

A Letter from Home

A NEWSLETTER FOR CAREGIVERS

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CARE OF THE GERIATRIC CLIENT, PART 2

The last issue of the *Letter from Home* addressed the changes that happen with vision, hearing, taste and skin with age. This issue will discuss how the aging process affects the bodily systems. This understanding will help you better care for your older clients by understanding why and what is happening as they age.

Nervous System

Luckily, our brains do not change drastically with age. The brain does get a bit smaller and blood flow to the brain is reduced. This can result in slower reaction times, both physically and mentally. It may take an older person longer to remember something; but with time, they usually can function much as they did when they were younger. Our elderly clients will need more memory cues for recall. It is harder for them to retrieve information from their long term memories because there is so much information that has been filed away. Older adult memories are more affected by fatigue, illness, stress, grief, depression, certain medications, vision and hearing loss, or by a lack of concentration. Dementia, a loss of mental ability that affects normal functioning, is not routine in aging. If you notice your client has significant memory loss that interferes with their daily lives, contact your supervisor.

Slowed reaction times may cause some issues

with elderly falls. The reaction necessary to readjust posture or body position when falling is slower with age; and by the time the impulse for body correction gets to the brain and back down to the appropriate body part, the person has fallen. Slowed reactions, can cause inadvertent burns or scalding with our clients. As a result, it is necessary for us to ensure water temperature for bathing is not too hot.

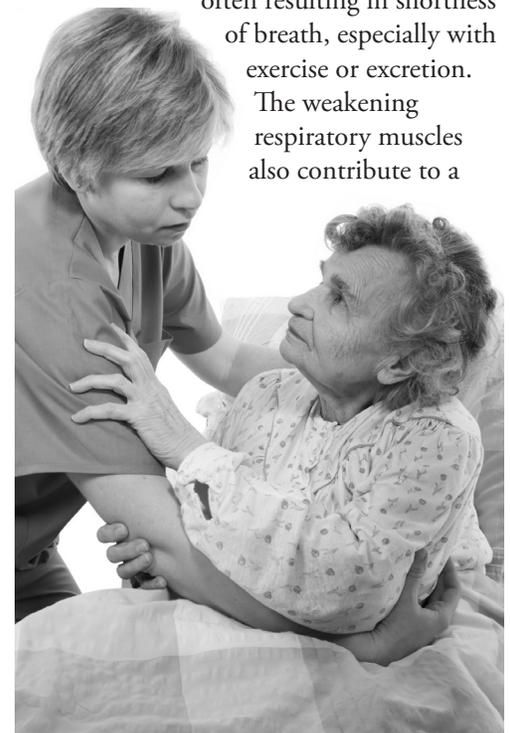
Between 15-25% of people more than 65 years old are seriously depressed. Although depression is not a normal condition with aging, it does occur in this age group in higher numbers. If your client, particularly males, says that they are depressed and want to hurt themselves, take this threat very seriously and contact your supervisor immediately! Nearly 20% of all suicides occur in this age group, with the rate for white males more than twice that of adolescents.

Finally, sleep is often altered with age. Older people may take longer to fall asleep or may have more frequent periods of wakefulness. As a result, the elderly may spend more time in bed to get the same amount of sleep or may take longer or more naps. Another issue with sleep disruptions in our elderly clients is due to lessened total sleep time in REM (rapid eye movement) sleep. We require a certain percentage

of time in REM sleep to feel fully rested and to allow the body to repair itself and consolidate memories. When clients do not get adequate REM sleep, they may feel "foggy" or feel more lethargic and slow. Sleep in the elderly is also disrupted due to chronic and acute illness, or pain and physical complaints.

Respiratory Changes

Deep breathing becomes difficult with age due to rigidity and stiffness of muscles; often resulting in shortness of breath, especially with exercise or excretion. The weakening respiratory muscles also contribute to a





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less effective cough mechanism. Another important change to the respiratory system is the decrease in the cilia and an increase in mucus production within the lungs.

These changes in the respiratory system can cause many complications. With a less effective cough, more mucus and decreased cilia, the client is at an increased risk of developing a respiratory infection or pneumonia. This is further impacted with inactivity or bed rest. Also, the respiratory changes often result in decreased oxygenation and air exchange. The older client may have problems with other body tissues, particularly the lower extremities, getting adequate oxygen.

If your older adult client does show signs of infection, encourage fluids and humidification which can help thin the secretions. Also, if your client is inactive, encourage deep breathing to help facilitate oxygenation.

Circulatory System

Blood vessels in the elderly become more rigid and narrow. The walls of the heart become stiffer and the heart fills with blood more slowly. This can result in a longer recovery period required in our older clients with exertion. The valves within the heart become less flexible and calcium deposits often build up.

The heart also becomes less efficient. It requires more oxygen to do the functions it used to do with less oxygen. The heart rate of an older person does not always rise in response to fever, stress or exertion as in a younger person. When the heart cannot keep up with the demand, it compensates often by increasing blood pressure.

Blood flow to the kidneys and other areas of the body decreases. The baroreceptors in the kidneys, which monitor and adjust the blood pressure when the client changes position, become less sensitive with age. This can result in the older client experiencing dizziness or problems with changing positions too quickly. Due to reduced activity, the pumping action of the calf muscle is lessened, which can result in dilatation of the veins and pooling of blood in lower legs and feet. Heart attack or failure may present with sudden onset of confusion rather than pain or difficulty in breathing because of lack of adequate oxygenation to the brain.

Advise older adults to take time to change positions. Observe for signs of confusion, edema, and increased blood pressure and report changes to your supervisor. Encourage exercise, if medically indicated.

Musculatory Changes

Vertebrae become compressed with age and by 80, the average person will lose an average of two inches of height. This compression of the spine can cause postural changes and difficulty walking.

Typically, we lose about 23% of our muscle mass by age 80. This can lead to weakness and fatigue. Joint space narrows and ligaments lose elasticity which decreases the joints ability to accommodate activity. Joints become less flexible and movements slower. Joint swelling can cause pain and is a major reason for limited activity of older adults. Aging causes the water content of cartilage to decrease which results in the joints being unable to handle repetitive stress such as walking. Osteoporosis and osteoarthritis are two common musculoskeletal diseases in older adults.

Falls are the most common cause of injury among seniors. Seniors are nine times more likely to be hurt in a fall than someone under age 65. Nearly two-thirds of the injury related hospitalizations for seniors are the result of falls. In addition, fear of falling can lead to a self-imposed decrease in activity. Bone loss and a decrease in absorption of calcium can cause the bones to become more porous or brittle; so if a fall does occur, the older person is more likely to break a bone. Normal changes to gait result with age and include a slower

gait, decreased stride length and arm swing, forward flexion at head and torso, increased flexion at shoulders and knees, and an increased lateral sway. These posture changes along with muscle weakness make the older person at an increased risk of falls.

Gastrointestinal Changes

Digestive secretions necessary for vitamin B12 absorption lessen and can lead to anemia. Saliva production also decreases increasing cavities and mouth disease. A decrease in esophageal muscle action and gag reflex can cause choking in the elderly. Another common GI problem with aging is a decrease in large bowel mobility and delayed gastric emptying, putting the senior at risk for constipation.

Because of these common changes to the GI system with age, you will need to encourage fluids with every meal and encourage dietary fiber to help in the prevention of constipation. You will also need to encourage extra time for eating in your older client. Be aware that choking incidence increases with age and ensure you are prepared on how to handle a choking emergency.

Changes to the Urinary System

The kidneys and bladder become smaller with age. They also have less blood flow and muscle tone and elasticity, which can cause issues with increased urinary frequency, especially at night. The prostate enlarges in men also leading to frequent trips to the bathroom. Aging can make a person more prone to bladder infections due to loss of muscle tone and incomplete emptying of the bladder. Also, because the urine is so concentrated it can irritate the bladder lining and cause inflammation.

Aging can cause a reduction to kidney functions by approximately 40%, which can interfere with the clearance of some drugs and the body's toxic waste. This decreased kidney function alters the regulation of the hormones that responds to dehydration and the ability to conserve salt. This results in the older adult being vulnerable to dehydration. Another disorder that may result from kidneys not working properly is anemia. This occurs because the kidneys produce a hormone that drives the production of red blood cells.

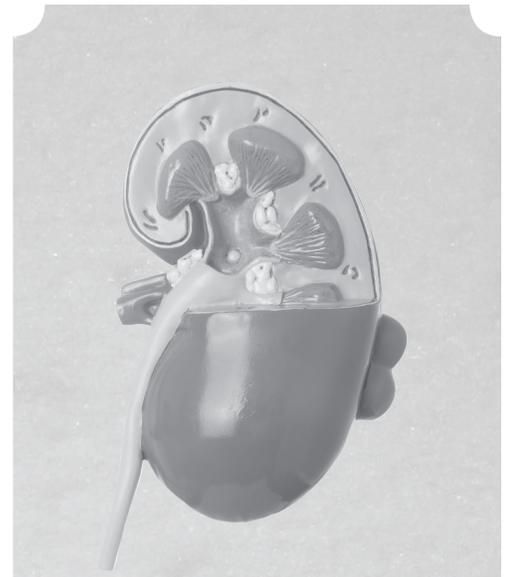
In older clients, encourage an increase in fluids to prevent dehydration and bladder infections. Ensure adequate lighting for night time trips to the bathroom. If the client is unable to communicate, encourage them to empty their bladder every 2-4 hours. Observe all older clients for medication toxicity.

Changes to the Endocrine System

Many naturally occurring hormones decrease with age including insulin, cortisol, growth hormone and thyroid stimulating hormone. With less insulin, older clients may develop non-insulin dependent diabetes. Also, because of a decrease in the adrenal production, an older person may not respond well in a crisis or may no longer be able to multi-task. A thyroid secretion decrease can contribute to a slowed metabolism, dry skin, lack of energy, inability to handle cold and constipation. Less growth hormone contributes to the muscle loss experienced in older clients and makes them more prone to weakness.

The immune system does not function as efficiently with aging and the ability to fight infections diminishes greatly. Therefore, when an older client gets even a cold or the flu, it will be more difficult for their body to fight the disease.

There are many systemic changes which can occur with age. It is important for you to understand the normal processes of aging and how these changes impact your clients. Not all clients experience aging in the same way. Some body systems may age more quickly than another within the same client. However, with knowledge of the normal aging changes, you can better identify what is normal and when you need to notify your supervisor of a concern.



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