



Promoting Hydration in Older Adults

...Fluid for Thought

Dehydration in Older Adults

- Why does hydration matter?
- What is dehydration?
- What are the risk factors for dehydration?
- How do we recognize it?
- What causes it?
- How can we prevent dehydration?



Did You Know That...

■ 48% of older adults in Emergency Departments have lab values indicative of dehydration?

J Gerontol Nurs 2006; 32(1): 13-19

■ 31% of LTC residents are dehydrated?

J Gerontol Nurs 2006; 32(1): 13-19

■ Dehydration is present in up to $\frac{1}{4}$ of older patients and those with dementia have higher risk?

Nurs Stand 2006;20(44):49-52



Why Does Hydration Matter?

- Fluid balance is essential to health
- Consequences of dehydration include:
 - 🔧 Constipation
 - 🔧 Falls
 - 🔧 Medication toxicity
 - 🔧 Urinary tract and respiratory infections
 - 🔧 Delirium
 - 🔧 Renal failure



Why Does Hydration Matter?

■ And further :

🔬 Hyperthermia

🔬 Longer time to wound healing (esp. pressure ulcers)

🔬 Common cause of hospitalization

🔬 Increased mortality rates among hospitalized older adults



Dehydration

Dehydration is a fluid imbalance caused by inadequate intake or excessive losses.

It can occur quickly in all older adults, and the effects can be harmful.

JAMA 1995; 274:1552-6



Dehydration vs. Volume Depletion

- Dehydration is the loss of water from the body.
- A related disorder is volume depletion, the loss of circulating volume.



Risk Factors for Dehydration

- Older age
- Age-related changes that predispose older patients to dehydration
 - ⌚ thirst response is blunted
 - ⌚ total body water decreases
 - ⌚ decline in ability of the kidneys to concentrate urine

AJN 2006;106:40-49



Risk Factors (cont'd)

■ Medications

⚡ more than 4 meds that interfere with fluid balance and affect kidney function (especially diuretics)

■ Functionally dependent (or independent!)

■ Cognitive impairment

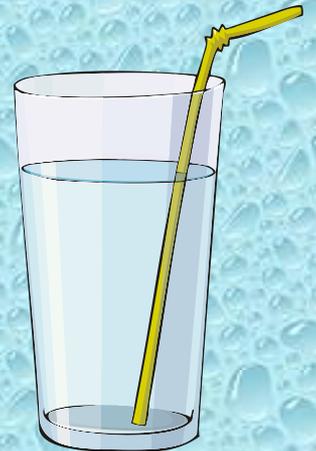
■ Comorbidities

⚡ chronic renal failure, hypercalcemia, diabetes (esp. high blood sugar, poor glycemic control)



Those at High Risk for Dehydration

- Older adults (>85 yrs); especially women
- Dysphagic patients



Symptoms of Dehydration

- General weakness
- Lightheadedness/dizziness

... or there may be NO symptoms!



Signs of Dehydration

- Dry oral mucosa
- Furrowed tongue
- Sunken eyes
- Rapid pulse, low Blood Pressure (particularly upon standing)
- Concentrated urine
- Low urine output
- Confusion
- Poor skin turgor (may not be reliable)
- Dry armpit (some evidence)



Biochemical Markers of Dehydration

■ Urea: Creatinine ratio

Probably the best marker.

$$\frac{\text{urea}}{\text{creatinine}} \geq 0.15$$

■ Elevated plasma sodium

■ Serum osmolality

2x sodium + urea + glucose

(if >300, suggests dehydration...except with unmeasured osmoles, e.g., ethanol)

■ Urine Colour or Specific Gravity



Causes of Dehydration

■ Inadequate intake

👤 can drink

👤 can't drink

👤 won't drink

👤 end of life

J Gerontol Nurs 2006; 32; 13-19



Causes of Dehydration

■ Excessive Losses

🚰 Renal

- ◆ polyuria

🚰 GI

- ◆ diarrhea
- ◆ vomiting
- ◆ ostomies

🚰 Skin

- ◆ excessive sweating
- ◆ burns, skin ulcers, wounds

🚰 Other

- ◆ blood loss



Causes (cont'd)

■ Medications

- 🔬 Diuretics (e.g., furosemide)
- 🔬 Laxatives (e.g., lactulose)
- 🔬 Excessive sedation (e.g., with antipsychotics, sedatives, and opiates)



Remedy? "H₂O"!

■ H

🔑 Identify those at High Risk for dehydration

■ 2

🔑 Watch for the 2 causes:

- ◆ Inadequate fluid intake
- ◆ Excessive fluid loss

■ O

🔑 Offer fluids

- ◆ small amounts each time you enter the room
- ◆ put fluids within reach
- ◆ preferred beverages at preferred temperature



What Else Can We Do to Promote Hydration?

- Minimize the length of time patients are required to fast for tests/procedures
- Review medications
- Ensure regular oral care
- Facilitate toileting (routine, accessible equipment) to encourage hydration
- Consult with the Dietitian about recommended daily intake



For Dysphagic Patients:

- Consult the SLP if patient has any swallowing difficulty
- Ensure patient in upright position for eating
- Encourage fluid intake, especially in patients receiving thickened fluids
- Provide snacks that are high in water content (i.e. apple sauce)
- Ask the SLP if the patient is allowed free water between meals

Have an idea? Enter our contest!!



References

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