

Nurse to Nurse

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Dehydration

— Adults lose about 10 cups of water each day through body processes including perspiration, respiration and elimination. Not getting enough fluids each day can take a tremendous toll on every aspect of bodily functions, including possible changes in memory, vision, and kidney and heart function.

The total amount of water in the body decreases with age. Approximately 80 percent of a child's weight is water. However, for an adult age 61 to 74 years, this drops to approximately 43 percent for a woman and 50 percent for a man. Therefore, even small decreases of fluid intake can cause proportionately more dehydration in an older person than in a younger person.

Older adults often don't drink enough fluids and are prone to dehydration, especially during the summer months. In fact, dehydration is the most common fluid and electrolyte disturbance in the elderly. Diseases that cause mental or physical incapacity also reduce the ability to recognize thirst or create an inability to express thirst, or may decrease access to water. Dehydration can result in serious physical complications and can cause death.

The human body should never lose more fluid than it is taking in. Most people need at least six cups per day of liquids to stay hydrated.



Below are some steps you can take to help people get enough to drink.

- Encourage people to drink many times throughout the day.
- Use creative ways of encouraging fluids such as puddings, Jell-O, fruit, Popsicles, soups, etc.
- Drink fluids with the person. Eating or drinking with others will tend to increase a person's willingness to eat and drink.
- Avoid the use of caffeinated beverages such as coffee, tea and soda, because they may contribute to dehydration. Caffeinated or alcoholic beverages aren't fluid substitutes because they act as diuretics and cause a person to lose more water through increased urination.
- In place of sodas, try offering flavored or unflavored carbonated water; lemonade or decaffeinated iced teas; or add lemon or lime slices or flavored ice cubes (cranberry juice, citrus, etc.) to water to improve the flavor.
- Consider using a large-handled cup, a cup with a secured lid and drinking spout or special straw if appropriate.
- Consider asking the physician for a swallowing evaluation if you think the person may be having difficulty with swallowing.

Vulnerable populations become dehydrated very quickly especially during warm weather. Early identification of dehydration signs and symptoms is critical.

Mild-to-moderate dehydration is likely to cause:

- Dry, sticky mouth
- Sleepiness or tiredness
- Thirst
- Decreased urine output
- Few or no tears when crying
- Muscle weakness
- Headache
- Dizziness or lightheadedness

Severe dehydration, a medical emergency, can cause:

- Extreme thirst
- Irritability and confusion in adults
- Very dry mouth, skin and mucous membranes
- Lack of sweating
- Little or no urination-any urine that is produced will be dark yellow or amber
- Sunken eyes
- Shriveled and dry skin that lacks elasticity and doesn't "bounce back" when pinched into a fold
- Low blood pressure
- Rapid heartbeat
- Fever
- In the most serious cases, delirium or unconsciousness.

Pressure Sores

■ Pressure sores are areas of tissue damage that develop when the skin and soft tissues (eg, muscle) are squeezed between the bones and the surface that is in contact with the body, such as a mattress. Common areas for pressure sores to develop include the hip, heel, buttocks, and other areas where the bone underneath is close to the body surface. Pressure sores are sometimes called decubitus ulcers or bed sores, but pressure ulcer is the best term because pressure is the main cause of the problem.

Pressure sores are a serious and common problem of older adults, affecting approximately one million Americans (primarily those over 65 years old). The occurrence of pressure sores varies greatly, depending on the healthcare setting. Pressure sores develop in up to one-sixth of older adults receiving home care, in up to one-third of older adults in hospitals and nursing homes and even more often in intensive care units.

Three processes are involved in the development of pressure sores. The main one is the pressure that body weight puts on tissues as they become squeezed between bones and a surface. Friction created by the body sliding over sheets, upholstery, etc also plays a part in irritating the skin. Poor circulation of blood to the area, too much moisture, and poor skin quality can also contribute to the problem. The sores come about when the pressure cuts off the blood supply to an area of tissues, and those tissues then die and slough off.

Depending on how large and how severe the sores are, they can appear as red areas, "craters," blisters or large, dark scabs. Sores are classified into clinical stages, depending on appearance:

- **Stage 1:** skin redness that does not turn white with pressure (approximately one half of all pressure sores)
- **Stage 2:** a scrape that results from loss of the outer skin layers (one third of all pressure sores)
- **Stage 3:** a shallow crater from loss of the skin and some of the tissue below the skin
- **Stage 4:** a deep crater from damage extending into muscle or bone

The main risk factor for pressure sores is not being able to move around, or immobility. Any illness that results in immobility or having to stay in bed for a long time (eg, stroke, surgery, cancer, heart failure, pneumonia, etc) increases the risk of pressure sores. Other illnesses that increase risk include dry skin, diabetes, anemia, dementia, renal failure, and various infections, urinary and fecal incontinences are also associated with sores, because of the moisture and bacteria on the skin. Old age is a risk factor because older adults have an increased risk of debilitating illness, have changes in their skin that make it thinner and more fragile, and have less spontaneous movements during sleep. Lifestyle factors associated with pressure sores include a lack of physical activity, smoking and poor nutrition.

Pressure sores can have serious and even life-threatening complications. The most serious complication is blood poisoning (septicemia). Other types of infections are also common, including local infections, skin infections, and bone infections. For about 25% of people with non-healing pressure sores, the underlying bone is involved in the infection. Pressure sores can also serve as sources of serious infections by bacteria that are resistant to normal antibiotics. Other complications include pain and depression, both of which have been linked to slow wound healing. Finally, because most pressure sores, particularly deep ones, take a long time and a lot of care to heal, pressure sores can have a significant impact on the quality of life of older people who often need nursing care or may need to be in a specialized facility for treatment.

The best way to deal with pressure sores is to prevent them before they start.

Maintaining or improving the ability to move around is one of the most effective ways to minimize the risk of developing pressure sores. People who are not confined to bed should be encouraged to move from bed to chair and to stand and walk. Attention to posture, balance, and weight distribution (shifting weight every 15 minutes) can help people when sitting. People who are bedbound can still benefit from various exercises that put their joints through a range of motion.

Bedbound people should be repositioned frequently to relieve pressure over bony areas. How often someone should be repositioned depends on the person's health and the quality of the supporting surface (eg, some beds are designed to decrease the pressure on bony areas of the body). Older adults at risk of developing pressure sores should be repositioned at least every 2 hours.



People who are likely to develop pressure sores should be repositioned often, changing from the back to their right side and then to their left side, keeping the back at a 30 degree angle to the bed surface. This avoids direct pressure on the bony areas of the lower back, hips, heels, and ankles—the sites where 80% of all pressure sores develop.

Pillows placed between the legs, behind the back, and supporting each arm can help maintain good position. “Doughnuts” should not be used as seating cushions because they increase pressure over the area of contact and may actually cause pressure sores.

Friction can be minimized by using proper repositioning, transferring, and turning techniques. Using lubricants (cornstarch and creams), protective films (transparent film dressing and skin sealants), protective dressings, and protective padding can also help. Bed-positioning devices such as pillows or foam wedges should be used to keep bony areas from being in direct contact with one another. The head of the bed should be elevated as little as possible, keeping in mind other medical conditions the person may have. Lifting devices, such as trapezes or bed linen, can be used to move the person in bed, rather than tagging directly on skin or sliding along the skin.

All older adults at risk of pressure sores should have a thorough skin inspection every day, with particular attention to all bony areas. The skin should be washed with warm water and a mild cleansing agent to minimize irritation and dryness. Every effort should be made to avoid low humidity (less than 40%) and exposure to cold. These environmental factors lead to dry skin, which can be damaged more easily. Dry skin should be treated with moisturizers. Bony areas should not be massaged, because this can cause tissue damage.

The skin should also be protected from excessive dampness caused by sweat, wound drainage, and urinary or fecal incontinence. Moisturizers and moisture barriers can be used to protect the skin. Disposable underpads to control moisture and perspiration can help draw moisture away from skin. However, disposable briefs

to manage incontinence should be checked and changed frequently to prevent skin irritation and infection that can develop quickly.

Older adults at risk of developing pressure sores may benefit from a mattress pad, or other supporting surface that is designed to relieve pressure. These materials vary in cost and technical complexity, from simple foam pads; to cushions filled with gel, fluid, or air; to other more technically complex devices. However, even relatively simple cushions often help prevent pressure sores. While these devices can help relieve pressure, they do not eliminate it entirely and are not a substitute for shifting position periodically to more completely relieve pressure from certain areas.

Poor nutrition has been associated with development of pressure sores. A good diet is important and should include adequate fluids, protein, vitamins, and minerals.

A pressure sores will not heal unless underlying causes are identified and effectively managed. Whenever pressure sores develop, they should be examined. The size, number, location, and depth of pressure sores should be recorded. Any evidence of infection (milky drainage, fever, foul odor, or surrounding redness of the skin) should be noted. Blood test or X-rays may also be needed to gauge infection or involvement of underlying bone. Any underlying health conditions or barriers that prevent someone from being able to move around should be corrected or managed. Preventive measures (frequent



and appropriate repositioning, control of dampness, proper diet) should be reviewed to limit recurrence.

Sometimes, specific treatments are needed to encourage and speed the healing of pressure sores. For example, dead tissue can support infection and prevent healing, so it needs to be removed through a process called debridement. Various types of dressing are used to absorb drainage and promote the healing of pressure sores. Wound cleaning and dressing changes are two of the most important methods for minimizing infection. Cleansing the wound and changing the dressing more often is particularly important if there is pus or foul smelling drainage in the area. People handling any infected material from the pressure sore should wear gloves, so that the germs are not spread from the ulcer to other areas. If the pressure sore is severe, surgical repair may be needed. However, surgically treated sores tend to recur, especially if underlying problems are not corrected.

Antibacterial drugs may be needed if the sore is not healing or it continues to ooze after 2 weeks of proper cleansing and bandage changes. Some antibacterial preparations can be applied directly to the skin (silver sulfadiazine and mupirocin ointment) up to three times a day for 1-2 weeks as long as there is no allergic reaction. Antibiotics (given by mouth or injected) are needed

for people who have blood poisoning or infections in the skin or underlying bone. Antibiotics are also given to prevent disease heart valves from getting infected, or when the ulcer needs surgical repair.

You might be one of the health care providers monitoring the healing process of any pressure sore to gauge the effectiveness of treatment. Usually, the depth and width of the sores are measured. Healing progress is usually evaluated weekly. Depending on the size and severity of the sore, healing may take from only a few days to several months. Especially severe pressure sores may take up to a year to heal, and unfortunately, some may never heal, especially when the person has other illnesses.

It is important to assess the direct caregivers understanding of pressure sore prevention and provide any necessary training. Training of direct caregivers is critical in the prevention of pressure sores.



Assessment of persons who lack language skills

All people communicate through language, facial expressions, posture and gestures. Another source of powerful information is the person's behavior. For persons who are unable to use language to express how they feel or if they are in pain, nurses must rely on gathering information through additional sources, such as family members, caregivers and observations.

When doing a nursing assessment for persons who have no or few language skills, it is important to allow for extra time, because assessments of these people may be time-consuming. Always ask permission from the person to have others present during the assessment. Address the individual directly as he or she may be able to answer all of your questions by means other than talking. Your first meeting with an individual may not reveal much information. However, after seeing the person several times, you will begin to understand the ways he or she communicates needs and preferences. Listen to those who are closest to the individual. Caregivers can be very helpful

in deciphering behavioral cues that you might miss. The following information can help nurses assess people who lack language skills, such as those with developmental disabilities, advanced dementia and severe mental illness.

Persons with developmental disabilities often have good receptive language skills



even though they may have little to no expressive skills. When asked in simple words about pain or discomfort, they may point and respond in a yes or no manner. Many individuals have learned some sort of sign language that family members and caregivers understand. The sign language may be an abbreviated form of American Sign Language or one made up over time by the individual and others. Some individuals communicate with

picture boards, word boards, computers or voice simulators. In fact, when using augmented communication devices, many individuals can be very conversational.

Choose a quiet setting to converse with the person. Provide written materials, because the person may be able to answer your questions in writing. Many persons are familiar with using a pain scale, so have a couple of different types available. If you ask the individual questions and he or she does not respond, or you are confused about what he or she is saying, ask the person's permission to seek clarification from a family member or caregiver. Be aware that family members and caregivers bring

their own perspective, experiences and interpretation to what the individual is experiencing. They may minimize or over-emphasize issues that they want the nurse to address.

When doing a physical exam, watch for guarding, moaning or grimacing in response to your exam. Signs of pain may be present only when the person moves or is repositioned. When individuals are in acute discomfort, the usual signs of pain, such as sweating, rapid breathing, dilated eyes and restlessness, likely will be present. Generally, the source of pain can be narrowed to a body area which can then be examined by x-ray, ultrasound or other means once the person is in a



medical setting. Even if a person with developmental disabilities can talk, he or she may often say what others want to hear. Nurses need to ask open-ended questions to encourage meaningful dialog.

Frequently, family members or caregivers will state that they knew something was wrong because the individual was acting “differently” – sleeping more, eating and drinking less, etc. Sometimes they have difficulty articulating why they feel the person is ill. A change in behavior pattern from being active to quiet, or viceversa, is usually a clue that the person is ill or that something is amiss. Ask about a loss of interest in favorite activities or refusal of favorite foods or drink. Be aware that an individual’s baseline vital signs may be outside of “normal” limits and not illness indicators. Always ask what is normal for the individual. Unfortunately, since some individuals have lived in many different types of residences, pertinent medical information may not be available. Also, medical record retrieval may take time because the individual may not have the capacity to sign legal documents, and finding the person’s legal representative may take time.

Individuals who have advanced dementia may have verbal skills, but what they say may not reflect what they mean or how they feel. They may repeat words or phrases, such as “help me, I’m sick,” many times per day without having signs of obvious illness or pain. Also their body language, behavior, gestures, facial expressions, crying or moaning may not be an indicator of

physical discomfort or pain, but more an expression of emotional stress and sadness. On the other hand, there are many stories of individuals who have had fractures or other serious health events who continued their daily routines without family or caregivers noticing that something was wrong because the person’s verbal and non verbal indicators did not change. It is not unusual for individuals with dementia to have more-lucid days, and at these times you may elicit reliable information. Again, visiting the individual over time and asking family members or caregivers for their observations will enhance your knowledge. Keep in mind that older adults may seem less cognitively aware if they have significant losses of sight or hearing or are taking medications that have side effects of confusion.

Persons who have severe mental illness may have difficulty conveying to others that they are sick or in pain. They may be able to talk but may not want to talk to other people or not in a manner that conveys much information. They may be very distrustful of others and not allow the nurse in their personal space or even social space. If they are taking psychoactive medications, their facial expressions may be flat and their posture slumped. In other words, they may appear unwell given first impressions. Some psychoactive medications can also blunt pain perception, so individuals may not realize that they have an injury or pain-causing disorder.

Preferably, start the nursing interview in the person’s natural setting. Persons with



mental illness are usually very wary of health professionals and clinical settings. Initially, meet the person in street clothes, without evidence of medical instruments. A caregiver or family member may be helpful in soliciting information and encouraging the individual to talk with you. The luxury of establishing a rapport by visiting the individual frequently and over time is priceless, but not always an option. Persons with severe mental illness may remain mute for long periods. They may also have days or even longer periods where they are more lucid and helpful.

In general, when assessing a person who can't clearly communicate his or her needs and preferences clearly, start by observing mobility and general demeanor. Note the differences between what you see and what you would expect to see in a healthy individual of about the same age. Ask how the individual functioned six months to a year prior. This information may give you a reference

point as to when the person's health began to change. Everyone's health status waxes and wanes. Ask about how the person acts on a good day versus a bad day and what kind of day the person is having on the day of your assessment.

It is very valuable to have a pain protocol available for any individual who has difficulty communicating how he or she feels and when he or she is in pain. A pain protocol is a written document that tells caregivers how the person usually expresses signs and symptoms of illness, pain and discomfort, as well as interventions on what to do if the signs and symptoms are observed. Protocols are written by persons who know the individual best and should be reviewed periodically to make sure that the information included is still relevant. Having a pain protocol is invaluable in settings where there are many caregivers who provide support to the individual.



Oregon Geriatrics Society 9th annual conference

Join OGS in Sunriver, Oregon for the ninth annual Geriatrics Conference, October 10-12, 2008. This two-and-a-half-day conference features a day focusing on long term care – learn about Coding and Billing, Immunization and Infection Control, Pharmacy Update and the Long-Term Care Panel. Other highlights of the conference include topics on Rheumatology, Cardiology, End of Life, Renal Disease, Nutrition, Dementia and Geropsychiatry. OGS is pleased to offer accreditation from the AMA, American Nurses Credentialing and American Medical Directors Association. New this year is the OGS committee meetings on Sunday morning. Join an OGS leader for one of three areas: Membership, Public Affairs or Education – bring your ideas and suggestions for these areas for OGS to pursue. For meeting registration or more information contact OHSU-CME at 503-494-4898. Find all the meeting details and information about membership in OGS visit www.oregongeriatricsociety.org.

AHRQ releases Spanish-language diabetes resource

- The federal Agency for Healthcare Research and Quality (AHRQ) has unveiled a new Spanish-language resource aimed at engaging Hispanic patients with type 2 diabetes in their health care and improving outcomes for that population, *HealthDay News* reports.
- The guide, titled *Pastillas para la diabetes tipo 2*, seeks to shape and improve interactions between Hispanic diabetes patients and their health care providers by presenting a range of comparative research on diabetes management and medications. Specifically, the resource offers information on 13 brand-name and 10 generic oral diabetes medications, explaining how the drugs work, the potential for side effects, average costs and appropriate dosages.
- The AHRQ developed the guide as part of its Effective Health Care Program, which compares various treatment options for health conditions to help physicians and nurses provide optimal care. According to the AHRQ, nearly one in eight Hispanics currently takes prescription drugs for diabetes (*HealthDay News/Washington Post*, 7/2/08; AHRQ release, 6/19/08).

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