

Aging With a Spinal Cord Injury

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<https://msktc.org/sci/factsheets>

SCI Factsheet

This factsheet describes some of the changes you may experience as you get older. It lists ways to care for your health as you age with a spinal cord injury.

Keys to Successful Aging

People with spinal cord injuries (SCIs) are living longer. As a result, they may need to find ways to promote and maintain their health throughout their lives. For people with an SCI, *successful aging* involves taking care of physical, emotional, and social health; maintaining as much independence as possible; and being open to changing how to do things when old strategies don't work. People who engage in self-care and in their community, maintain a healthy lifestyle, have a positive outlook, and visit their doctors or SCI specialists regularly are more likely to age successfully.

To help you age successfully with SCI, take the following steps:

- Schedule regular health check-ups with your doctor.
- Learn how to spot important changes to your health, fitness level, and well-being.
- Use assistive devices when you need them to help with everyday tasks. The best assistive device for you may change over time, so it is OK to change how you do things. For example, you may need to switch to a power wheelchair or use a special bed, cushion, or braces.
- Try to keep your level of independence, but get help when you need it. For example, make decisions and manage issues related to your health and care. This may include hiring, training, and replacing helpers.
- Accessible housing becomes more necessary as you age. If necessary, and when you can, find housing that is more accessible.
- Find new resources that support you in your efforts to age successfully. Your health care and community networks can keep you informed and help you be proactive about getting new resources.
- Create and follow a self-care routine. Eat healthy and exercise. This will reduce the chance for new or worsening health problems.
- Find and pursue activities that bring joy and meaning to your life.
- Keep your mind active. Explore new interests and learn new things.
- Stay connected to the people in your family, community, and social groups.



The Model Systems Knowledge Translation Center works with Spinal Cord Injury Model System centers to provide free research-based rehabilitation resources for people living with spinal cord injury (See <https://msktc.org/sci> for more information).

Both research and people living with SCI have found that having a network of friends or people with shared interests is important for healthy aging. It may also improve your quality of life and help you maintain your independence. Social networks can help you have a positive outlook. For example, they may help you

- Create and strengthen your connection with others



- Take part in regular physical activity
- Take part in activities and hobbies that you enjoy
- Keep your mind active and learn new things
- Have different or more pleasant experiences than you might have alone



Why Is Aging an Important Issue for People With SCI?

The human body changes with age. Activities that were once easy when you were young may become harder. As you age, you may have health problems that you didn't have before, such as "chronic" health problems. Chronic health problems are those that last for six months or more, need ongoing medical care, and may limit your ability to independently do activities of daily living. Some chronic conditions that people with SCI may develop are common with aging, such as arthritis. Other conditions that may develop are related to the SCI itself, such as spasticity and pressure injuries (sores or wounds); these are known as "secondary health conditions."

New health problems may:

- Happen more often as you age.
- Stem from complications from SCI or its treatment.
- Stem from over-, under-, or misusing a body system. For example, you may have shoulder pain from using a manual wheelchair or from your transfer technique.
- Stem from lifestyle behaviors or factors in your environment. For example, you may have limited transportation options or few chances to take part in healthy recreational activities.

We have learned a lot about aging with SCI from research in the last 20 years:

- Aging is more likely to affect certain systems of the body. These include the musculoskeletal (muscles and bones), endocrine (glands), and cardiovascular (heart and blood vessel) systems. Changes in these systems may occur earlier in the aging process for those with SCI compared with those without SCI.
- People with SCI are more likely than the general population to have chronic pain, bone density loss, pressure injuries, and kidney and bladder stones.

The following may affect your health as you age with SCI:

- The level and severity of your SCI.
- Your age at injury.
- Your genetics and family health history.
- Lifestyle behaviors. These include your activity level, smoking or alcohol use, and diet.
- Your use of community services and social supports.
- The presence of other conditions that may affect your overall health.



A new symptom or a change in a condition may be a part of "normal" aging. But it could also be a sign of a problem. Talking to your doctor about your symptoms can help you figure out if the symptom or change is a sign of a problem. The table that follows lists some common body changes that come with normal aging and aging with an SCI. It also includes ideas to reduce secondary health conditions and help you age well.



Body system	Issues you may experience	What can you do?
Muscles and bones	<ul style="list-style-type: none"> • Less flexibility, muscle endurance and strength, and bone strength. • Higher risk for broken bones, chronic pain, stiff joints, and changes in the spinal column (such as scoliosis, a sideways curving of the spine). • More difficulty doing daily activities such as transfers. • Injury or arthritis in the shoulders, arms, and hands for people who propel wheelchairs or bear weight using their arms. 	<ul style="list-style-type: none"> • Limit repetitive movements and movements that cause pain. • Exercise (such as lifting weights) to maintain arm strength and endurance.¹ • Use equipment to reduce pain and stress on joints. This may include using a lift or sliding board or a power assist add-on for manual wheelchairs. • Maintain healthy postures and positions. • Maintain a healthy weight and stretch. • Follow transfer guidelines for correct techniques.² Limit your number of transfers each day. • If possible, strengthen the bones of your legs (e.g., by using a standing frame).
Skin	<ul style="list-style-type: none"> • Less flexibility, less feeling, and a thinner outer layer. Pressure injuries may be more likely, even if you did not have them before. • Wounds take longer to heal. 	<ul style="list-style-type: none"> • Check skin for pressure injuries.³ • Relieve the pressure on your skin with regular position changes.⁴ Take steps to avoid skin injury. • Look for changes in your skin and in moles. • Use sunscreen and drink plenty of liquids. • Check your equipment often for breakdown or wear and tear; this could cause extra pressure on the skin.
Immune system	<ul style="list-style-type: none"> • Less ability to fight infections, less benefit from vaccines, and a higher risk of autoimmune diseases. • Increased risk for infection and increased risk for resistance to antibiotics and other medicines. 	<ul style="list-style-type: none"> • Use clean, sterile materials during bladder management programs. • Get recommended vaccines to boost your immune system.⁵ • Eat a healthy diet and drink plenty of liquids. • Get enough sleep, exercise regularly, and reduce your stress.
Lungs	<ul style="list-style-type: none"> • Weak lung muscles due to chest or abdominal weakness, less physical activity, and a higher chance of infection and blood clots. 	<ul style="list-style-type: none"> • Visit your doctor regularly to test your lung function. • Don't smoke or vape. • Get routine vaccines, maintain a healthy weight, and exercise regularly (including breathing-specific exercises).
Kidneys and bladder	<ul style="list-style-type: none"> • Decreased kidney and bladder function. • Higher chance of bladder infections, kidney damage from holding in urine, and risk of stones in the kidneys and bladder. • Urethral damage or limitation from prolonged use of catheters. 	<ul style="list-style-type: none"> • Drink plenty of water and monitor any changes in your kidneys or bladder. • Get regular check-ups of your kidneys and bladder. • Talk to your doctor about other bladder emptying methods and preserving kidney function, if needed.
Gastrointestinal (digestive) system	<ul style="list-style-type: none"> • Decrease in bowel contractions, trouble digesting some foods, and less ability to absorb vitamins and minerals. • Constipation or incontinence, the need for bowel medicines, hemorrhoids, and gallbladder disease. 	<ul style="list-style-type: none"> • Maintain a regular bowel program. Consider other options if your bowel is or becomes hard to manage. • Eat a healthy diet with enough fiber. Drink plenty of liquids.
Spinal cord and nerves	<ul style="list-style-type: none"> • Slower reaction times and decreased strength, coordination, and reflexes. 	<ul style="list-style-type: none"> • Refer to transfer guidelines to make sure you are using the correct technique.² Reduce the number of transfers each day.



Body system	Issues you may experience	What can you do?
	<ul style="list-style-type: none"> Over- or misuse of muscles and bones leading to nerve damage (e.g., carpal tunnel syndrome). Changes in the spinal cord itself (such as a cyst) that may lead to sensory or strength changes. 	<ul style="list-style-type: none"> Modify your home and work environments to reduce stress on the arms. Use sliding boards. Watch for changes in feeling and strength and talk to a doctor as needed. Surgery may help release trapped nerves.
Heart and blood vessels	<ul style="list-style-type: none"> Higher chances of heart disease, high blood pressure, high cholesterol, and glucose intolerance. Obesity, decrease in “good” cholesterol (or high-density lipoprotein [HDL]), and fewer benefits from aerobic exercise. 	<ul style="list-style-type: none"> Schedule regular check-ups to monitor cholesterol, glucose, weight, and blood pressure. Eat healthy foods and stay active. If necessary, talk to a nutritionist with experience in designing programs for people with SCI.
Mental abilities and emotions	<ul style="list-style-type: none"> Gradual declines in memory and processing speed are typical. Significant changes in memory are not a normal part of aging. Most older adults, with and without SCI, are resilient. But changes in social networks and relationships, physical abilities, and independence may lead to increased depression and anxiety. Feeling a bit blue or stressed sometimes is not unusual. But depression or anxiety that interferes with your ability to function each day for more than 2 weeks is not a normal part of aging. 	<ul style="list-style-type: none"> Talk with your doctor or a counselor if you worry often, lose interest or pleasure in things that you have enjoyed, or feel blue. To keep a positive outlook: <ul style="list-style-type: none"> Connect with others. Practice good self-care. Engage in regular physical activity, eat well, get enough sleep, and practice stress management. Take part in activities you enjoy that give you meaning. Keep your mind active. Learn something new or take part in activities that stimulate your mind. Reflect on the good things about getting older and use your experiences and knowledge to help others. Seek out volunteer opportunities. Use services and supports provided by community-based organizations. These include independent living centers, aging and disability resource centers, and faith-based organizations.

For more information on how to age well with an SCI, refer to the other SCI factsheets from the Model Systems Knowledge Translation Center (<https://msktc.org/sci/factsheets>).

Health Maintenance and Aging With SCI

The following table lists recommendations for general health maintenance and health maintenance with SCI. These recommendations may vary by age, ethnicity, family history, and other factors.

General health maintenance	Health maintenance with SCI
<p>Things to do every month:</p> <ul style="list-style-type: none"> Maintain a healthy weight. Check weight and blood pressure. 	<p>Things to do every day:</p> <ul style="list-style-type: none"> Check skin for pressure injuries.³ Take part in regular physical activity to maintain your strength, cardiovascular fitness, and flexibility. Engage in regular social and mentally stimulating activities. Eat healthily and drink responsibly. Monitor your bladder and bowel function.



General health maintenance

Things to do every 1–2 years:

- Get an annual physical check-up with your doctor.
- Women: Get a mammogram starting at age 40.⁶
- Men: Get a digital rectal exam starting at age 50.
- Get a comprehensive eye exam.
- Get mental health screening with your primary care provider at your annual visit.
- Get lipid panel testing.

Things to do every 2–3 years:

- Get blood tests as recommended by your doctor.
- Women: Get a well woman exam and a Pap test.

Things to do every 5 years:

- Get regular screening for colorectal cancer, beginning at age 45.⁷

Things to do every 10 years:

- Get a tetanus booster.

Things to do one time

- Get a complete vaccine series for pneumococcal disease.
- Age 50 and older: Get the complete shingles vaccine series.

Health maintenance with SCI

Things to do every 1–2 years:

- Review changes in your memory, problem-solving, and processing speed that affect your ability to function each day.
- Get a flu shot each year, especially if you have an SCI at level T8 or higher.
- Get annual vaccines, as recommended by the Centers for Disease Control and Prevention.⁵
- Get renal testing and imaging to see how well your bladder and urethra are performing their job of storing and releasing urine.
- Talk to your doctor about your bladder and bowel management program to identify changes that may be clinically important.

Things to do with your SCI specialist or team each year during the first 3–5 years after injury:

- Get a full history and physical check-up with doctor.
- Assess your adaptive equipment and posture.
- Assess your range of motion, contractures, and function.
- Get a full skin check.
- Get a bladder and urethra exam. Do this each year for the first 3 years after any major change in bladder management.
- Review changes in your life situation, including coping, adjustment, and life satisfaction.

Things to do at least every 5 years with your SCI specialist or team:

- Get motor and sensory testing.
- Assess lung function. This includes how much air you can exhale during a forced breath at 1 second and the total amount of air you can exhale during a lung capacity test.
- Talk to a health care provider about any changes in memory, problem-solving, and processing speed that affect daily functioning.

Things to do every 10 years:

- No additional SCI-specific recommendations.

Things to do one time

- No additional SCI-specific recommendations.

Summary

- As you age with SCI, activities that were once easy may become harder and you may have health problems that you didn't have before.
- Successful aging with SCI involves being proactive (taking time to care for your physical, emotional, and social health).



- Successful aging also involves being flexible (being open to changing how you do things when old strategies don't work well).
- You are more likely to age well if you have a positive outlook, engage in self-care and in your community, maintain a healthy lifestyle, and visit your doctors or SCI specialists regularly.

References

1. Exercise after Spinal Cord Injury | MSKTC. Accessed May 16, 2023. <https://msktc.org/sci/factsheets/exercise-after-spinal-cord-injury>
2. Safe Transfer Technique | MSKTC. Accessed May 16, 2023. <https://msktc.org/sci/factsheets/safe-transfer-technique>
3. Skincare and Pressure Sores in Spinal Cord Injury | MSKTC. Accessed May 16, 2023. <https://msktc.org/sci/factsheets/skincare-and-pressure-sores-spinal-cord-injury>
4. How to Do Pressure Reliefs (Weight Shifts) | MSKTC. Accessed May 16, 2023. <https://msktc.org/sci/factsheets/how-do-pressure-reliefs-weight-shifts>
5. Recommended Vaccines for Adults | CDC. Published May 12, 2023. Accessed May 16, 2023. <https://www.cdc.gov/vaccines/adults/rec-vac/index.html>
6. ACS Breast Cancer Screening Guidelines. Accessed May 16, 2023. <https://www.cancer.org/cancer/types/breast-cancer/screening-tests-and-early-detection/american-cancer-society-recommendations-for-the-early-detection-of-breast-cancer.html>
7. Colorectal Cancer Guideline | How Often to Have Screening Tests. Accessed May 16, 2023. <https://www.cancer.org/cancer/types/colon-rectal-cancer/detection-diagnosis-staging/acs-recommendations.html>



Authorship

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