Dehydration

Dehydration is the reduction of water and fluid from the body to a level below that required for proper functioning.

CAUSES

Dehydration occurs when there is excessive fluid loss from the body or when loss of normal fluids is not adequately replaced.

- Loss of fluids occurs in vomiting, diarrhea, excessive sweating, excessive urine output, or excessive loss of fluid from the lungs (as occurs in fever or in patients on a ventilator).
- Inadequate fluid replacement occurs with nausea or decreased appetite due to illness, sore throat, or mouth pain.

SYMPTOMS

Mild dehydration

- Thirst (infants and young children may not be able to tell you they are thirsty).
- Dry lips.
- Slightly dry mouth membranes.

Moderate dehydration

- Very dry mouth membranes.
- Sunken eyes.
- Sunken soft spot (*fontanelle*) on infant's head.
- Skin does not bounce back quickly when lightly pinched and released.
- Decreased urine production.
- Decreased tear production.

Severe dehydration

- Rapid, weak pulse (more than 100 beats per minute at rest).
- Cold hands and feet.
- Loss of ability to sweat in spite of heat and temperature.
- Rapid breathing.
- Blue lips.
- Confusion, lethargy, difficult to arouse.
- Minimal urine production.
- No tears.

DIAGNOSIS

Your caregiver will diagnose dehydration based on your symptoms and your exam. Blood and urine tests will help confirm the diagnosis. The diagnostic evaluation should also identify the cause of dehydration.

PREVENTION

The body depends on a proper balance of fluid and salts (*electrolytes*) for normal function. Adequate fluid intake in the presence of illness or other stresses (such as extreme exercise) is important.

TREATMENT

- **Mild dehydration** is safe to self-treat for most ages as long as it does not worsen. Contact your caregiver for even mild dehydration in infants and the elderly.
- In teenagers and adults with **moderate dehydration**, careful home treatment (as outlined below) can be safe. Phone contact with a caregiver is advised. Children under 10 years of age with moderate dehydration

should see a caregiver.

- If you or your child is **severely dehydrated**, go to a hospital for treatment. Intravenous (IV) fluids will quickly reverse dehydration and are often lifesaving in young children, infants, and elderly persons.

HOME CARE INSTRUCTIONS

Small amounts of fluids should be taken frequently. Large amounts at one time may not be tolerated. Plain water may be harmful in infants and the elderly. Oral rehydration solutions (ORS) are available at pharmacies and grocery stores. ORS replaces water and important electrolytes in proper proportions. Sports drinks are not as effective as ORS and may be harmful because the sugar can make diarrhea worse.

- As a general guideline for children, replace any new fluid losses from diarrhea and/or vomiting with ORS as follows:
  - If your child **weighs 22 pounds or under** (10 kg or less), give 60-120 mL (1/4-1/2 cup or 2-4 ounces) of ORS for each diarrheal stool or vomiting episode.
  - If your child **weighs more than 22 pounds** (more than 10 kg), give 120-240 mL (1/2-1 cup or 4-8 ounces) of ORS for each diarrheal stool or vomiting episode.

- If your child is vomiting, it may be helpful to give the above ORS replacement in 5 mL (1 teaspoon) amounts every 5 minutes and increase as tolerated.
- While correcting for dehydration, children should eat normally. However, foods high in sugar should be avoided because they may worsen diarrhea. Large amounts of carbonated soft drinks, juice, gelatin desserts, and other highly sugared drinks should be avoided.
- After correction of dehydration, other liquids that are appealing to the child may be added. Children should drink small amounts of fluids frequently and fluids should be increased as tolerated. Children should drink enough fluids to keep urine clear or pale yellow.

- Adults should eat normally while drinking more fluids than usual. Drink small amounts of fluids frequently and increase the amount as tolerated. Drink enough fluids to keep urine clear or pale yellow. Broths, weak decaffeinated tea, lemon-lime soft drinks (allowed to go flat), and ORS replace fluids and electrolytes.

Avoid:

- Carbonated drinks.
- Juice.
- Extremely hot or cold fluids.
- Caffeine drinks.
- Fatty, greasy foods.
- Alcohol.
- Tobacco.
- Too much intake of anything at one time.
- Gelatin desserts.

- Probiotics are active cultures of beneficial bacteria. They may lessen the amount and number of diarrheal stools in adults. Probiotics can be found in yogurt with active cultures and in supplements.
- **Wash your hands well to avoid spreading germs (*bacteria*) and viruses.**
- Antidiarrheal medicines are not recommended for infants and children.
- Only take over-the-counter or prescription medicines for pain, discomfort, or fever as directed by your caregiver. **Do not give aspirin to children.**
- For adults with dehydration, ask your caregiver if you should continue all prescribed and over-the-counter medicines.
- If your caregiver has given you a follow-up appointment, it is very important to keep that appointment. Not keeping the appointment could result in a lasting (*chronic*) or permanent injury and disability. If there is any problem keeping the appointment, you must call to reschedule.

SEEK IMMEDIATE MEDICAL CARE IF:

- You are unable to keep fluids down or other symptoms become worse despite treatment.
- Vomiting or diarrhea develops and becomes persistent.
- There is vomiting of blood or green matter (*bile*).
- There is blood in the stool or the stools are black and tarry.
- There is no urine output in 6 to 8 hours or there is only a small amount of very dark urine.
- Abdominal pain develops, increases, or localizes.
- You or your child has an oral temperature above 102° F (38.9° C), not controlled by medicine.
- Your baby is older than 3 months with a rectal temperature of 102.0°F (38.9° C) or higher.
- **Your baby is 3 months old or younger with a rectal temperature of 100.4º F (38º C) or higher.**
- You develop excessive weakness, dizziness, fainting, or extreme thirst.
- You develop a rash, stiff neck, severe headache, or you become irritable, sleepy, or difficult to awaken.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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