

DEHYDRATION AND THE ELDERLY

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Dehydration is a dangerous problem that can be life threatening to an elderly person in a short period of time.

IMPORTANCE OF WATER

Next to oxygen, water is the nutrient most needed for life. A person can live without food for a month, but most people can survive only three or four days without water. We start life in a watery cradle of amniotic fluid. Water makes up 85% of the blood, 70% of the muscles, and about 75% of the brain and is present in and around our cells.

In the body, water acts as a solvent, coolant, lubricant, and transport agent. It's needed to regulate body temperature, carry nutrients, remove toxins and waste materials, and provide the medium in which all cellular, chemical reactions take place.

Fluid balance is vital for body functions and adequate blood volume. A significant decrease in the total amount of body fluids leads to dehydration. Dehydration occurs when the amount of water a person takes in is less than the amount that is lost. Fluids are lost through the urine, skin, and lungs. Along with fluids, essential electrolytes such as sodium and potassium are also perilously depleted in a dehydrated individual.

EFFECTS ON ELDERLY INDIVIDUALS

Elderly individuals are at a heightened risk for dehydration because their bodies have a lower water content than younger people. An elderly person weighing 150 pounds has about seven liters less water than a young person of the same weight. As a result, these individuals can become dehydrated more quickly.

Because of visual, cognitive, or motor impairments, elderly persons may have difficulty getting fluids for themselves. They also may have only a muted perception of thirst. Unfortunately, many symptoms of dehydration do not appear until significant fluid has been lost and that it can happen very rapidly, in less than an eight-hour shift.

Nursing facility residents are particularly at risk for dehydration. According to the article, "Preventing Dehydration in the Elderly," published in the September 1996 edition of *Provider* magazine, as many as 75% of residents have average fluid intakes below 1,500 cc per day. A minimum recommendation is between 1,500 to 2,000 cc of fluid a day. These residents may need more opportunities and reminders to drink. Individuals with disabilities may be unable to get a glass of fluid without assistance. However, disability is not the only risk factor. Residents who are not dependent on staff also need encouragement for sufficient fluid intake.

SIGNS AND SYMPTOMS OF DEHYDRATION

It is important that staff members be able to recognize the signs and symptoms of dehydration to promptly assure correction and prevention of complications. Without timely correction, it can lead to decreased functional ability, predisposition to falls due to orthostatic hypotension, constipation, predisposition to infection, and death. According to the chapter on "Dehydration: Prevention and Recognition" published in *Long Term Care Educator*, staff members should be alert to the following symptoms:

- Confusion can be an early sign of dehydration. Caregivers need to look for subtle changes in mental status. It should be one of the first problems suspected when residents have sudden changes in mental status.

- Poor skin turgor (elasticity) accompanies dehydration, but this can be a difficult sign to assess because most older residents have an age-related reduction in skin turgor under normal circumstances. If skin turgor is to be used in assessing for dehydration, the best areas to test are the skin over the sternum and forehead because these areas maintain better skin turgor than other areas. Generally, skin will feel warm and moist with dehydration.
- An inspection of the oral cavity can yield useful insight into a resident's hydration. A dry oral mucosa and dry furrowed tongue are indicators of dehydration. Staff should be cautioned that residents who are taking certain medication (such as anticholinergic drugs) may have dry oral mucosae in the absence of dehydration.
- An assessment of vital signs will reveal a decrease in blood pressure and increase in pulse when dehydration is present.
- A review of bowel elimination patterns can assist in assessing dehydration. Recent diarrhea can offer an explanation for a dehydrated state, while constipation is a common occurrence. Likewise, bladder elimination patterns can provide useful insights: excess voiding can contribute to dehydration while scanty output can indicate insufficient fluid intake. Concentrated urine is also a common sign.
- Because such a large percentage of the body is comprised of fluid, weight loss is often present.

PROACTIVE APPROACHES TO PREVENTING DEHYDRATION

The best defense against dehydration is prevention. Utilize a variety of proactive strategies to identify residents at risk, monitor their fluid balance, and establish institutional policies and programs to ensure that all residents receive adequate hydration.

- ✓ Routinely monitor residents for signs of dehydration such as cracked lips, dry oral mucous, poor skin turgor, and dark urine color. Observe the residents' consumption of fluids to determine if they have reduced the amount of liquids they usually drink. Pertinent observations should be recorded in the nursing notes.
- ✓ Keep a list of residents at high risk of dehydration in the nurses' station and other strategic locations to remind others to monitor their fluid intake. Consider placing a symbol such as a drop of water near their beds as a sign for staff to encourage fluid intake.
- ✓ Establish hydration protocols to be instituted immediately when acute symptoms or illness threaten fluid and electrolyte homeostasis.
- ✓ Schedule fluid administration at least three times a day between meals. Older people tolerate frequent administration of fluid in smaller quantities.
- ✓ To maintain hydration, note the residents' preferences for type and temperature of fluids and individualize the hydration plan.
- ✓ Review residents' medications to assess possible impact of fluid and electrolyte levels.
- ✓ Leave filled, fresh water pitchers at bedsides and assure that residents are able to reach pitchers and glasses. Supply straws and special drinking glasses, as needed.
- ✓ Staff should offer a variety of fluids at different times and tell residents why they're doing this. For example, the dietary staff could add a glass of water to each meal. Activities such as a discussion and music groups should include the offering of beverages.

- ✓ Arrange for residents to eat meals and snacks with other residents. People typically eat and drink more in a social setting.
- ✓ Offer at least a full glass of fluid with medications. Studies have shown that residents tend to drink the entire amount of fluid offered.
- ✓ CNAs can offer small amounts of fluid every time they interact with residents during care delivery (i.e., toileting, after a transfer, after getting dressed, after rehab. or range of motion exercises).
- ✓ Instruct residents, staff, and families about the importance of hydration. Involve residents and family members in establishing and meeting hydration goals.
- ✓ Teach staff to use a direct, positive approach when offering fluids. Avoid asking, "Do you want something to drink?". Instead say, "Here is some cool, refreshing water for you." Older people may not feel thirsty and may not recognize their need for fluids.
- ✓ Consider giving residents water bottles to carry with them around the facility. On a regular basis, fill the bottles with their favorite cool beverages.
- ✓ Offer residents a variety of delicious beverages on a beverage cart. Have a staff member provide drinks from this cart to the residents on a daily basis.
- ✓ Sponsor a cocktail hour for residents to enjoy their favorite beverages and socialize. Facilities can set up a bar where residents can order their drinks.
- ✓ Make drinks more appealing by the use of "props" that are colorful and inexpensive (i.e., lemonade pitchers and glasses, cocktail decorations, fruit garnishes).
- ✓ During activities, use a blender to make drink and smoothie combinations for the residents (i.e., ginger ale in cranberry juice, orange and pineapple juice).
- ✓ Ask the residents for their ideas for drinks and gelatin desserts that can be created during activity programs. Develop a juice bar with a variety of juices, Italian ices, and snow cones.
- ✓ For residents with disabilities, ask an Occupational Therapist to recommend self-help devices such as long, flexible straws and spouted or two-handled cups. For residents with body stiffness commonly seen in the later stages of Alzheimer's disease, a cut-out on the upper rim for the nose allows cups to be tilted enough for people to drink.
- ✓ Ask surveyors to offer something to drink to residents they interview as part of the overall facility's effort to prevent dehydration.

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