a meal, it is important to check the person’s position throughout the meal and readjust if necessary. Pay special attention to the individual’s head position. It should be upright with the chin tucked slightly. If the person needs assistance with eating, the staff should sit facing the person at eye level and offer food at midline in a slow but steady pace.

Food Presentation. Regular mealtimes encourage healthy appetites and weight control. Waiting at least 2-3 hours between meals and snacks will increase mealtime appetites, however, some conditions (i.e., reflux, rumination) may require more frequent meals. Administration of medications should be timed to minimize interference with mealtime based on the pharmacist’s recommendations.

Food safety standards require keeping hot foods hot and cold foods cold. The general rule is to avoid holding or storing food at temperatures between 40-100 degrees. However, temperatures over 105 degrees are much hotter than “eating temperature.” Be sure to check that the temperature of food is pleasant to the person and allow it to cool down slightly before serving if necessary. When heating in a microwave, there may be uneven heating, so stir thoroughly and test different parts. If a person has difficulty waiting, don’t present the food until it is the right temperature.

Individuals who have difficulty eating may require modification of the texture or consistency of their food. Texture is the resistance of food to being broken into smaller bits. Highly textured foods are more difficult to chew; foods without texture are smooth, soft, and can be eaten with little or no chewing.

Diet consistencies are evaluated by a speech therapist or an occupational therapist and prescribed by a physician. It is important to follow the prescribed diet consistency in order to ensure the person’s safety. Diet consistencies include:

Regular
Chopped
Finely chopped
Pureed

Remember that mixed foods such as soup and stew may contain foods of varying texture. Adding ingredients such as raisins to pudding may make it too difficult for some people to chew. If food is chopped or pureed, do not combine different menu items unless that is the preference of the individual. Acceptance is often improved if food is presented attractively, but simply and separated on the plate. Mixing foods deprives the person of sensory cues of color and taste.

How "runny" a food is determines consistency. People who have some difficulty manipulating food in the mouth may have difficulty eating foods with very thick consistencies (e.g., mashed potatoes or peanut butter). Thinning a thick food by adding water will make the food easier to eat. Other people
have difficulty if the food or beverage is too thin. In these cases, it is important to thicken their beverages so they can swallow them. Liquid consistencies include:

- Regular
- Nectar thick
- Honey thick
- Spoon thick

McGowan (2000) suggests the following options if food is not the appropriate temperature or texture for the individual:

- If the food served is too coarse, chop it or put it in a food processor until it is the right size.
- If it is too fine, don’t serve it; find something else.
- If the food is too sticky, it may help to add liquids, condiments or fat (e.g., add mayonnaise to pasta salad, add butter or milk to mashed potatoes).
- If it is too runny, cook it longer, drain off fluid, add gelatin, bread or cracker crumbs.
- If it is too dry, try adding a liquid, condiments or fats (i.e., add tartar sauce to fish sticks).
- If food is too hot, stir it, spread it out, wait until it cools, put it in the refrigerator for a few seconds, or add cooler food.
- If the person is sensitive to cold temperatures, you may want to warm some refrigerated foods.

Controlling Sensory Input. A room that is filled with lots of sounds and activity may make it hard for some people to pay attention to eating. The television and radio should be turned off during the meal so everyone can focus on conversation without distraction. Let the answering machine pick up calls or turn off the phone ringer to avoid dinner interruptions. A phone call can always be returned after dinner. Control distracting smells from some foods (i.e., cauliflower, liver) or body odors which may make it difficult to concentrate on the meal. Respect individual preferences for seating arrangements during mealtime.

Teaching Independence & Modeling Social Skills. When teaching someone to eat independently, begin with hand-over-hand assistance. As soon as possible, decrease the amount of physical assistance. Fade from verbal cues to supervision as the person takes on more of the responsibility. Serve food in a manner that increases ease of self-feeding (i.e., finger foods, bite-sized pieces) when appropriate. An occupational therapist can suggest adaptive utensils with built up handles and dishes with sides to scoop against to support independent eating (see the appendix). Reinforce the person as skills improve in an age-appropriate manner that is respectful of their personal dignity. It may take months or years to teach some self-feeding skills. Ask yourself, “Is this person teaching me to feed him, or am I teaching him to eat by himself?”

Eating in small groups fosters social skill development and allows for more individualized teaching and support. Healthy habits should be taught and a positive example should be set at mealtime by modeling appropriate table manners and healthy eating habits (i.e., eating a variety of healthy foods, limiting snacks).

Make mealtime pleasant. Include everyone at the table in the conversation, even those who don’t speak. Discuss positive events of the day or upcoming activities at a level they can understand. Remember to take your time and enjoy the extra few minutes sitting at the table before cleaning up.
Positive Behavioral Supports. Observe how each person communicates. Some people have a subtle way of saying they are uncomfortable or need more time to chew and swallow. Be a good observer. Remember that the person is also observing you. Try to enjoy the meal yourself and be careful not to indicate dislike for particular foods or show displeasure at drooling, etc. The person may misinterpret negative facial expressions as rejection.

Follow clear and consistent routines so people know what to expect. Minimize long waits for food. Criticism and unpleasant topics during meals create a stressful atmosphere. Choose topics in which people are interested or to which they can relate. Avoid drawing attention to accidental spills and messes or attention seeking behavior.

Remember that medical conditions and medication may influence hunger. Report sudden changes in appetite or mealtime behavior. Mealtime “behavior” problems or food refusal can be avoidance behavior related to discomfort from reflux, heartburn, constipation, or other medical problems. Changes in appetite can also be a symptom of depression or other disorders.
Lesson 4 Feedback Questions

1. Why do some people with disabilities have specialized or complex nutritional needs?
   a. 
   b. 
   c. 
   d. 
   e. 
   f. 
   g. 

2. List several secondary conditions which may result from poor nutrition.

3. What are some supports that can minimize nutritional risk factors for people with developmental disabilities?
   a. 
   b. 
   c. 
   d. 
   e. 
   f. 
   g. 

4. Medication taken over a long period of time can affect nutritional status through the following side effects:
   a. Changes in the sense of _________________
   b. ____________ or _________ in appetite.
   c. Dry ____________
   d. Nausea or ____________
   e. Diarrhea or _______________
   f. Interference with the way the body ________________ or uses vitamins or minerals.

5. Describe nutritional practices that can promote good oral health:

6. Describe typical treatments for gastroesophageal reflux:

7. List suggestions for preventing constipation:

8. Describe strategies to support individuals who are underweight:
9. When assisting with feeding:
   a. _____ (Sit or stand)
   b. Offer ______ (small/large) amounts and give enough time for the person to __________ between bites.
   c. Don’t __________ food off on the upper teeth. Instead wait and assist them to close their lips.
   d. ______ liquids with the meal. Don’t save all liquids for the end of the meal.
   e. Never pour liquids in an _______ mouth.
   f. Use _______________ if the person has a tonic bite reflex.
   g. __________ the person by tapping on the chin to let them know it is time to open their mouth, if they have difficulty.
   h. Avoid the _______________ if tongue thrust occurs.

9. Describe how you can teach skills and foster a pleasant mealtime experience with the people you support related to the following factors:

   Planning and Preparing the Meal:

   Positioning:

   Food Presentation:
   - Time for meals and snacks
   - Temperature
   - Texture
   - Consistency

   Controlling Sensory Input:

   Teaching Independence:

   Modeling Social Skills:

   Positive Behavioral Supports:
Lesson 5: Promoting Physical Activity and Wellness in Persons with Developmental Disabilities

Objectives: Upon completion of this lesson, DSPs will be able to:

- List the benefits of exercise and sport activities for people with disabilities
- Explain the role of staff in supporting fitness programs for people with disabilities
- Describe characteristics of successful fitness programs for people with disabilities
- Apply motivation principles when supporting consumer’s fitness programs

Studies clearly indicate that people with disabilities are less likely to engage in regular moderate physical activity than people without disabilities, yet they have similar needs to promote their health and prevent unnecessary disease and decline. In fact, promoting physical activity for people with disabilities is especially important since they have a substantially greater risk of developing secondary conditions. The benefits of exercise and sports activities for people with disabilities include (Kosma & Cardinal, Rintala; CDC, 1999):

- Controlling weight.
- Reducing the risk of dying from coronary heart disease and of developing high blood pressure, colon cancer, and diabetes.
- Helping reduce blood pressure in some people with hypertension.
- Helping people with chronic, disabling conditions improve their stamina and muscle strength.
- Increasing flexibility and helps control joint swelling and pain associated with arthritis.
- Reducing symptoms of anxiety and depression, improves mood, and promotes general feelings of well-being.
- Decreasing inappropriate, stereotypical behaviors and increase self-control.
- Enhancing self-esteem and psychological empowerment.
- Enhancing perceived competence, social integration, and challenge disability stereotypes.
- Supporting personal fulfillment and attainment of personal goals.

In the Surgeon General’s report on Physical Activity and Health (1999), these key messages relating to people with disabilities were highlighted:

“Physical activity need not be strenuous to achieve health benefits. Significant health benefits can be obtained with a moderate amount of physical activity, preferably daily. The same moderate amount of activity can be obtained in longer sessions of moderately intense activities (such as 30-40 minutes of wheeling oneself in a wheelchair) or in shorter sessions of more strenuous activities (such as 20 minutes of wheelchair basketball). Additional health benefits can be gained through greater amounts of physical activity. People who can maintain a regular routine of physical activity that is of longer duration or of greater intensity are likely to derive greater benefit.

The emphasis on moderate amounts of physical activity makes it possible to vary activities to meet individual needs, preferences, and life circumstances. Previously sedentary people who begin physical activity programs should start with short intervals of physical activity (5-10 minutes) and gradually build up to the desired level of activity. People with disabilities should first consult a physician before beginning a program of physical activity to which they are unaccustomed.”
In spite of documented benefits, only 23% of individuals with disabilities engage in regular physical activity, which is characterized by at least 20 minutes of exercise on three or more days per week. Often, this is because of low motivation to participate in regular physical activity (Kosma, et al). Many people with disabilities do not consider themselves candidates for an exercise program or do not have experiences with community-based fitness programs. Staff members who understand that people with disabilities can be healthy, active, and self-directed, make a tremendous difference in helping people identify and practice tailored health promotion behaviors and activities directed at increasing a person’s level of well-being. Social support has been consistently and positively related to regular physical activity (CDC, 1999).

Many community-based fitness programs may need support to provide instruction or adaptations to activities for people with disabilities. The National Center on Physical Activity and Disability has several online fact sheets with information on a variety of physical activities for people with disabilities which include drop down menus on recreation and leisure activities, exercise and fitness activities, sports and team games, information on specific disabilities, and information on resources and accessibility. Individuals, staff, and fitness center personnel may print the fact sheets to learn benefits, goal setting strategies, how to tips, training principles, safety considerations, and in-home training protocols at this website [http://www.ncpad.org/Factshthtml/default.htm]. An example of one of the fact sheets is in the appendix.

The National Center on Physical Activity and Disability (NCPAD) reviewed 10 research-based health promotion programs for persons with disabilities. Successful strategies used in these programs include:

- Fitness was approached from several dimensions simultaneously (physical activity, nutrition, and stress management).
- Programs combined lessons, group discussions, deep-breathing techniques, stretching and strengthening exercises.
- Peer support was provided to program participants.
- Weight loss programs combined nutrition, exercise, and behavior modification.
- Wellness information on a wide range of topics was presented including: preventing secondary conditions, offsetting depression and anxiety, interpersonal relationships and sexuality, celebrating personal success.
- Exercise programs included warm-up (stretches); aerobic activity; muscles strength and endurance; and cool down (stretches).
- The relationship between daily health behaviors and achievement of long-term goals was stressed. Participants were taught goal-setting and problem solving.
- Support was provided to overcome transportation, limited income, and lack of information barriers.

Gains in physiological and psychological health outcomes of these fitness programs varied depending on the design, length of participation, and participants in each study. In programs where data did not indicate increase in specific health measures (i.e., weight loss, decrease in cholesterol), self-reports by people with disabilities indicated that participation had positive outcomes such as improved strength, endurance, increased energy, motivation, and self-confidence. The majority of people with disabilities felt the program positively impacted their overall quality of life.
Researchers in these studies confirmed that changes in attitudes and behavior must occur before changes can be observed in health markers such as blood cholesterol and weight. Researchers at the University of Montana have had success with the *Living Well with a Disability* Curriculum. It teaches individuals with disabilities a process for setting and clarifying wellness goals, as well as teaching skills for generating, implementing, and monitoring solutions. Goal setting and problem solving becomes the framework for developing healthy lifestyles and making the necessary connection between health and function.

**Building Motivation and Commitment to Change**

The following recommendations are adapted from Carla Culley’s presentation, Application of the Concept of Health and Wellness to People with Disabilities – from Academia to Real Life. The person’s motivation and commitment to change should be assessed first (See the Appendix). Then Culley’s “Ten Tips on Building Motivation for Change” (listed below) should be adapted to meet the needs of the individual.

1. **Choose a Target Behavior.** For successful behavior change, it’s best to focus on one behavior at a time. Choose a behavior that is important to you and that you are strongly motivated to change.

2. **Gather Information About Your Target Behavior.** Take a close look at what your target behavior means to your health, now and in the future. Sources for information include: a health care provider, non-profit health organizations such as the American Heart Association, the Internet or written materials.

3. **Set SMART Goals** For your behavior change program to succeed, you must set meaningful, realistic goals. In addition to an ultimate goal, set some intermediate goals and milestones that you can strive for on the way to your final objective. It is best to smart small and build on your successes.
   - **Specific:** “I will walk for 20+ minutes 3 times this week” instead of “I will exercise more this week.”
   - **Measurable:** “In order to evaluate how you are doing, you need some measure of your success. Miles? Number of fruits and vegetable services? Consider developing your own measure (perhaps a 1-10 scale of how good you feel after you walk.)
   - **Attainable:** The goal should be something that is challenging but also within your ability to achieve.
   - **Realistic:** Running a marathon in February if you have never run before isn’t likely. Know your limitations and be realistic about what you can accomplish.
   - **Timebound:** Set a start date and a completion date. Then you can set another goal when you have accomplished the first one.

4. **Reward Yourself!** Make a list of objects, activities, and events you can use as rewards for achieving the goals of your behavior change program. Reward yourself for your successes. You deserve it!

5. **Break Your Behavior Chains.** Start out by changing one behavior that interferes with your goal. Some general strategies for breaking behavior chains include the following:
• Control or eliminate environmental cues that provoke the behavior. Go out for an ice cream cone instead of buying a half gallon for your freezer.
• Change behaviors or habits that are linked to your target behavior. If you always smoke in your car when you drive to work, try taking public transportation instead.
• Add new cues to your environment to trigger your new behavior. Prepare easy-to-grab healthy snacks and have them visible throughout the day. Keep your exercise clothes and equipment in a visible location.

6. Complete a Contract for Behavior Change Your next step in creating a successful behavior change program is to complete and sign a behavior change contract. Your contract should include details of your program and indicate your commitment to changing your behavior.

7. Build Motivation and Commitment. Why are you making this change? Make a list of the benefits and post them where you can see them every day.

8. Develop Realistic Self-Talk. Take a closer look at your current pattern of self-talk. Keep track of negative self-talk, especially as it relates to your target behavior. Think of better responses and use them!

9. Involve the People Around You. Take note of how other people influence your target behavior and your efforts to change. For example, do you always skip exercising when you’re with certain people? Do you always drink or eat too much when you socialize with certain friends? Are friends and family members offering you enthusiastic support for your efforts to change your behavior, or do they make jokes about your program? Make a plan of how you will interact with others’ responses to your efforts.

10. Prepare for Relapse If you maintain your new behavior for at least 6 months, your chances of lifetime success are greatly increased. However, you may find yourself sliding back into old habits at some point. Try not to feel defeated if you lapse. The best thing you can do is to renew your commitment and continue with your program.

Celebrate Accomplishments

Culley’s encourages people to reward themselves for attaining behavior change goals with the following suggestions:

“An effective reward is something that is desirable, timely, and depends on meeting your goal. Numerous small rewards, delivered for meeting smaller goals, are more effective than bigger rewards that require a long, difficult effort. Ideas for rewards:

Material things: Pencil, greeting card, CD, something to play with, books, new clothes, radio, sports equipment, furniture, money

Physical pleasures: A bite of candy, stick of gum, glass of beverage, eating a nice dessert or meal, taking a relaxing nap, getting a 10-minute back rub, a good workout and shower, a whole body massage, a special dinner out
Fun activities alone: Smell a rose, daydream, watch people, read a short article, play with your pet, read, exercise, take a shower, go for a walk, work in a garden, write a letter, do something creative or artistic, go hiking, start a hobby, go shopping, fix a car, learn to fly

Social activities: Talk on the phone, tell a joke, go out for a snack, offer to help someone, invite someone over, go to a movie or theater or ball game, go to or give a party, play sports, go on a vacation, join a club, go to a concert or a dance, start doing volunteer work

Self-appreciation and praise: Saying to yourself, "You did that well!" or "You deserve a break." Telling your family about some success, being quietly proud.”

To print the entire set of Culley’s goal setting guides, visit the Independent Living Research Utilization website [http://www.ilru.org/online/archive/cc10-31.html]. Transcripts and an audio files of Culley’s presentation are also available through the website.
Lesson 5 Feedback Questions

1. List the benefits of exercise and sport activities for people with disabilities
   a. 
   b. 
   c. 
   d. 
   e. 

2. Physical exercise ______ (must/need not) be strenuous to achieve health benefits.

3. Staff play a __________ (significant/minor) role in promoting fitness programs for people with disabilities.

4. Community fitness programs ___________ (need/don’t need) support in providing instruction or adaptations of activities for people with disabilities.

5. Describe characteristics of successful fitness programs for people with disabilities:
   a. 
   b. 
   c. 
   d. 
   e. 

6. Choose a fitness goal for yourself or one of the people with disabilities you support and describe how you would apply the “Ten Tips on Building Motivation for Change.”
   a. Choose a Target Behavior.
   b. Gather Information About Your Target Behavior.
   c. Set SMART Goals
      Specific:
      Measurable:
      Attainable:
      Realistic:
      Timebound:
   d. Reward Yourself!
   e. Break Your Behavior Chains.
   f. Complete a Contract for Behavior Change
   g. Build Motivation and Commitment.
   h. Develop Realistic Self-Talk.
   i. Involve the People Around You.
   j. Prepare for Relapse.
Feedback Answers

Lesson 1

5. **Define wellness:**
   Wellness can be defined as the best possible functioning of each individual” regardless of health status or disability. There is not one definition of wellness for everyone Wellness is seen as a continuum or scale that is very individualized. It is a lifestyle, an ongoing process to reach one’s full potential by integrating body, mind, and spirit.

6. **List lifestyle choices that determine our level of physical health:** The choices we make are related to regular exercise, healthy diet, adequate rest, intentional and responsible sexual choices, medical self-care and appropriate use of medical systems, responsible use of alcohol and other drugs, and protecting oneself from injuries and harm (i.e., wearing seat belts).

7. Discuss the answers to these questions with your staff trainer or supervisor

8. Discuss the answers to these questions with your staff trainer or supervisor

Lesson 2

1. a. High
   b. Low
   c. Low
   d. Less
   e. Higher
   f. Lower
   g. Lower
2. a. lifestyles; environments
   b. further complications and secondary conditions
   c. understand and monitor
   d. participate in community activities
3. a. being able to do activities the person wants and needs to do
   b. independence and ability to control one’s life
   c. opportunities to make choices and lead a self-directed life
   d. not being held back by pain
4. a. developing self-acceptance
   b. practicing coping strategies
   c. staying active
   d. opportunities to contribute
   e. setting personal goals
5. a. The sponsor and/or author of the website should be easily identifiable and contact information should be readily available.
   b. Trustworthy sites are often sponsored by persons or groups who are recognized authorities in their fields, or they have expert editorial boards that review and validate information.
c. Question Web sites that credit themselves as the sole source of information on a topic as well as sites that discredit other reputable sources of knowledge.

d. Question the site if the author or authors have anything to gain from proposing one particular point of view over another.

e. Make sure the site is current.

f. Avoid online physicians who propose to diagnose or treat without a proper physical examination and consultation.

g. Read the website's privacy statement and make certain that any personal medical or other information you supply will be kept absolutely confidential.

h. Be suspicious of promises that sound too good to be true or “miracle cures” and always read the fine print.

**Answer Key Lesson 3**

1. Eating a diet containing all the nutrients your body needs to provide energy for everyday activities as well as to maintain good health.

2. The plate includes all five food groups needed to be healthy and shows how much of each food group we should eat at each meal. ½ the plate should be fruits and vegetables; there should be a serving of grains and protein and some milk. The visual reminds us not only to include the five food groups, but what portion each of the food groups our plates should contain based on the 2010 Dietary Guidelines for Americans.

3. Grains group: 6-11 servings – at least ½ should be whole grains.  
   Vegetable group: 3-5 servings. 
   Fruit group: 2-4 servings. 
   Milk group: 2-3 servings. 
   Meat group: 2-3 servings (total 5-7 ounces). 
   Fats, Oils & Sweets should be used sparingly.

4. a. calories.
   b. less.
   c. portions.
   d. more.
   e. ½
   f. milk.
   g. whole.
   h. sodium.
   i. water.

5. Lean protein such as lean beef and pork, chicken, turkey, beans, or tofu. Seafood twice a week.

6. Quickly.

7. Whole or cut up fruit provide dietary fiber not present in juice.

8. Rinse fruits before preparing or eating them. Under clean, running water, rub fruits briskly to remove dirt and surface microorganisms.

9. Red, orange or dark green.

10. Frozen.

11. “Reduced sodium,” “low sodium,” or “no salt added.”

12. First

13. Whole-grain cornmeal, wild rice, brown rice, oatmeal.
14. 10-19%; 20%
15. Calories.
17. 90%
18. 3
19. 100 and 300
20. 30 minutes
21. Answers will vary but should include moderate of vigorous activities such as:
   a. Walking briskly (about 3 ½ miles per hour)
   b. Hiking
   c. Gardening/yard work
   d. Dancing
   e. Golf (walking and carrying clubs)
   f. Bicycling (less than 10 miles per hour)
   g. Weight training (general light workout)
   h. Running/jogging (5 miles per hour)
   i. Bicycling (more than 10 miles per hour)
   j. Swimming (freestyle laps)
   k. Aerobics
   l. Walking very fast (4 ½ miles per hour)
   m. Heavy yard work, such as chopping wood
   n. Weight lifting (vigorous effort)
   o. Basketball (competitive)
22. 400
23. first
24. a. saturated fats, trans fats, cholesterol, and sodium
   b. potassium, fiber, vitamins A and C, calcium, and iron.
25. 40; 140
26. 1; 2
27. From 30 minutes to 3 weeks.
28. Food safety
   a. 20 minutes; food; bathroom; pets
   b. raw, cooked, and ready-to-eat
   c. thermometer; 165
   d. 2, 1, 40, 3-4
   e. hot (140 degrees or above); cold (40 degrees or below
   f. throw it out

Lesson 4

1. The severity of nutritional risks varies depending on
   • factors unique to the person (i.e., genetic abnormalities, interactions with medications and
     foods, low muscle tone, impaired fine and gross motor skills, impaired fine and gross
     motor skills and cognitive ability required for eating independently)
   • maladaptive behaviors, insufficient staff training, inconsistent approach among staff, and
     limited financial resources may also contribute to poor nutrition.
2. weight problems, bladder dysfunction, fatigue, bowel dysfunction, depression, physical fitness/conditioning problems, dental/oral hygiene problems, sleep problems, gastrointestinal dysfunction, urinary tract infections, side effects from medications, allergies and allergic reactions, cardiovascular/circulatory problems, diabetes, osteoporosis, cancer

3. Training in wellness and nutrition for individuals with disabilities and support staff; Positive behavioral supports to encourage healthy lifestyles and adequate nutrition; Environmental and schedule modifications to enhance mealtime experiences and increase opportunities for physical activity; Individualized teaching plans to build skills (self-feeding, cooking, meal planning, etc.): Adaptive utensils and customized equipment for positioning and feeding; Specialized nutrition products and formulas; Involvement of appropriate specialists (i.e., occupational therapist, dietician, behavior analyst) to provide assessment, direct therapy, and staff training

4. a. taste
   b. decreases or increases
   c. mouth
   d. vomiting
   e. constipation
   f. absorbs.

5. h. Provide plenty of liquids with meals and between meals
   i. Limit sticky foods and sweets, especially between meals
   j. If possible, brush right after eating. If brushing is not possible, at least rinse with water.
   k. Maintain a varied diet of easy to chew foods for people missing or without teeth

6. a. Small, frequent meals
   b. Avoid fatty greasy foods, chocolate, caffeine, peppermint, spicy foods, citrus fruits and juices, tomato products, carbonated beverages and alcohol
   c. Remain upright during and after meals
   d. Thicken liquids by adding thickening agents
   e. Avoid eating within 3 hours of bedtime
   f. Elevate the head of the bed 6 inches with blocks
   g. Lose excess weight
   h. Keep meal times calm and free of distractions
   i. Maintain good posture

7. a. Increase fluids, especially water and fruit juices.
   b. Increase fiber or bulk while maintaining or increasing fluid intake.
   c. Limit poor sources of fiber that contribute to constipation (i.e., pudding, cheese, and meats).
   d. Replace white bread with whole grain products. Other fiber rich foods include fresh fruits and vegetables, beans, and whole grains (bran, oatmeal, granola).
e. Encourage the person to go to the bathroom at the same time every day—preferably after meals—and take enough time.

f. Increase activities such as walking.

8. 
   a. Offer small, frequent meals
   b. Praise and encourage eating and keep the mealtime experience pleasant and calm.
   c. Never force food, punish or scold a person for refusing to eat
   d. Select calorie-rich foods from each group of the Food Guide Pyramid, plus fats, oils, and sweets in moderation.
   e. The emphasis should be on foods that pack other nutrients, such as protein, vitamins, and minerals, in addition to calories
   f. Add extra calories to foods that will not add bulk to the diet
   g. Encourage snacks but space them during the day to avoid spoiling the appetite for later meals

9. 
   a. sit
   b. small; swallow
   c. scrape
   d. intersperse
   e. open
   f. rubber or nylon coated utensils
   g. cue
   h. tip

10. Answers will vary and should apply to the people the staff person supports and the settings where they provide mealtime assistance. Some of the following may apply.

Planning and Preparing the Meal:
   • Include the person in the meal planning, shopping for ingredients, and meal preparation.
   • Honor the individual’s food preferences but encourage a variety of choices from all food groups.
   • Introducing new foods with familiar favorites may increase food acceptance.
   • Observe for other signs that indicate food preferences/dislikes

Positioning:
   • The person should feel well supported with their body upright, head slightly forward with shoulders inline with the hips. The arms should be in front, resting on the table, in the lap or on the arms of the chair.
   • Hips should be symmetrical and flexed at least 90 degrees. A lap belt or adaptive equipment may be used to help maintain correct positioning.
   • Knees should be flexed at 90 degrees and the feet should be resting on a flat, firm surface to provide stability
   • Check the person’s position throughout the meal and readjust if necessary.
   • The head should be upright with the chin tucked slightly.
   • If the person needs assistance with eating, the staff should sit facing the person at eye level and offer food at midline in a slow but steady pace

Food Presentation:
   • Regular mealtimes encourage healthy appetites and weight control.
- Time medications to minimize interference with mealtime based on the pharmacist’s recommendations.
- Be sure to check that the temperature of food is pleasant to the person and allow it to cool down slightly before serving if necessary.
- Follow the prescribed diet consistency order to ensure the person’s safety.
- If food is chopped or pureed, do not combine different menu items unless that is the preference of the individual.

Controlling Sensory Input:
- Turn off the television and radio during the meal so everyone can focus on conversation without distraction.
- Let the answering machine pick up calls or turn off the phone ringer to avoid dinner interruptions.
- Control distracting smells from some foods (i.e., cauliflower, liver) or body odors which may make it difficult to concentrate on the meal.
- Respect individual preferences for seating arrangements during mealtime.

Teaching Independence:
- When teaching someone to eat independently, begin with hand over hand assistance. As soon as possible, decrease the amount of physical assistance. Fade from verbal cues to supervision as the person takes on more of the responsibility.
- Serve food in a manner that increases ease of self-feeding (i.e., finger foods, bite-sized pieces) when appropriate.
- Adaptive utensils with built up handles and dishes with sides to scoop against to support independent eating.

Modeling Social Skills:
- Eating in small groups fosters social skill development and allows for more individualized teaching and support.
- Set a positive example at mealtime by modeling appropriate table manners and healthy eating habits (i.e., eating a variety of healthy foods, limiting snacks).
- Include everyone at the table in the conversation, even those who don’t speak.
- Discuss positive events of the day or upcoming activities at a level they can understand.
- Remember to take your time and enjoy the extra few minutes sitting at the table before cleaning up.

Positive Behavioral Supports:
- Observe how each person communicates.
- Try to enjoy the meal yourself and be careful not to indicate dislike for particular foods or
show displeasure at drooling, etc.

- Follow clear and consistent routines so people know what to expect.
- Minimize long waits for food.
- Choose topics that people are interested in or can relate to.
- Avoid drawing attention to accidental spills and messes or attention seeking behavior.
- Report sudden changes in appetite or mealtime behavior.

**Lesson 5**

1. List the benefits of exercise and sport activities for people with disabilities
   a. Weight control.
   b. Reduces the risk of dying from coronary heart disease and of developing high blood pressure, colon cancer, and diabetes.
   c. Can help reduce blood pressure in some people with hypertension.
   d. Can help people with chronic, disabling conditions improve their stamina and muscle strength.
   e. Increase flexibility and helps control joint swelling and pain associated with arthritis.
   f. Reduces symptoms of anxiety and depression, improves mood, and promotes general feelings of well-being.
   g. Decrease inappropriate, stereotypical behaviors and increase self-control.
   h. Enhance self-esteem, and psychological empowerment.
   i. Enhance perceived competence, social integration, and challenge disability stereotypes.
   j. Support personal fulfillment and attainment of personal goals.

2. need not
3. significant
4. need

5. Describe characteristics of successful fitness programs for people with disabilities:
   - Fitness is approached from several dimensions simultaneously (physical activity, nutrition, and stress management).
   - Programs combine lessons, group discussions, deep-breathing techniques, stretching and strengthening exercises.
   - Peer support is provided to program participants.
   - Weight loss programs combined nutrition, exercise, and behavior modification.
   - Wellness information on a wide range of topics is presented including: preventing secondary conditions, offsetting depression and anxiety, interpersonal relationships and sexuality, celebrating personal success.
   - Exercise programs include warm-up (stretches); aerobic activity; muscles strength and endurance; and cool down (stretches).
   - The relationship between daily health behaviors and achievement of long-term goals is stressed. Participants are taught goal-setting and problem solving.
   - Support is provided to overcome transportation, limited income, and lack of information barriers.

6. Choose a fitness goal for yourself or one of the people with disabilities you support and describe how you would apply the “Ten Tips on Building Motivation for Change.”
   Answers will vary, use the information in Lesson 5 of the module to guide you.
Appendices

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Are You Balancing the Dimensions of Wellness?

Assess your current dimensions of wellness by filling out the questions below, checking the choice that best reflects your current behavior. Although this is not a scientific questionnaire, it will help you become more aware of your current level of wellness and what changes, if any, you might want to make. To take the survey online and view the results go to [http://cps.uwsp.edu/hphd/wellquiz/]

Social wellness is the process of creating and maintaining healthy relationships.

<table>
<thead>
<tr>
<th>never</th>
<th>often</th>
<th>always</th>
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<tbody>
<tr>
<td>I communicate honestly and directly. I resolve conflict in a healthy, timely manner.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I treat every person with respect.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I maintain a strong mutual, interdependent social support system.</td>
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Physical wellness is the process of having a flexible, aerobically fit body.

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<tr>
<th>never</th>
<th>often</th>
<th>always</th>
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<tbody>
<tr>
<td>I maintain a consistent exercise regime consisting of flexibility and muscular strengthening exercises and at least 30 minutes of aerobic exercise daily.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I manage stress and do some activity that elicits the &quot;relaxation response&quot; for at least 15 min./day.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I take proactive steps to avoid and prevent injury, illness and disease (including sexually transmitted diseases).</td>
<td></td>
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</tbody>
</table>

Emotional wellness is the process of creating and maintaining a positive realistic self concept and enthusiasm about life.

<table>
<thead>
<tr>
<th>never</th>
<th>often</th>
<th>always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I recognize that I create my own feelings and am responsible for them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I accept and appreciate my worth as a human being.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I can realistically assess my limitations and cope effectively with stress and ego.</td>
<td></td>
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</tbody>
</table>

Career wellness is the process of making and maintaining choices that are meaningful and contributes to your personal growth as well as work.

<table>
<thead>
<tr>
<th>never</th>
<th>often</th>
<th>always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have chosen a job role that I enjoy and that matches my values and lifestyle.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I balance work with play and other aspects of my life.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My work benefits individuals and or society.</td>
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</tbody>
</table>

Intellectual wellness is the process of using your mind to create a greater understanding of yourself and the universe.

<table>
<thead>
<tr>
<th>never</th>
<th>often</th>
<th>always</th>
</tr>
</thead>
<tbody>
<tr>
<td>I view learning as a lifelong process and question my views &amp; change them in accordance with new information.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I take risks, learn from my mistakes and question authority.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I seek opportunities that challenge my critical thinking skills.</td>
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</tbody>
</table>

Spiritual wellness is the process of "experiencing life" while seeking meaning and purpose in human existence. Spirituality allows one to have consistency between values and behaviors.

<table>
<thead>
<tr>
<th>never</th>
<th>often</th>
<th>always</th>
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</thead>
<tbody>
<tr>
<td>I have a deep appreciation for the depth of life, death and understanding universal human connection or consciousness.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I integrate my &quot;spiritual practice&quot; within everyday life of work, family and relationships.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have a consistency between my beliefs, values and behaviors.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adapted from: University of Wisconsin Stevens Point Employee Wellness Program "Are You Balancing the 7 Dimensions of Wellness?" available online @ [http://cps.uwsp.edu/hphd/wellquiz/]
### FOR PEOPLE WHO NEED ADAPTIVE EQUIPMENT SO THEY CAN EAT INDEPENDENTLY

<table>
<thead>
<tr>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Angled spoons" /></td>
<td>Angled spoons help people get the spoon in their mouths if they have limited movement in their wrists. They angle towards the mouth.</td>
</tr>
<tr>
<td><img src="image" alt="Spouted cups" /></td>
<td>Spouted cups help prevent spilling. The spout helps direct the liquid. Controlling the flow may be hard. The person may bite down on the spout. The person must lift his head, making hyperextension possible.</td>
</tr>
<tr>
<td><img src="image" alt="Spoons with built-up handles" /></td>
<td>Spoons with built-up handles help a person keep a good grip on the spoon.</td>
</tr>
<tr>
<td><img src="image" alt="Cut-out cups" /></td>
<td>Cut-out cups help the person control the flow of liquid. The head can remain flexed forward when drinking.</td>
</tr>
<tr>
<td><img src="image" alt="Stiff “sport” bottles with straws" /></td>
<td>Stiff “sport” bottles with straws help keep drinks from spilling. Person may have more control than with a cup.</td>
</tr>
<tr>
<td><img src="image" alt="Dycem mats" /></td>
<td>Dycem mats are gelatin-like material that provide a non-skid surface for utensils.</td>
</tr>
<tr>
<td><img src="image" alt="Scooper bowls and plates" /></td>
<td>Scooper bowls and plates help position the food on the spoon. The high side should be facing the direction the person is scooping.</td>
</tr>
</tbody>
</table>

### FOR PEOPLE WHO DEPEND ON YOU AT MEALTIMES

<table>
<thead>
<tr>
<th>Image</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Flat blade utensils" /></td>
<td>Flat blade utensils help to place ground or pureed food. They help in placing the food to the side of the mouth.</td>
</tr>
<tr>
<td><img src="image" alt="Mother care spoons" /></td>
<td>Mother care spoons are very sturdy resin spoons with shallow bowls. Food moves off these spoons easily. They help you to control the amount and placement of food.</td>
</tr>
<tr>
<td><img src="image" alt="Angled flat blade utensils" /></td>
<td>Angled flat blade utensils work the same way as regular flat blade utensils (above).</td>
</tr>
<tr>
<td><img src="image" alt="Cut-out cups" /></td>
<td>Cut-out cups help the person control the flow of liquid.</td>
</tr>
<tr>
<td><img src="image" alt="Flexible straw bottles" /></td>
<td>Flexible straw bottles allow you to carefully control placement and flow of fluids. Straw drinking encourages good cheek and lip movements. With practice, the person may learn to pull fluid into the mouth independently.</td>
</tr>
<tr>
<td><img src="image" alt="Split cylinder cups" /></td>
<td>Split cylinder cups help you control the flow of fluids. Warning: The person may bite on the rim if it is placed between the teeth.</td>
</tr>
</tbody>
</table>
Building Motivation and Commitment

Complete the following checklist to determine whether you are motivated and committed to changing your behavior.

Check the statements that are true for you:

☐ I feel responsible for my own behavior and capable of managing it.

☐ I am not easily discouraged.

☐ I enjoy setting goals and then working to achieve them.

☐ I am good at keeping promises to myself.

☐ I like having a structure and schedule for my activities.

☐ I view my new behavior as a necessity, not an optional activity.

☐ Compared with previous attempts to change my behavior, I am more motivated now.

☐ My goals are realistic.

☐ I have a positive mental picture of the new behavior.

☐ Considering the stresses in my life, I feel confident that I can stick to my program.

☐ I feel prepared for lapses and ups-and-downs in my behavior change program.

☐ I feel that my plan for behavior change is enjoyable.

☐ I feel comfortable telling other people about the change I am making in my behavior.

Did you check most of these statements? If not, you need to boost your motivation and commitment. Consider these strategies:

- Review the potential benefits of changing your behavior and the costs of not changing it (see Activity 2).
- Pay special attention to the short-term benefits of changing your behavior, including feelings of accomplishment and self-confidence. Post a list of these benefits in a prominent location.
• Visualize yourself achieving your goal and enjoying its benefits. For example, if you want to manage time more effectively, picture yourself as a confident, organized person who systematically tackles important tasks and sets aside time each day for relaxation, exercise, and friends. Practice this type of visualization regularly.

• Put aside obstacles and objections to change. Counter thoughts such as "I’ll never have time to exercise" with thoughts like "Lots of other people do it and so can I."

• Bombard yourself with propaganda. Take a class dealing with the change you want to make. Read books and watch television shows on the subject. Post motivational phrases or pictures on your refrigerator or over your desk. Talk to people who have already made the change.

• Build up your confidence. Remind yourself of other goals you’ve achieved. At the end of each day, mentally review your good decisions and actions. See yourself as a capable person, one who is in charge of her or his behavior.

• List two strategies for boosting your motivation and commitment; choose from the list above or develop your own. Try each strategy, and then describe how well it worked for you. If it is not working, try another strategy until you find one that works for you!

<table>
<thead>
<tr>
<th>Strategy 1:</th>
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<tbody>
<tr>
<td>How well it worked:</td>
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<table>
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<tr>
<th>Strategy 2:</th>
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<tbody>
<tr>
<td>How well it worked:</td>
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Source: Fahey, et. al., Behavior Change Workbook, Mayfield Publishing, Mountain View, CA.
http://www.nicpad.org
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This resource tool is designed to provide an overview of nutrition in individuals with intellectual and developmental disabilities. It contains descriptions of IDD Diagnoses, Inherited Metabolic Disorders, and Common Nutritional Concerns in IDD and information and guidelines on nutrition assessment, common medication actions, dysphagia and mealtime issues, and intervention approaches and practice tips. Content was created, compiled and donated by BHN Nutrition Professionals.

The resource guide is contained on one CD-ROM as a 209 page PDF file. You will be able to scan, search, view and print selected sections of the resource guide using your Adobe Acrobat. The CD also contains a copy of ADA Standards of Practice and Standards of Professional Performance for Registered Dietitians (Generalist, Specialty, and Advanced) in Behavioral Health Care.

Prices: BHN members: $25.00 plus $3.00 shipping = $28.00
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