

## Evidence-based Best Practice Recommendations to Prevent and Manage Dehydration

Identify Risk Factors for Dehydration: As part of the initial nursing assessment, quarterly assessments, and nutrition assessments, risk factors for dehydration in individuals residing in nursing homes should be identified.

Risk factors for dehydration in residents in nursing homes include:

- ❖ Alzheimer's disease and other dementias
- ❖ Cognitive impairment
- ❖ Purposeful restriction of fluid intake
- ❖ Increased age: especially greater than 85 years
- ❖ Infection
- ❖ Fever
- ❖ Decreased kidney function
- ❖ Uncontrolled diabetes
- ❖ Four or more chronic conditions
- ❖ Medications (e.g., diuretics, laxatives, antipsychotics, Digoxin)
- ❖ Decreased thirst perception
- ❖ Functional impairment such as hand dexterity problems
- ❖ Difficulty swallowing (dysphagia)
- ❖ Thickened Liquids
- ❖ Therapeutic diets (including fluid restriction)
- ❖ Communication problems
- ❖ Environment: hot weather
- ❖ Individuals who are dependent on staff
- ❖ Enteral nutrition (including adequate flushes)
- ❖ Terminal illnesses

### Facility Risk Factors:

- ◆ Staff Education: Ensure staff understand that withholding fluids does not control incontinence and may have serious medical consequences to individuals such as heart problems
- ◆ Staff Assistance: Ensure staff are not rushed and have adequate time to feed, to properly position people, to offer additional fluids, and to pour second servings of beverages
- ◆ Hydration plan/program: Ensure residents get the fluid preferences throughout the day, including temperature of beverage and type of container used. Staff who is too persistent in encouraging hydration may make drinking fluids burdensome. Hydration care should be a pleasurable and social experience.

### Signs and Symptoms of Dehydration:

#### **Mild to Moderate:**

- ❖ Dry, sticky mouth
- ❖ Sleepy or tired
- ❖ Thirsty
- ❖ Decreased urine output
- ❖ Muscle weakness
- ❖ Headache
- ❖ Dizzy or lightheaded

### **Advanced Signs:**

- ❖ ADL Decline
- ❖ Change in mental status
- ❖ Delirium
- ❖ Constipation
- ❖ Little or no urination
- ❖ Postural hypotension
- ❖ Recent rapid weight loss (3-5 pounds in short time)
- ❖ Tachycardia
- ❖ Coma

### Promote Good Hydration

Providers need to have a system in place that recognizes not only individual risk factors for dehydration but also systems to prevent dehydration. Awareness of the potential for dehydration involves a disciplinary approach that includes all facility personnel. Good hydration can be promoted by:

- ◆ Provide liquids before and with meals.
  - ❖ Mealtime is when the most fluid is consumed
  - ❖ Provide two or more beverages or high-fluid fruits or foods
  - ❖ Refill or reintroduce items not consumed
- ◆ Provide liquids between meals.
  - ❖ Use a beverage cart with a variety of liquids, including thickened liquids, twice a day
  - ❖ Provide a water pitcher within reach and light enough for the resident to lift
  - ❖ Assist individuals who are unable to reach, bed-bound, or have restraints with fluids
  - ❖ Use water bottles with sippers
  - ❖ Include enticing beverages as desserts (floats and smoothies)
  - ❖ Use special events or Happy Hour to offer non-alcoholic beverages
  - ❖ Provide fluids during Group Activities.
  - ❖ Provide fluids during therapy sessions
- ◆ Provide liquids during medication pass. Offer 4-6 ounces of fluid to those receiving medications AND to individuals who are not given medications
- ◆ Offer fluid-dense foods. Gelatin, soup, juice, shakes, sherbet, fruit such as watermelon, and berries

**Table 1 Ranges of water content for selected foods**

Percentage	Food item
100%	Water
90–99%	Fat-free milk, cantaloupe, strawberries, watermelon, lettuce, cabbage, celery, spinach, pickles, squash (cooked)
80–89%	Fruit juice, yogurt, apples, grapes, oranges, carrots, broccoli (cooked), pears, pineapple
70–79%	Bananas, avocados, cottage cheese, ricotta cheese, potato (baked), corn (cooked), shrimp
60–69%	Pasta, legumes, salmon, ice cream, chicken breast
50–59%	Ground beef, hot dogs, feta cheese, tenderloin steak (cooked)
40–49%	Pizza
30–39%	Cheddar cheese, bagels, bread
20–29%	Pepperoni sausage, cake, biscuits
10–19%	Butter, margarine, raisins
1–9%	Walnuts, peanuts (dry roasted), chocolate chip cookies, crackers, cereals, pretzels, taco shells, peanut butter
0%	Oils, sugars

Data from the USDA national nutrient database for standard reference, release 21.

- ◆ Observe beverage preferences. Especially important for people with cognitive impairment
- ◆ Use verbal prompts. Encourage residents to drink with every contact especially those with cognitive impairment
- ◆ Provide assistance. Position the person to minimize aspiration risk and to assist with drinking beverages
- ◆ Provide staff education. Staff must understand how their actions prevent dehydration. Recognize signs and symptoms of dehydration
- ◆ Track and review fluid intake. Accurately monitor fluid intake closely. Include amount with meal intake records
- ◆ Provide thorough oral care. A simple protective oral health care regimen will maintain good oral health, possibly prevent some infections, and enhance nutritional status
- ◆ Maintain an appropriate environment. Maintain a comfortable temperature and humidity level in the facility

### Thickened Liquids

Traditionally people who are ordered thickened liquids have poor intake of fluids. As they age, residents' intake of thickened liquids decreases. Intake could possibly increase with the implementation of definitive protocols for providing and monitoring consumption, use of pre-thickened beverages vs. thickened at the bedside, offering fluid via food, free water protocols, and use of non-oral supplementary routes (Hypodermoclysis).

If a resident refuses to drink adequate amounts of thickened liquids, providing additional thickened liquids is unlikely to increase fluid intake. Fluid dense foods statistically contributes more to daily fluid intake than thickened liquids do.