Lesson Plan N-3, Hydration

University of Nevada, Reno
Southern Area Cooperative Extension
Seniors CAN
Lesson Plan

Lesson: Hydration Lesson Number: N-3

Introduction: The “Hydration” lesson is designed to introduce Learners to information regarding maintenance of adequate body fluid levels because older adults are more vulnerable to dehydration, which is one of the most frequent causes of hospitalization among people over 65.

Learning Overview: The Learner will participate in a lesson designed to teach him/her techniques to maintain an adequate balance of body fluids.

Lesson Objectives:

1. During the lesson, the Learner will be exposed to the following information:
   - Danger of dehydration.
   - Symptoms of dehydration.
   - Reasons the elderly are more vulnerable to dehydration.
   - Techniques for maintaining an adequate balance of body fluid.
   - The relationship of incontinence to dehydration.

2. During the lesson, the Learner will engage in group discussion regarding hydration, describing with clarity at least one example from his/her life experience.

3. During group discussion, either spontaneously or in response to Facilitator request, the Learner will state with clarity that s/he has selected at least one idea presented during the lesson, what that idea is, and that s/he will try this idea during the following week to see if it works for him/her. Alternatively, the Learner will state with clarity that s/he does not want to try out any of the ideas presented, and the reason for the decision.

Set up at previous meeting:

Next week, we will be exploring how to maintain adequate fluid levels in our bodies.

Optional activity:
"We will make a hydrating fruit smoothie."

Set up immediately prior to this meeting:

Place water bottle with ice in freezer or bring one in with you.
Materials:

Provided by Facilitator:
One of the following for each Learner:
- Fact Sheet: Water: Fountain of Life (UNCE, FS 99-03)
- Recipe: Super Sippers (Seniors CAN Curriculum, 2008)

Optional activity:
- Fruit smoothie recipe ingredients
- Blender; plastic cups
- Use of freezer and refrigerator during lesson

Note: Facilitator should bring lesson plan for this week, last week and next week because information provided at the beginning of each lesson plan is needed for smooth transition between lessons.

Activities:
- Demonstration: Preparing a water bottle with ice for transporting water.
- Optional: Demonstration and Practice: Making a hydrating fruit smoothie.

References:


Lesson

| Begin Lesson: | Last week we talked about *(name of last week’s unit)*. Each of us selected one idea to try out. Let’s talk about how those worked (or didn’t work) for us, and also what we learned from last week’s meeting. |
| Transition from last week | |
| Anticipatory Set | Today we will explore hydration. This involves maintaining vital water levels in the body. There are three reasons that we think this topic is important: |
| | I. As we age we become more vulnerable to lower water intake that can lead to dehydration. |
| | II. Dehydration is one of the most frequent causes of hospitalization among people over 65. |
| | III. About one-half of those hospitalized for dehydration die within a year. |
| Share the Objective | I. We will be discussing the following types of information: |
| | A. Importance of maintaining an adequate fluid balance in the body. |
| | B. Symptoms of dehydration. |
| | C. Reasons older adults are more vulnerable to dehydration. |
| | D. Techniques for maintaining an adequate balance of body fluid. |
| | E. The relationship of incontinence to dehydration. |
| | II. During this lesson, I will be providing information, but it is also important that we share information and ask questions in group discussion. I would appreciate it if each of you could bring up at least one example from your life experience. |
| | III. Also during the lesson today, I’m going to ask each of you to select one idea from the lesson to try out on your own over the next week. I’ll pick one, too. Then each of us can share with the group next week how it worked out. |
| Share the Handouts | These summarize the main ideas we will be discussing today. *(Pass out fact sheet and drink recipe handout.*) Please feel free to take notes and ask questions as they arise. |
I. **Water** is the largest single substance in the human body (from 50% to 75%) and we can't live without it. Everybody cell, tissue and organ, and nearly every life-sustaining body process, requires water.

II. **Importance of maintaining an adequate fluid balance in the body:**

   A. Water helps to control body temperature.
      1. Perspiration keeps us cool in hot weather; protects body against heat exhaustion.
      2. Water helps the body to insulate itself against cold weather.
   B. Water carries nutrients as well as medicines to body cells and carries away waste.
   C. Water keeps mouth, nose, eyes and skin moist.
   D. Water ensures proper volume of blood.
   E. Water keeps the urinary tract flushed out. This is important in reducing the risk of urinary tract infections. Urinary tract infections can be quite serious—even fatal—in an aging person.

III. **Symptoms of dehydration** – what happens when you don’t drink enough water:

   A. The first sign of dehydration is usually thirst. Thirst generally occurs when there is a 1 to 2% loss of body water. Many older people, however, have a diminished sense of thirst, and do not necessarily know they are becoming dehydrated.
   B. One easy to check sign of dehydration is the color of your urine. It should be clear or pale yellow. Darker urine indicates you are not meeting your fluid needs. Some vitamin supplements at high levels will also give urine a dark color.
   C. When loss of body water ranges from 2 to 5%, symptoms can include dry mouth, flushed skin, headache, fatigue and impaired physical performance.
   D. When loss of body water is at 6%, symptoms noted are increased body temperature, increased pulse rate and increased breathing.
   E. At 8% loss dizziness, increased weakness and labored breathing when exercise may be experienced.
   F. At 10% loss of body water, there may be muscle spasms, swollen tongue, and delirium, while at 11%, symptoms are poor blood circulation and failing kidney function.
IV. Reasons older adults are more vulnerable to dehydration:

A. Aging is associated with several physical conditions that contribute to dehydration.

1. Aging is associated with decreased kidney function, which is made worse by lower water intake.
2. As mentioned earlier, aging is associated with a reduced sense of thirst.
3. Aging is associated with lower amounts of total body water.
   a. Older adults have a lower level of stored fluid in the body in part because of increase in body fat and decrease in muscle mass. If there is not enough water to release waste products, the body will withdraw fluid from body tissues, increasing the likelihood of dehydration.

B. Other factors
   1. Some older adults have difficulty with bladder control which is made even more difficult if there are problems in getting to the bathroom. Some older adults avoid drinking fluids to prevent an embarrassing accident (see incontinence below).

V. Techniques for maintaining an adequate balance of body fluid:

A. Make sure your intake of water is 48 to 64 ounces per day. That’s six to eight, 8-ounce glasses per day.
B. Take a bottle of water with you when you travel anywhere—on foot, on the bus, in a car or in an airplane.
C. Have a glass of water or juice when you first get up in the morning.
D. Whenever you see a water fountain stop and take a sip.
E. Drink water before, after and during physical activity.
F. Give yourself “water breaks” throughout the day, instead of or in addition to coffee breaks.
G. Eat at least five servings of fruits and vegetables a day because they have a high water content.
H. Know which liquids count as “water” and which do not:
   1. The following foods and drinks count as water:
      a. Water (of course!) – absorbed faster than any other beverage and it’s calorie-free.
      b. Milk
c. Soup
d. Fruit and vegetable juice
e. Gelatin
f. Decaffeinated soft drinks and tea.

2. The following foods contribute less fluid than equivalent amounts of water:
   a. Anything that contains caffeine: soda, coffee, tea.
   b. Alcohol
   c. Caffeine and alcohol act as diuretics in the body and increase water loss. These types of beverages will not contribute as much as you think to your fluid intake and should be consumed in moderation.

I. Be especially careful about maintaining adequate fluid intake in the following situations:
   1. With illness involving fever, diarrhea, nausea and/or vomiting, try sucking on ice chips.
   2. In very hot weather both indoors and outdoors, especially when involved in outside activities like gardening or running errands, have water available at all times.

J. Optional Activity: Keep in mind that healthy, hydrating drinks don’t have to be boring. With a little creativity, you can make some tasty drinks out of ordinary ingredients. We will be making one of those today.

VI. Incontinence

A. Urinary incontinence can become a serious problem as we age. It can have significant medical and social consequences. The problem is estimated to affect as many as 30% of older adults and is more prevalent in women than men.

B. If you don’t drink enough fluids because you have difficulty making it to the bathroom on time, you have several options that will help you consume enough water:

   1. When away from home, make frequent restroom visits, even if you don’t feel the need. In other words, use every restroom to your advantage!
   2. Consider adult undergarments for trips away from home if they will make you feel more confident about going out.
3. At home, have a urinal or porta-potty handy in your bedroom, living room or any other room in which you spend a lot of time. If you are uncomfortable having these things out in the open, try tucking them under a table with a long tablecloth, in easy reach.

4. If adult undergarments are too expensive to use at home every day, consider using them at home selectively, whenever they work best for you—maybe at night before going to sleep or when you have company.

5. Never forget that dehydration is a much worse fate than embarrassment. Dehydration can kill you, while embarrassment can't. And staying home for fear of embarrassment just isolates you which can lead to poor health and earlier death.

6. There are a variety of medical options for treating urinary incontinence, depending in large part on the condition causing it. Some treatment methods are as simple as pelvic muscle exercises. Your doctor can help you select the treatment that is right for you.

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**Monitoring / Discussion**

Q. How would you be able to tell that you might be getting dehydrated? What clues might you have even if you weren’t thirsty?

Q. What would be the easiest way for you to remind yourself to drink enough water every day? [Prompt, if needed]: Sticking a note on your refrigerator that says: “Six to eight 8-ounce glasses per day? Filling a large container each morning with 64 ounces of water and making sure it gets emptied by the end of the day? Or would you not need a reminder method?”

Q. [Optional--assess comfort level of group with this topic]: If a very close friend or relative confided to you that he or she deliberately limited fluid intake because (s)he is afraid of incontinence, what might you say to them? What if this person said they never went out because they were afraid of an embarrassing accident?

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**Modeling and Guided Practice**

*Demonstration: Preparing a water bottle with ice for transporting water.*

This is an easy way to carry around refreshing liquid as you are doing activities outside of your home. *Open freezer, take out water bottle.* Do any of you already do this? All you do is take a water
bottle, fill it half way with water, then put it in the freezer. You store it there until you are ready to go out. When you are ready to leave, you fill it the rest of the way with water. You sip on it as you are going about your errands. The ice gradually melts, giving you a steady source of cold water.

- The reason you don’t fill the bottle all the way up is that water expands as it freezes. Sometimes the cap can get frozen and even broken if it’s filled all the way.
- When freezing, place the bottle at an angle so that the water collects toward the bottom of the bottle rather than the top. This way the cap will not be frozen shut when you go to fill the bottle with water. Current studies have shown that it is safe to freeze clean, plastic water bottles (read below).
- Most plastic water bottles are designed for single use only. The “Resin ID Code” on the bottom of plastic containers is used to more easily identify and sort the plastics for recycling. It is not a “safety” code. If you reuse plastic water bottles frequently, consider buying bottles designed for this purpose like those made from polyethylene, glass, stainless steel or aluminum (lined). However, always clean the reusable water bottle with soap and water after each use to eliminate germs.

*Optional Demonstration and Practice:* Making a hydrating fruit smoothie following the recipe.

Facilitator and Learners should first all wash their hands. Follow recipes with learners. Ask for volunteers to perform various tasks called for in the recipes. Notice and praise Learners’ unique ways of accomplishing the tasks—e.g., techniques that add to safety, efficiency, reduced waste.

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<th><strong>Independent Practice</strong></th>
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<td>This can be done at any time during the lesson. It seems to work better when it is not done in the rush at the end of a meeting.</td>
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<td>&quot;I’d like for each of us to select at least one idea, from what we're learning, to try out this week. Let’s choose something easy to experiment with. Next week we can all compare our experiences and see what worked and what didn't.&quot;</td>
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<th><strong>Closure/Transition:</strong></th>
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<td><em>Look at next week’s lesson plan for: “Set up at previous meeting.”</em></td>
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<td><em>It begins:</em> “Next week, we will be exploring . . .”</td>
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