

Optional Reading: Chronic Conditions

Chronic conditions are illnesses that are ongoing, generally incurable conditions that require continuing medical attention and affect daily life. As individuals live longer, diseases that affect older individuals become more prevalent, and the burden of chronic illness grows with age. Less than 50% of adults 50-64 have a chronic condition, 90% aged 75 and up do (Cohen, 2011). Almost 80% have at least one chronic disease, and 77% have at least two (National Council on Aging, 2019). Older women are more likely to have a chronic condition than are older men (83% vs. 88%) (CDC, 2009). Table 10.5 lists the percentage of older adults who have certain chronic illnesses based on the National Health Survey conducted in 2014. Other studies place the figure of diabetes in older adults at 26% (CDC, 2014).

Table 10.5. Death Percentages for Cancer and Heart Disease for Selected Age Groups

2016 CAUSES OF DEATH	45-64	65+	85+
CANCER	29.2	21.1	12.1
HEART DISEASE	20.9	25.3	25.3

Cancer and Major Cardiovascular Disease. As discussed previously, cancer and cardiovascular disease are the overall leading causes of death, and they are especially high reasons for death in middle and late adults. Table 10.6 identifies the percentages of deaths due to cancer and cardiovascular disease for selected age groups in 2016; the most recent year for data (Heron, 2018).

Cancer. Advancing age is a significant risk factor for cancer, with persons over 65 accounting for 60% of newly diagnosed cancer and 70% of all cancer deaths (Berger et al., 2006). Additionally, more than 70% of the mortality associated with many cancers, including prostate, bladder, colon, uterus, pancreas, stomach, rectum and lung occur in patients 65 and older. Other conditions that affect the elderly can occur with cancer, including anemia, coronary artery diseases, congestive heart failure, chronic obstructive pulmonary diseases, renal insufficiency, cerebrovascular diseases, neurovascular complications of diabetes mellitus, and arthritis that restricts mobility (Balducci & Extermann, 2000). Comorbidity complicates treatment.

Table 10.6 Death Percentages for Cancer and Heart Disease for Selected Age Groups

2016 Causes of Death	45-64	65+	85+
Cancer	29.2%	21.1%	12.1%
Heart Disease	20.9%	25.3%	25.3%

Balducci and Extermann (2000) examined several concerns about cancer treatment in the elderly. With aging, there is a decline in multiple organ systems that can adversely affect the ability of medications to treat the cancer. Chemotherapy has been found to compromise the cognitive function of those being treated for cancer, and it may further exacerbate dementia and cognitive declines among the elderly. Frail individuals, defined as having limited life expectancy and near-to-exhausted functional reserves, are also not considered candidates for more toxic forms of chemotherapy.

With cancer, the prevalence and risk of malnutrition are higher, and diminished vision and hearing make elderly cancer patients more susceptible to environmental injury. Screening for depression is also recommended because depression is associated with weight loss, failure to thrive, and may reduce the motivation to receive treatment. Consequently, depression has been associated with decreased survival rates in the elderly. Due to the projected increase in the total number of older patients with cancer, it is recommended that physicians and caretakers have expertise in both oncology and geriatrics (Berger et al., 2006).

Heart Disease. There are normative changes to the heart that take place with age, and some may increase a person's risk of heart disease. These include stiffening blood vessels and valves, which may result in leaks or problems pumping blood out of the heart (NIA, 2012). As previously stated, heart disease is the leading cause of death for those in late adulthood (CDC, 2016b). There are different types of heart disease, and as already discussed, the most common is atherosclerosis, the buildup of fatty deposits or plaques in the walls of arteries. As plaque builds up, blood is unable to flow normally and bring oxygen throughout the body, including to the heart. Depending on where the buildup is, atherosclerosis can cause a heart attack, leg pain, or a stroke. However, atherosclerosis is not part of normal aging. Many of the problems older people have with their hearts and blood vessels are caused by disease and not by aging. For example, an older heart can normally pump blood as strong as a younger heart, while decreased ability to pump blood is caused by disease. Therefore, leading a heart-healthy lifestyle is most important to keeping one's heart strong during late adulthood.

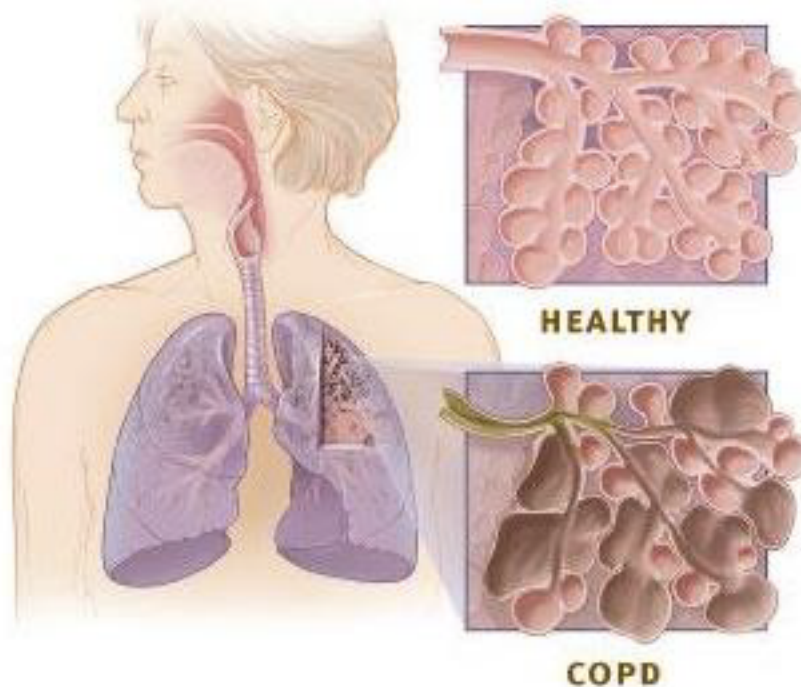
Arthritis. Arthritis and other rheumatic conditions are the most common cause of disability among US adults and have been the most common cause of disability among US adults for the

past 15 years (NIH: National Institute of Arthritis and Musculoskeletal and Skin Diseases, 2014). According to the NIH, approximately 62% of adults with arthritis are 65 years old or older. Almost 1 in 2 older adults with arthritis have some degree of mobility restrictions, such as climbing stairs, walking, and grasping objects. The pain and other limitations of arthritis can also increase the risk of depression and other forms of mental distress. Osteoarthritis is the most common type of arthritis. “When the cartilage, the slick, cushioning surface on the ends of bones wears away, bone rubs against bone, causing pain, swelling and stiffness. Over time, joints can lose strength and pain may become chronic” (Arthritis Foundation, 2017, para 3). Common risk factors for osteoarthritis include genetics, obesity, age, previous injury, and other medical conditions.

Osteoporosis and Kyphosis. *Osteoporosis is a disease that thins and weakens bones to the point that they become fragile and break easily.* After age 50, 50% of women and 25% of men will experience an osteoporosis related fracture in their lifetime, often leading to hip, spine, and wrist fractures (Dailey & Cravedi, 2006). Broken hips are a very serious problem as we age. They greatly increase the risk of death, especially during the year after they break (NIH Senior Health, 2015). In the U.S., more than 53 million adults either already have osteoporosis or at a high risk due to low bone mass (NIH Senior Health, 2015). *As bones weaken in the spine, adults gradually lose height and their posture becomes hunched over, which is called **Kyphosis**.* Over time a bent spine can make it hard to walk or even sit up. Adults can prevent the loss of bone mass by eating a healthy diet with enough calcium and vitamin D, exercising regularly, limiting alcohol, and not smoking (National Osteoporosis Foundation, 2016).

Chronic obstructive pulmonary disease (COPD) *is a progressive lung disease in which the airways become damaged, making it difficult to breathe.* COPD includes problems such as emphysema and chronic bronchitis (NIH Senior Health, 2013). COPD kills more than 120,000 people every year, making it one of the leading causes of death. COPD was once considered a “man’s disease.” However, since 2000, women comprise 58% of those with COPD which affects about 8% of all women (American Lung Association, 2019). Research indicates that women may be more susceptible to the effects of cigarette smoke due to having smaller lungs and estrogen worsening the effects.

COPD: What is COPD?



Healthy airways and air sacs in the lungs are elastic—they try to bounce back to their original shape after being stretched or filled with air. In people with COPD, the air sacs no longer bounce back to their original shape. The airways can also become swollen or thicker than normal, and mucus production might increase.

Figure 10.13

Figure 10.13 compares healthy to damaged lungs due to COPD. As COPD develops slowly, people may not notice the early signs, and may attribute the shortness of breath to age or lack of physical exercise. Most people are not diagnosed until midlife or late adulthood. There is no cure as the damage cannot be reversed. Treatments aim at slowing further damage. Cigarette smoking is the leading cause of COPD, but other types of tobacco smoking, such as a pipe or cigar, can cause COPD, especially if the smoke is inhaled. Heavy or long-term exposure to second hand smoke can also lead to COPD (NIH Senior Health, 2013). COPD can also occur in people who have long term exposure to other environmental irritants, such as chemical fumes and dust from the environment and workplace.

About 1 in every 1,600 to 5,000 people have a risk for COPD because of a recessive genetic condition known as alpha-1 antitrypsin (AAT) deficiency (NIH, 2011). AAT is a protein made in the liver that protects organs, especially the lungs, from the effects of other harmful proteins. In those with the genetic defect, the AAT protein created is the wrong shape and cannot leave the liver. This can lead to a heightened risk for lung disease, and even liver disease, as the excess of the AAT protein can lead to **cirrhosis**, which is a disease in which the liver becomes scarred and

does not function properly. While some people with ATT deficiency are not affected and live a normal life, COPD is more likely to occur in such individuals if their lungs are exposed to environmental irritants.

Shingles. According to the National Institute on Aging (2015e), *shingles is a disease that affects your nerves.* Shingles is caused by the same virus as chicken pox, the varicella-zoster virus (VZV). After you recover from chickenpox, the virus continues to live in some of your nerve cells. It is usually inactive, and most adults live with VZV in their body and never get shingles. However, the virus will become active in one in three adults. Instead of causing chickenpox again, it produces shingles. *A risk factor for shingles includes advanced age as people have a harder time fighting off infections as they get older.* About half of all shingles cases are in adults age 60 or older, and the chance of getting shingles becomes much greater by age 70. Other factors that weaken an individual's ability to fight infections, such as cancer, HIV infections, or other medical conditions, can put one at a greater risk for developing shingles.

Shingles results in pain, burning, tingling, or itching in the affected area, as well as a rash and blisters. Typically, shingles develops only on one side of the body or face and in a small area rather than all over. Most cases of shingles last 3 to 5 weeks. After the shingles rash goes away, some people may be left with ongoing pain, called post-herpetic neuralgia (PHN) in the area where the rash had been (NIA, 2015e). The older one is when getting shingles, the greater the chance of developing PHN. Some people with PHN find it hard to go about their daily activities, like dressing, cooking, and eating. They can also suffer from depression, anxiety and sleeplessness. Medicines can help with pain and usually PHN will disappear. Unfortunately, the blisters from shingles may become infected or leave a scar. Blisters near or in the eye can cause lasting eye damage or blindness. A brief paralysis of the face, hearing loss, and very rarely, swelling of the brain (encephalitis) can also occur. There is a shingles vaccine that is recommended for those aged 50 and older. Shingles is not contagious, but one can catch chickenpox from someone with shingles.

Beliefs about Health. Despite the fact that the majority of older adults have at least one chronic illness, most rate their overall health positively (Graham, 2019). Based on results of the CDC's 2017 National Health Interview Survey, 82% of those aged 65-74 and 73% of those 75 and older rated their health as good, very good, or excellent. Because older adults focus more on emotional well-being, positive social relationships, remaining active, and overall life satisfaction, poor physical functioning is not considered as important. Older adults often look to those who are worse off than themselves, including those who have died or are in a nursing home, and consequently feel more positive about themselves. This perspective can be contrasted with that of younger people who believe that there should not be anything wrong with them, and consequently experience negative feelings when they have an illness. Older adults expect there will be some deterioration in their health and are able to adapt to it. Similarly, in conjunction with their physical health, most older adults identify positive mental health as well.

Parkinson's disease *is characterized by motor tremors, loss of balance, poor coordination, rigidity, and difficulty moving* (Garrett, 2015). Parkinson's affects approximately 1% of those over the age of 60, and it appears more frequently in family members in a little less than 10% of cases. Twenty-eight chromosomal areas have been implicated in Parkinson's disease, but

environmental factors have also been identified and include brain injury. Being knocked unconscious once increases the risk by 32% and being knocked out several times increases the risk by 174% (Garrett, 2015). Other environmental influences include toxins, industrial chemicals, carbon monoxide, herbicides, and pesticides (Olanow & Tatton, 1999). The symptoms are due to the deterioration of the substantia nigra, an area in the midbrain whose neurons send dopamine-releasing axons to the basal ganglia which affects motor activity. Treatment typically includes the medication levodopa (L-dopa), which crosses the blood-brain barrier and is converted into dopamine in the brain. Deep brain stimulation, which involves inserting an electrode into the brain that provides electrical stimulation, has also resulted in improved motor functioning (Garrett, 2015).

Sleep

Similar to other adults, older adults need between 7 to 9 hours of sleep per night, *but they tend to go to sleep earlier and get up earlier than those younger. This pattern is called **advanced sleep phase syndrome*** and is based on changes in circadian rhythms (National Sleep Foundation, 2009). There are sleep problems in older adults, and insomnia is the most common problem in those 60 and older (NIA, 2016). People with **insomnia** *have trouble falling asleep and staying asleep*. There are many reasons why older people may have insomnia, including certain medications, being in pain, having a medical or psychiatric condition, and even worrying before bedtime about not being able to sleep. Using over the counter sleep aids or medication may only work when used for a short time. Consequently, sleep problems should be discussed with a health care professional.

Sleep disorders are also common in older adults, including sleep apnea, restless legs syndrome, periodic limb movement disorder, and rapid eye movement sleep behavior disorder (NIA, 2016). **Sleep apnea** *refers to repeated short pauses in breathing while an individual sleeps, and can lead to reduced oxygen in the blood*. Snoring is a common symptom of sleep apnea and it often worsens with age. Untreated sleep apnea can lead to impaired daytime functioning, high blood pressure, headaches, stroke, and memory loss. **Restless legs syndrome** *feels like there is tingling, crawling, or pins and needles in one or both legs, and this feeling is worse at night*. **Periodic limb movement disorder** *causes people to jerk and kick their legs every 20 to 40 seconds during sleep*. **Rapid eye movement sleep behavior disorder** *occurs when one's muscles can move during REM sleep and sleep is disrupted*.

According to the National Sleep Foundation (2009), there are many medical conditions that affect sleep. These include gastroesophageal reflux disease, diabetes mellitus, renal failure, respiratory diseases such as asthma, and immune disorders. Diseases such as Parkinson's disease and multiple sclerosis also commonly cause problems sleeping. Lastly, Alzheimer's disease can interfere with sleeping patterns. Individuals may wake up many times during the night, wander when up, and yell which can alter the amount of time they sleep. Both minor and major sleep problems in older adults can lead to increased risk of accidents, falls, chronic fatigue, decreased quality of life, cognitive decline, reduced immune function, and depression (Buman, 2013).



Figure 10.14. Exercise improves sleep

Because of sleep problems experienced by those in late adulthood, research has looked into whether exercise can improve their quality of sleep. Results show that 150 minutes per week of exercise can improve sleep quality (Buman, 2013). This amount of exercise is also recommended to improve other health areas including lowering the risk for heart disease, diabetes, and some cancers. Aerobic activity, weight training, and balance programs are all recommended. High intensity activity is not necessary to see improvements. For those who live in assisted living facilities even light exercise, such as stretching and short walks, can improve sleep. Overall, the effects of exercise on sleep may actually be even larger for older adults since their sleep quality may not be ideal to start.

Sexuality

According to Kane (2008), older men and women are often viewed as genderless and asexual. There is a stereotype that elderly individuals no longer engage in sexual activity and when they do, they are perceived to have committed some kind of offense. These ageist myths can become internalized, and older people have a more difficult time accepting their sexuality (Gosney, 2011). Additionally, some older women indicate that they no longer worry about sexual concerns anymore once they are past the child bearing years.

In reality, many older couples find greater satisfaction in their sex life than they did when they were younger. They have fewer distractions, more time and privacy, no worries about getting pregnant, and greater intimacy with a lifelong partner (NIA, 2013). Results from the National

Social Life Health, and Aging Project indicated that 72% of men and 45.5% of women aged 52 to 72 reported being sexually active (Karraker, DeLamater, & Schwarz, 2011). Additionally, the National Survey of Sexual Health data indicated that 20%-30% of individuals remain sexually active well into their 80s (Schick et al., 2010). However, there are issues that occur in older adults that can adversely affect their enjoyment of healthy sexual relationships.

Causes of Sexual Problems. According to the National Institute on Aging (2013), chronic illnesses including arthritis (joint pain), diabetes (erectile dysfunction), heart disease (difficulty achieving orgasm for both sexes), stroke (paralysis), and dementia (inappropriate sexual behavior) can all adversely affect sexual functioning. Hormonal changes, physical disabilities, surgeries, and medicines can also affect a senior's ability to participate in and enjoy sex. How one feels about sex can also affect performance. For example, a woman who is unhappy about her appearance as she ages may think her partner will no longer find her attractive. A focus on youthful physical beauty for women may get in the way of her enjoyment of sex. Likewise, most men have a problem with erectile dysfunction (ED) once in a while, and some may fear that ED will become a more common problem as they age. If there is a decline in sexual activity for a heterosexual couple, it is typically due to a decline in the male's physical health (Erber & Szuchman, 2015).

Overall, the best way to experience a healthy sex life in later life is to keep sexually active while aging. However, the lack of an available partner can affect heterosexual women's participation in a sexual relationship. Beginning at age 40, there are more women than men in the population, and the ratio becomes 2 to 1 by age 85 (Karraker et al., 2011). Because older men tend to pair with younger women when they become widowed or divorced, this also decreases the pool of available men for older women (Erber & Szuchman, 2015). In fact, a change in marital status does not result in a decline in the sexual behavior of men aged 57 to 85 years-old, but it does result in a decline for similar aged women (Karraker et al., 2011).

Concluding Thoughts. Key players in improving the quality of life among older adults are those adults themselves. By exercising, stopping smoking, limiting use of alcohol, and consuming more fruits and vegetables, older adults can expect to live longer and more active lives (He et al., 2005). Stress reduction, both in late adulthood and earlier in life, is also crucial. The reduction of societal stressors can promote active life expectancy, and might even reduce the racial disparities in average life expectancy that are so clearly marked at the current time. In the last 40 years, smoking rates have decreased, but obesity has increased, and physical activity has only modestly increased.