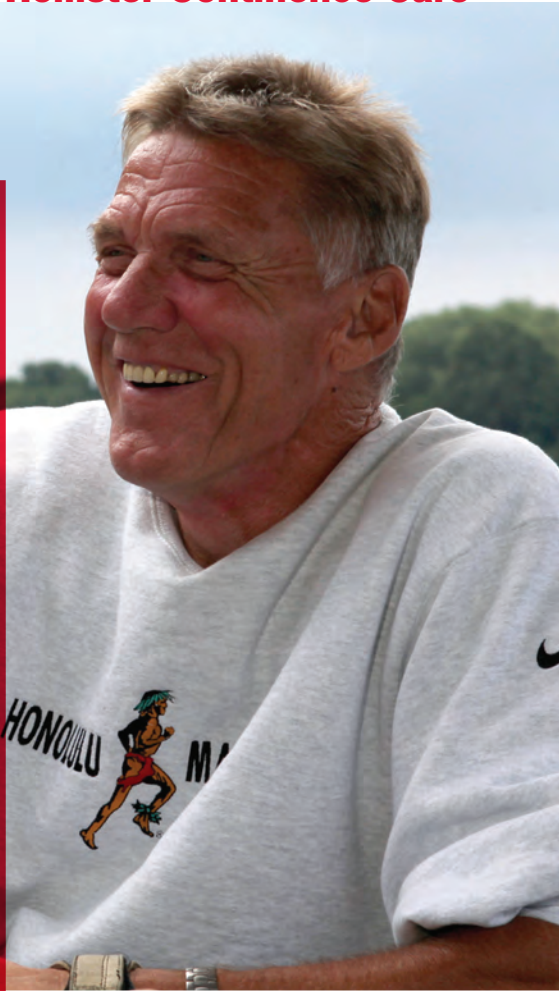


Living with Spinal Cord Injury

A Guide for the Newly Injured



Hollister Continance Care



People First.

Hollister Continance Care is committed to **people** and to helping empower their lives. Our products and services are testimony—**first** and foremost—to the assurance that quality of life needn't be compromised by managing one's continence.

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The most common causes of spinal cord injury:

Motor vehicle accidents

Falls

Acts of violence

Recreational sporting activities

If you have a new spinal cord injury, or you are close to someone who does, you may have many questions and concerns. You might be wondering how this injury will change your life and how you can begin to adjust to these changes.

It's important to know you are NOT alone. Each year in the United States there are between 12,000 and 15,000 people who sustain spinal cord injuries. The number of people living with spinal cord injury in the United States is thought to be approximately 250,000.

This book is designed to help answer some common questions, as well as provide insight and encouragement from people who have experienced spinal cord injury. The message is one of understanding and hope. When you are ready to learn more, please read on.

This book is possible because many people took time to share their stories and provide insight about adapting to life with a spinal cord injury. We appreciate their contributions, candor, and expertise.

Christina, from Germany. She is a paraplegic injured at age 25.

Curtis, from the United States. He's a paraplegic because of a tumor on his spine.

Hans, from Germany. He is a paraplegic because of a tumor on his spine.

Heinrich, from Germany. He is a tetraplegic injured in an automobile accident.

Joan, a nurse practitioner in the United States who works with spinal cord injured patients.

Jonathan, from the United States. He is a paraplegic injured in an accident at age 19.

Kathleen, from the United States. She heads the spina bifida clinic at University of South Florida Medical School.

Kenny, from United Kingdom. He is a paraplegic, injured in a motorcycle accident.

Letitia, from the United States. She is a paraplegic injured in a car accident.

Lynne, from the United Kingdom. She is a paraplegic injured in a horseback-riding accident.

Matthias, from Germany. He is a paraplegic injured at age 19.

Ria, from the Netherlands. She has limited mobility because of a tumor on her spine.

Thomas, from Germany. He is a paraplegic injured in an accident at age 23.



The Nervous System and How it Works

In order to understand your injury, it helps to first review the way a healthy nervous system functions. The critical components of the nervous system are the brain, the spinal cord, and the nerves. These parts communicate with each other and work together to help you move your body, feel pressure, and control body functions like breathing, bowels, bladder, and blood pressure. The illustration and information on page 9 show the vertebral column, the bony structure that surrounds and protects your spinal cord, and the different sections of the spinal cord.



Ria Bakker, the Netherlands

Ria is quintessentially Dutch. Reserved, direct, progressive, family-centric. “Strange things happen when you are disabled,” she says. “You lose friends, people choose not to understand, people stare or pretend not to notice. But with that comes new friendships, a better job, and well, when people stare, I stare back.” She laughs.

Paraplegia

Paralysis affecting the legs and lower part of the body. Usually occurs as a result of injuries at T2 or below.

Tetraplegia

Paralysis affecting levels below the neck involving both the arms and legs. Usually occurs as a result of injuries at T1 or above.

The spinal cord is the largest nerve in the body. It is about 18 inches, and extends from the base of the brain down the middle of the back to the waist. Nerves are cord-like structures made up of nerve fibers. Nerve fibers are responsible for the communication of impulses to muscles and organs throughout the body.



Curtis Cole, USA

Grace. Curtis' life is predicated on this principle. The once restless itinerant young man has evolved into a calm inquisitive journeyer, in mind, body and spirit. And his disability? "We are all deficient or disabled in some way," he says. "Some disabilities are visible, like mine. Others are not." He smiles, and it is the smile of grace.

When the spinal cord is injured, the nervous system can't communicate properly. The nerves above the injury work fine, but the ones at and below the injury can't receive or send messages properly. Sometimes all the messages stop, so there is no movement or sensation (feeling) below the level of the injury.

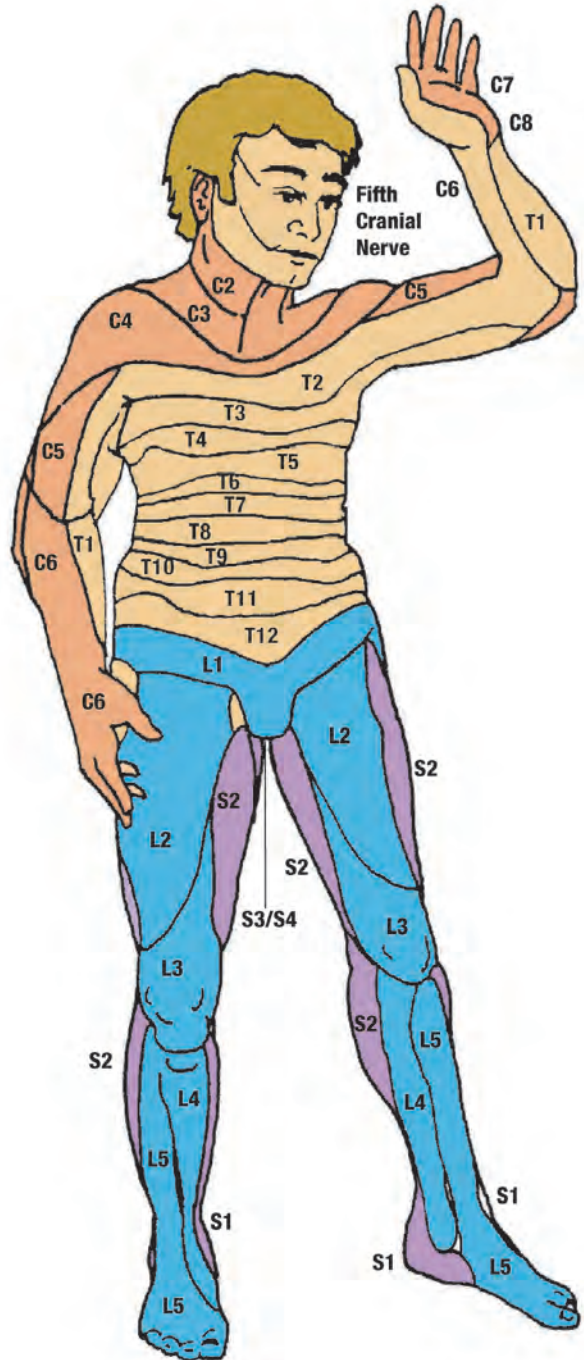
A complete injury means there is no sensory or motor function preserved in S4-S5 (see pages 8-9). If the injury is incomplete, some sensory and/or motor function is still present in or through S4-S5 (see pages 8-9). Your healthcare provider will do physical examinations to find out whether your injury is complete or incomplete. You will be tested several times in both inpatient and outpatient settings because the completeness of your injury may change over time.

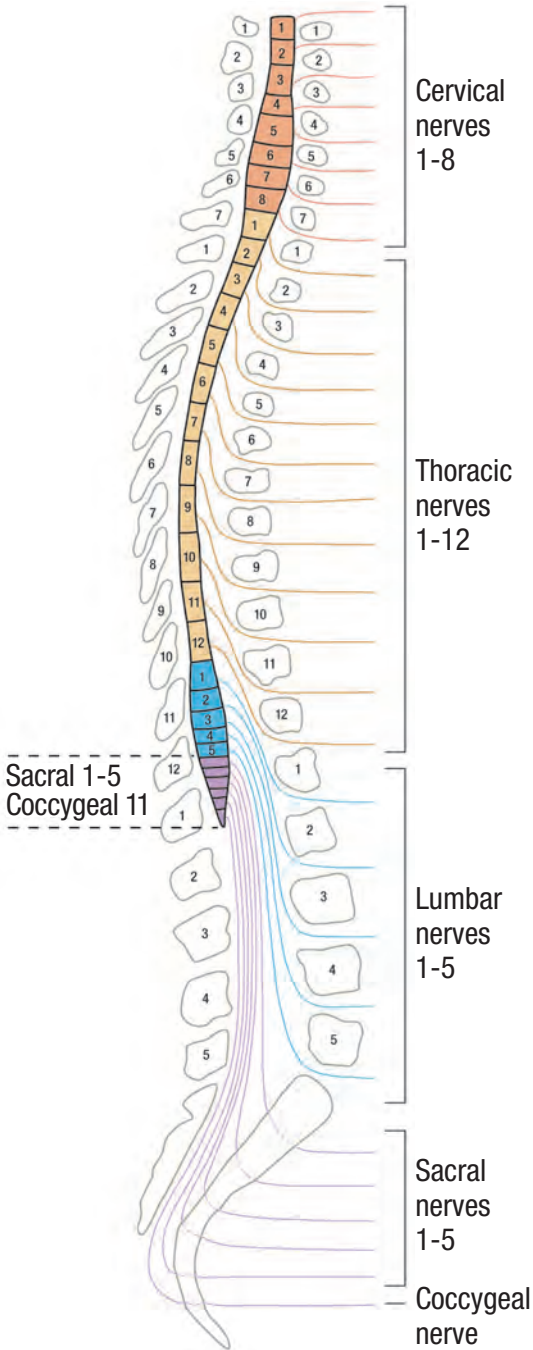
As the body grows, the vertebral column grows more in length than the spinal column.

Because of this, there is often a discrepancy between the skeletal level of vertebral fracture and the neurologic level of spinal cord injury. The neurological level of injury refers to the lowest level of the spinal cord that still has normal sensory and motor function after injury. See page 9 for a list of the effects of injury at each level of the spine.

The Nervous System and How it Works *(Cont'd)*

Spinal Cord Segments and Corresponding Functions (adapted from Hanak, M. (1993). *Spinal Cord Injury: An Illustrated Guide for Health Care Professionals* (2nd ed., p.91). Springer Publishing Company, Inc., New York 10036. Used by permission.





Spinal Segment	Affect on Function
C1-3	Limited head control
C4	Breathing and shoulder shrug
C5	Lift arm with shoulder, elbow flex
C6	Elbow flex and wrist extension
C7	Elbow extension and finger extension
C8	Finger flexion
T1	Finger movement (spread and pull together)
T2-T12	Deep breaths, deep breathing
T6-L1	Deep exhale of breath, stability while sitting
L1-L2	Hip flexion
L2-L3	Hip movement toward middle of body
L3-L4	Knee extension
L4-L5	Ankle extension
L5	Extension of big toe
S1	Movement of foot and ankle
S1-S2	Toe movement
S2-S5	Function of bladder and bowel

Your Rehabilitation

In the Hospital

The first days following a spinal cord injury are filled with physical examinations and diagnostic tests. Medications may be given to reduce the inflammation of the spinal cord, and to prevent blood clots. Care in an intensive care unit for a period of time is not unusual. The X-rays and scans help the doctors determine the level of injury and whether damage was sustained to any other part of the body, or if the vertebral column is fractured or compressing the spinal cord; surgery may be required to stabilize it, or a brace may be necessary.

Lynne, UK

“My therapists went to my home before I left rehabilitation. They made suggestions for small changes, such as a ramp instead of a front step, and a hand rail next to the toilet and the bathtub.”

The higher and more extensive the injury, the more equipment and assistive devices will be needed for daily living. The injury level will also dictate whether a power or manual wheelchair is needed. Help with daily living activities (bowel and bladder care, positioning, transfers, dressing, and bathing) may also be necessary.

A team of healthcare providers will be involved during hospitalization and rehabilitation to maximize learning how to manage a spinal cord injury.



Hans Pieter Thomas,
Germany

Hans Pieter has had his share of loss and hardship, but he would never use such terms to describe his life. Ask him and he will tell you that he is blessed; he admits he has not always been inclined to see things that way. “The greatest lessons hit us hard. Not everyone is able to rebound,” he says. “It’s difficult to ask for help, sometimes even to know you need help, rougher still to accept help when it’s offered.”

Exercise

Exercise is essential for good cardiovascular health. Exercise will help you maintain your physical strength and help make daily living activities easier. Exercise provides other benefits as well, including increased flexibility, improved muscle tone, increased stamina and energy, and stress management.

Initially, your exercise program will be designed to increase your strength so you can accomplish a number of new activities like pushing a wheelchair, transferring your body, and moving in bed. Learning the proper technique to perform these activities is important to help maintain your safety. You will have a program tailored to your specific needs.

Many of the people who have spinal cord injuries continue to enjoy athletics and team sports. If you enjoyed participating in sports or exercise before your injury, you may wish to continue.



Here are some management options for spasms:

- Identify and eliminate the possible cause such as a pressure ulcer or a bladder infection
- Stretch and work out your muscles, exercise and apply pressure to the limb when it spasms, if appropriate
- Medications
- Nerve blocks
- Surgery and interventions such as spinal stimulators or infusion pumps

If spasms occur, be sure to discuss the available treatments with your healthcare team.

Dealing with Spasticity

Spasticity is a sudden involuntary contraction of muscles. Many people with spinal cord injuries or certain diseases (such as Multiple Sclerosis) have problems with uncontrolled spasms of their arms or legs. A certain amount of spasms can be good because they help to maintain muscle tone and to increase blood circulation to the legs. However, too many spasms can be painful and make daily living activities difficult for you and your caregiver.

Pain

Following your injury it is normal to experience pain. Two common types of pain are neuropathic and musculoskeletal. Neuropathic pain is often described as burning, pins and needles, electric or cold sensation, and it is felt at or below the level of your injury. Musculoskeletal pain is often in the back, shoulders or wrists, and is usually the result of physical stress and exertion from lifting, moving, and exercising. While often normal, pain symptoms may be an indicator of an injury or infection. If you are experiencing pain you should consult with your healthcare professional for diagnosis and treatment.

Pressure Ulcers

After a spinal cord injury, you are at risk for developing pressure ulcers. A pressure ulcer is any wound due to unrelieved pressure in a particular area. A pressure ulcer results in damage to underlying tissue. Other names for pressure ulcers are bedsores and decubitus ulcers.

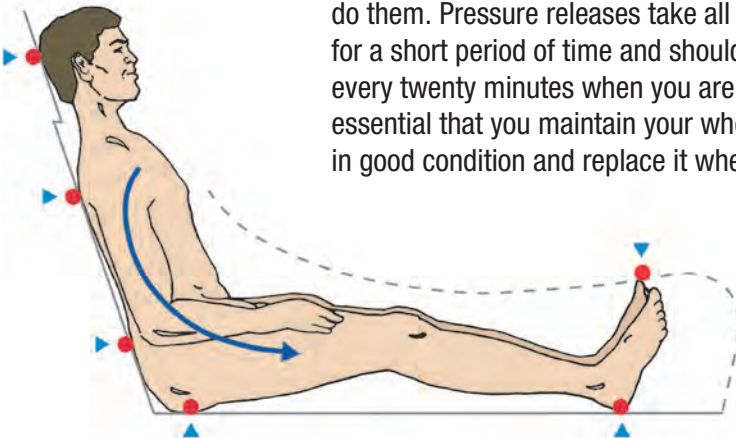
Following spinal cord injury, you are supporting your weight differently than you did before and you may not feel the need to shift your weight due to decreased sensation. This change puts your skin and the underlying tissue at risk for injury. Dragging your body across a flat or inclined surface, or allowing your skin to be wet for prolonged periods of time can also increase the risk of pressure ulcers.

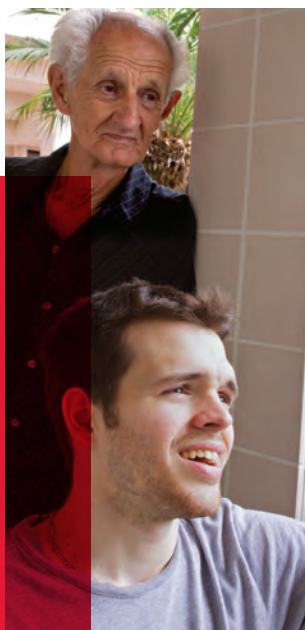
One of the first signs of a problem may be a red spot, an area of hardness, or discoloration on an area of your skin that supports your body weight.

Check your pressure points at least twice a day, or have someone else do this for you.

Your healthcare team will help you obtain a wheelchair cushion and other equipment which can help reduce your risk. You will also learn how to do pressure releases, or have someone else help you do them. Pressure releases take all the pressure off for a short period of time and should be done at least every twenty minutes when you are in your chair. It is essential that you maintain your wheelchair cushion in good condition and replace it when necessary.

Common Pressure Points





Pressure Ulcer Prevention Tips

- Do pressure releases every 15 to 20 minutes
- Check your skin twice a day using a mirror
- Change your position in bed and in the chair frequently
- Learn transfer techniques to avoid dragging your skin across surfaces
- Be careful to avoid bumping and scraping
- Keep your skin conditioned and clean, and do not expose your skin to urine and stool
- Avoid prolonged sitting on wet clothes or moist surfaces
- Eat a nutritious diet and drink adequate fluids
- Properly maintain and check your cushions
- Maintain a healthy weight; avoid becoming overweight
- Wear shoes that are one size larger than you wore prior to your injury. This will help prevent blisters and pressure on your feet and toes
- Don't massage reddened areas. Do not use heat lamps or try to dry out pressure ulcers

If you develop a pressure ulcer, or think you might be getting one, contact your healthcare provider and stay off of the area. Pressure ulcers are treated differently than other types of injuries or skin problems. An examination will help determine how much damage there is, and whether infection is present. You may need to restrict your activity and use special bandages that will help protect the area while it heals. In severe cases, surgery, hospitalization, medications, and skin grafts may be needed.

Burn Prevention

Because there are now areas of your body without sensation, you need to be aware of how your body is positioned, and carefully watch what it comes into contact with. Many people with spinal cord injuries have burned themselves severely on hot grills, heating pads, spilled coffee, dropped cigarettes, and in the tub or shower, because they did not feel the temperature against their skin. Even the floor board of a car or the cement around a pool can become very hot, causing severe burns to your feet or legs without you noticing. Check your skin often and be aware of hot or extremely cold surfaces. Extremes in temperature can produce deep skin damage that can take months to heal and puts you at risk for severe infection.

Bowel Care

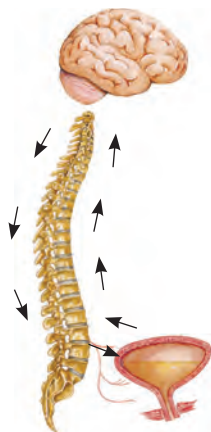
After spinal cord injury, your bowels may function differently. During rehabilitation you will learn a bowel program which will involve proper diet, exercise, medication, and regularly scheduled bowel care. The goal of the program is to maintain health by having regular bowel movements and avoid having bowel accidents.

If you are experiencing bowel difficulties consult your healthcare professional as you may need to change the routine you are following.

- Think about your bowel program.
- Follow your bowel routine every day.
- Eat a balanced diet that includes fruit and vegetables, and drink plenty of fluids each day. This helps prevent constipation.
- Take medications as directed.
- Completely empty your bowels before leaving the toilet.

Your Rehabilitation *(Cont'd)*

The process of urination requires undisturbed communication between the bladder and the brain.



Bladder Care

Spinal cord injury can cause changes in the way your bladder works. Your bladder may empty too frequently, not frequently enough, or in an uncoordinated way. Your urinary sphincters may also work incorrectly. The way your bladder and sphincters behave depends on the location and extent of your injury.

A neurogenic bladder typically does not empty by itself.

The type of treatments most often used for neurogenic bladder problems include intermittent catheterization, male external catheters, and medications.

Urinary Tract Infections

If you have a neurogenic bladder disorder you may have occasional or frequent urinary tract infections (UTIs). These occur when there is an increased amount of bacteria (or other microorganisms) in the tissues of the bladder, urethra, or kidneys. It is important to contact your healthcare provider at the first sign of a urinary tract infection. Not everyone develops these symptoms. If you are not feeling well or you suspect you have an infection, contact your healthcare provider. Your urine will be tested and medications will be prescribed if an infection is present. Be sure to take all the antibiotic prescribed, and to contact your healthcare provider if your symptoms return. If you experience frequent urinary tract infections, your healthcare provider may recommend additional tests or treatments.

You may experience these signs if you have a urinary tract infection:

- More frequent urination or need to catheterize more than normal
- Leakage of urine between normal voiding or catheterization
- Increased muscle spasms
- Fever
- Back pain
- Milky, cloudy, or darkly colored urine
- Foul smelling urine

Catheters

A catheter is a small hollow tube which is inserted into the bladder to drain urine when the bladder can't empty on its own. If the catheter is intended to stay in the bladder for hours, days, or longer, it is called an indwelling catheter. If the catheter is inserted to drain the bladder, and then removed, it is called an intermittent catheter.



There are two main techniques of intermittent catheterization

- Clean technique
- Sterile technique

Your healthcare professional will help you choose the most appropriate method for you. It's important, regardless of the technique you use, to be fully trained by a healthcare professional.

Intermittent Catheterization

Intermittent catheterization may reduce the risk of kidney damage and urinary tract infections in a bladder that does not empty properly. People who use intermittent catheterization as a method of emptying their bladder are taught by a professional and may need to catheterize four to six times each day. Supplies may be carried discreetly in a pocket or bag. To learn the procedure, you must learn where the catheter is inserted and how to use the product. You must also be able to reach your urethra (at the tip of the penis for men and in front of the vagina for women) and manipulate the catheter. You can drain the urine through the catheter and into the toilet or receptacle such as a urinal, or drain the urine into a disposable bag. Women can't always see their urethra and may learn to do the procedure by touch or by using a mirror. People of all ages can learn intermittent catheterization. The procedure can also be performed by a trained caregiver or family member if you are unable to perform the procedure yourself.

Your Rehabilitation *(Cont'd)*



Intermittent catheterization can be done using two main methods. Your healthcare professional will help you choose the most appropriate method for you.

Clean Technique

Clean Technique may involve touching the catheter. Hand washing before use is extremely important. A gel is typically applied to the catheter to lubricate it, and urine is emptied directly into a toilet, urinal, or other collection device. These catheters are packaged sterile and should be disposed of after use.

Sterile Technique

Sterile (or Aseptic) Technique involves a sterilized closed system intermittent catheter, which can include a catheter with a protective tip located inside a collection bag. With this type of intermittent catheterization, the catheter is typically not touched. Prior to catheterization, the genital area is cleaned with antiseptic. The supplies are thrown away after use.

Male External Catheters

Men who have urine leakage from the penis may benefit from the use of a male external catheter. This device is like a condom, applied to the shaft of the penis. The male external catheter is worn discreetly under the clothing and connected to a leg bag or a bedside drainage collector.



Other Types of Catheters

If you are unable to insert and remove a catheter to drain your bladder, you may need to use an indwelling catheter. This type of catheter is held in the bladder by an inflatable balloon and provides continuous drainage. Complications of indwelling catheters may include urinary tract infections, urethral injury, bladder stones, and/or blood in the urine (hematuria). Long-term indwelling catheters are replaced once a month or as recommended by your healthcare professional.

A suprapubic catheter is an alternative for individuals who have difficulty managing intermittent catheterization, such as those with paralysis of the arms or those for whom a urethral indwelling catheter is not an option. A suprapubic catheter is an indwelling catheter placed directly into the bladder through the skin above the pubic bone.

This catheter must be placed by a urologist during outpatient surgery or an office procedure. With indwelling catheters, a drainage bag is required.

There are two main types of drainage bags. One type is a leg bag that attaches by straps to the leg. A leg bag is usually worn during the day since it fits discreetly under pants or skirts, and is easily emptied into the toilet. The other type of drainage bag is larger. It may be used during the night and is usually hung on the bed.

Returning to Everyday Life

Your rehabilitation will involve learning new skills. You will need equipment, such as a wheelchair, transfer tub bench, or shower chair. You may even need special equipment for bowel and bladder management. A very important part of your recovery involves setting goals to work toward. While each person's goals are different, the overall plan is to move toward resuming your life and getting back as best you can to the routines and activities you enjoyed prior to your injury.

Your Overall Health

It is important to maintain your general health in addition to managing your spinal cord injury. The type of examinations and tests needed vary according to your age, sex, and health history. A complete medical check-up and influenza (flu) vaccine is recommended once a year. Visit your urologist annually. Urodynamic tests (special studies of your bladder) may be recommended.

Other important aspects of maintaining your overall health include maintaining normal body weight, regular exercise, healthy eating, and not smoking. Your risk of heart attack and stroke is the same as people who don't have spinal cord injury.



Heinrich Köberle, Germany

Good fortune arises out of misfortune (provided one is disposed to see things in this way; not everyone is). “We all need luck,” says Heini, whose light blue eyes sparkle like a mountain rivulet in the sun. “It’s very difficult to get along in life without it.”

There are certain medical complications that occur more commonly after spinal cord injury; some are listed below. Learn about these risks, and discuss ways of preventing them with your healthcare provider.

Fractures	Broken Bones
Osteopenia/ Osteoporosis	Chronic bone disease involving low bone mass and deterioration of bone; it can raise your risk of fractures.
Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE)	Blood clots that form in a vein deep in the body can cause leg pain, swelling, and redness. If a clot travels through your bloodstream, it can lodge in your lung. This is called a pulmonary embolism, or PE. A PE is a medical emergency.
Orthostatic Hypotension	Sudden low blood pressure that occurs with position changes. It may cause fainting, profuse sweating, and a rapid heart rate.
Autonomic Dysreflexia (AD)	A risk for people with SCI level T6 and above. This is a medical emergency. Your blood pressure rises significantly, you may get a pounding headache, a slow heart rate, profuse sweating, goose bumps, flushed skin, blurred vision, and anxiety.
Septicemia	An infection that enters the bloodstream. Symptoms can include fever and chills, confusion, nausea and vomiting, increased heart rate, and low blood pressure.
Pneumonia	Infection involving the lungs. This can be caused by bacteria, viruses, or other organisms. Symptoms may include fever, cough, weakness, and shortness of breath.
Bladder and Kidney Stones	A solid piece of material that forms from substances in the urine. A stone can stay in the kidney or travel down in the urinary tract. Stones can block the flow of urine, increase infection risk, and cause pain.

Your Emotions

It is normal to experience a variety of emotions following spinal cord injury. Your adjustment will undoubtedly take time and patience. How quickly you adapt to the changes in your body will vary, and your friends and family members may also adjust at very different rates. Many people experience a period of mourning similar to the death of a loved one. Others have difficulty believing that the injury is permanent, and treat the recovery period as a temporary inconvenience. You may also experience depression and anger. The way you respond to your injury will be highly variable and your emotional adjustment may take a number of months. Some of the ways to help yourself through this time include:



Kathleen Meehan-Ferrar, RN, USA, Spina bifida clinic, University of South Florida Medical School

We never know where life will lead. We make plans, we dream dreams, we aspire, we love. In the end it is the transference of goodness—what we give freely of ourselves to others without expectation of reward—that matters most.

- Confide in a friend, loved one, or healthcare provider about your thoughts and feelings
- Keep a journal of your challenges and successes, and how you feel about your journey
- Speak with other people with spinal cord injuries to share ideas and experiences. Your rehab team can help you meet other individuals in your community
- Set realistic goals and celebrate reaching them
- Avoid using alcohol, drugs, or smoking as a way to reduce stress and anxiety

If you are having trouble adjusting, you should talk to your healthcare professional. Professional psychotherapy can provide the assistance you need to get back to an active, fulfilling lifestyle.



Sexuality and Intimacy

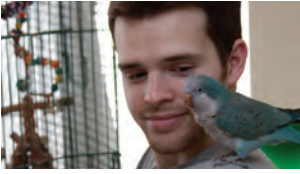
Most people with spinal cord injury are interested in sex, so you will be happy to know you can still have a healthy sex life and fulfilling relationships. Sexual desire continues after spinal cord injury and the need to love and be loved does not change.

The mechanics of having sex will be different than prior to your injury. You may have to experiment with different activities and body positions. You may need to reassure your partner that you won't be injured by sexual activity, and you may also need to teach him or her about what feels good and where you can feel their touch.

Women with spinal cord injury have menstrual periods, and can still become pregnant. Vaginal deliveries are possible, and while these pregnancies are usually managed at a high-risk birth center, they most often result in healthy deliveries. Some men with spinal cord injury can obtain and maintain erections, while others need to use medications, devices, or other options to obtain this. Retrograde ejaculation (semen enters the bladder instead of going through the urethra) is a frequent consequence of spinal cord injury in men, and this can decrease the possibility of fathering a child. Because the motility of sperm decreases in men with spinal cord injury, some choose sperm banking shortly after injury to increase the likelihood of fertilization.

Remember, the risk of getting a sexually transmitted disease is the same as it was before your injury. Safe sex practices include the use of condoms during intercourse, limiting the number of sexual partners, and using effective birth control methods.

Returning to Everyday Life *(Cont'd)*



Jonathan Mendez, USA

Jonathan is working to finish up his bachelor's degree, after which he hopes to study medicine at the University of Miami. "Neurology," he says matter-of-factly. "To treat people with spinal cord injuries, like myself. So when they describe shooting pains in their legs that feel like volts of electricity, I'll know exactly what they mean."

Travel

It is possible to travel throughout the world after a spinal cord injury. It takes a bit more planning, however. Contact your airline carrier for special accommodations (i.e., ask for assistance to board the plane if needed, request a larger baggage allowance). You should also familiarize yourself with the policies of your airline. Alert hotels about your needs before your arrival and request any equipment you will need (i.e., tub, bench, roll-in shower, etc.) Even cruise lines must provide handicap accessible rooms. Be very specific about what you need when making reservations.

Research your travel destination to prevent surprises with regard to physical barriers. Be sure to carry your medications and supplies for catheterization and other self-care routines in your carry-on luggage. Get as much rest as possible, maintain your usual care routines, and drink plenty of fluids. Drink bottled water if the tap water quality is questionable.



Driving

Letitia has regained her independence through driving. She has focused on choosing the right kind of car, outfitting it properly, and finding the most effective method of transferring to the car from her chair.



Closing Advice



Kenny Herriott, UK

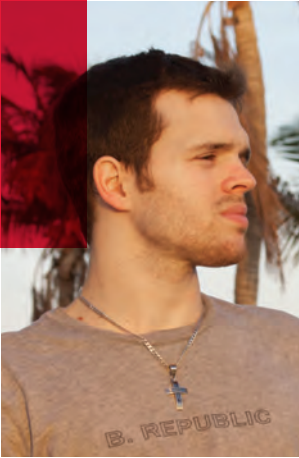
“Everything takes more time.
Everything.”

Coping with a spinal cord injury is very challenging. You may feel physically and emotionally exhausted. It's hard to remember all of the information being given to you, and you may find it difficult to acquire new skills as quickly as you would like.

Here are some helpful tips from people who have been through similar situations with spinal cord injury:

- Ask questions! Write down your questions, and write the answers also. Have a friend or family member help you keep track of the answers by writing notes in the back of this booklet
- Be patient with yourself and with those around you. It will take time for you to feel comfortable and adjusted to the changes created by your injury
- Set small goals each day. Celebrate reaching those goals
- Find someone you can truly connect with; someone who can support you emotionally. This might be a nurse or doctor, a friend or family member, or a member of a support group
- Be proactive. Ask for what you need and learn about the ways you can adapt to your injury





Jonathan Mendez, USA

Jonathan's family is close-knit. Loyalty is a given. So too, mutual respect, admiration, and a selfless regard for each other's well-being and security. Family is home, a bastion of hope and trust, faith and renewal. Home is family.

Research About Spinal Cord Injury

A cure for spinal cord injury does not currently exist. Research is ongoing in many areas of treatment and adjustment, including such topics as medications, surgery, nerve cell transplantation, and almost every aspect of health and spinal cord injury. You can learn more about some of the results of recent studies by talking with your healthcare team and visiting websites such as those listed here. If you are interested in participating in studies, there are many opportunities; the choice is yours.

**Information about
Spinal Cord Injury Research:
www.miamiproject.miami.edu or
1.800.STANDUP**

Intermittent Catheters

Confidence. Pure and simple.

The Advance Plus intermittent catheter supports user mobility and promotes independence.

- Integrated 1500 mL collection bag for secure urine collection—anytime, anywhere
- Protective tip and collection bag also shield the catheter from possible environmental contamination before and during insertion
- Unique gel reservoir helps the user regulate the amount of gel lubricant and stabilize the catheter during insertion
- The bag handle is easy to grasp and easy to hold

Advance Plus Touch Free Intermittent Catheter (available with or without kit)

The Advance Plus ready-to-use intermittent catheters feature *touch free* technology. This enables users to catheterize with confidence, without ever having to touch the sterile catheter or to expose it to possible environmental contamination.

The Advance Plus intermittent catheter system is available in standard packaging or the new Advance Plus Pocket intermittent catheter in a convenient smaller package!

Advance Plus Intermittent Catheter

Stock No	Tip	Size	Box Qty
94064	Straight	06 Fr/16 in	100
94084	Straight	08 Fr/16 in	100
94104	Straight	10 Fr/16 in	100
94124	Straight	12 Fr/16 in	100
94144	Straight	14 Fr/16 in	100
94164	Straight	16 Fr/16 in	100
94184	Straight	18 Fr/16 in	100
95124	Coudé	12 Fr/16 in	100
95144	Coudé	14 Fr/16 in	100
95164	Coudé	16 Fr/16 in	100

Advance Plus Pocket Intermittent Catheter

Stock No	Tip	Size	Box Qty
93104	Straight	10 Fr/16 in	100
93124	Straight	12 Fr/16 in	100
93144	Straight	14 Fr/16 in	100
93164	Straight	16 Fr/16 in	100

Advance Plus Touch Free Intermittent Catheter Kit

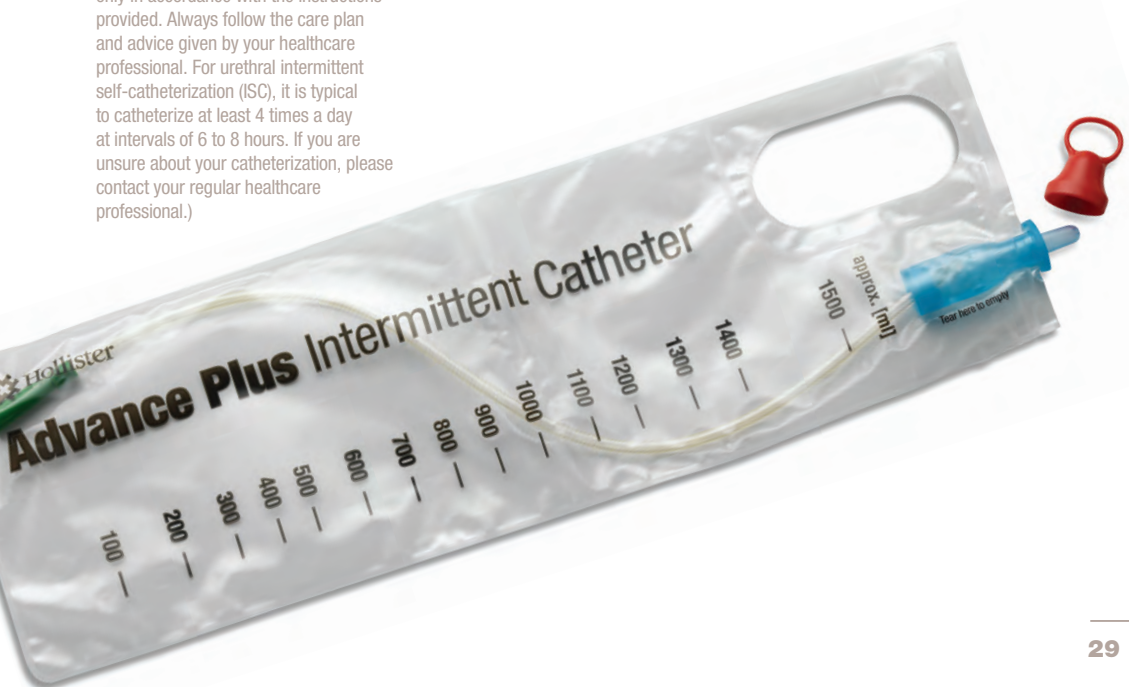
Warning: To help reduce the potential for infection and/or other complications, do not reuse. Dispose of appropriately after procedure. If discomfort or any sign of trauma occurs, discontinue use immediately and consult your healthcare professional.

Caution: Federal (USA) law restricts this device to sale by or on the order of a licensed healthcare professional. Prior to use of this device, be sure to read (i) the complete information on how to use this device including Warnings, Cautions, and Instructions for Use, and (ii) all other package inserts and labels supplied with the product and accessories. Please consult a medical professional before using this product if any of the following conditions are present: Severed urethra, unexplained urethral bleeding, pronounced stricture, false passage, urethritis – inflammation of the urethra, prostatitis – inflammation of the prostate gland, epididymitis – inflammation of the epididymis (testicle tube).

Self-catheterization should only be carried out after medical advice and only in accordance with the instructions provided. Always follow the care plan and advice given by your healthcare professional. For urethral intermittent self-catheterization (ISC), it is typical to catheterize at least 4 times a day at intervals of 6 to 8 hours. If you are unsure about your catheterization, please contact your regular healthcare professional.)

Contains Advance Plus intermittent catheter, gloves, waterproof underpad, drape, and BZK swabsticks. BZK is preferred over iodine for ease of use and cleanup.

Stock No	Tip	Size/Length	Box Qty
96064	Straight	06 Fr/16 in	100
96084	Straight	08 Fr/16 in	100
96104	Straight	10 Fr/16 in	100
96124	Straight	12 Fr/16 in	100
96144	Straight	14 Fr/16 in	100
96164	Straight	16 Fr/16 in	100
96184	Straight	18 Fr/16 in	100
97124	Coudé	12 Fr/16 in	100
97144	Coudé	14 Fr/16 in	100
97164	Coudé	16 Fr/16 in	100



Intermittent Catheter *(Cont'd)*

Apogee Intermittent Catheter Insertion Kit

Contains two gloves, drape, jelly, collection bag, Benzalkonium Chloride Prep Pad, and Polyvinylphenol Prep Pad.

Apogee Plus Closed System Intermittent Catheter

The Apogee Plus closed system intermittent catheter combines advancements with trusted features to help deliver flexibility and control to manage your continence with confidence.

Advancements

- *Touch free* insertion: The protective tip and collection bag eliminate direct hand contact with the catheter, helping to guard against environmental contamination
- The unique protective tip helps the catheter bypass bacterial concentrations in the distal urethra, reducing the risk of pushing bacteria further into the urinary tract
- The ultra-smooth catheter eyelets provide comfort during insertion and removal

Trusted features

- Ready to use: No additional lubrication is necessary – this catheter can be used anywhere, anytime

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Stock No	Size	Description	Box Qty
B6F	6 Fr	Firm	100
B8F	8 Fr	Firm	100
B10F	10 Fr	Firm	100
B12F	12 Fr	Firm	100
B14F	14 Fr	Firm	100
B16F	16 Fr	Firm	100
B18F	18 Fr	Firm	100
B12C	12 Fr	Coudé	100
B14C	14 Fr	Coudé	100
B16C	16 Fr	Coudé	100
B12S	12 Fr	Soft	100
B14S	14 Fr	Soft	100
B14F-Female	14 Fr, 6 in	Firm	100



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Intermittent Catheter *(Cont'd)*

Apogee Intermittent Catheters are latex-free and ready to use. These catheters require you to add lubrication.

- Latex-free
- Ultra-smooth eyelets
- Curved or straight packaging

10" Length Stock No	Size	Description	Box Qty
1020	8 Fr	Firm, Luer End	30
1040	10 Fr	Firm, Luer End	30

6" Length Stock No	Size	Description	Box Qty
1016	8 Fr	Firm	30
1033	10 Fr	Firm	30
1047	12 Fr	Firm	30
1062	14 Fr	Firm	30
1063	14 Fr	No Funnel	30



Distinctive smooth eyelets are designed to provide comfort on insertion and removal.



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15" Length Stock No	Size	Description	Box Qty
1007	6 Fr	Firm	30

16" Length Stock No	Size	Description	Box Qty
1016	8 Fr	?	30
1018	8 Fr	Firm	30
1034	10 Fr	Firm	30
1048	12 Fr	Firm	30
1064	14 Fr	Firm	30
1082	16 Fr	Firm	30
1096	18 Fr	Firm	30
1036	10 Fr	Soft	30
1046	12 Fr	Soft	30
1061	14 Fr	Soft	30
1083	16 Fr	Soft	30
1049	12 Fr	Curved Pkg	50
1065	14 Fr	Curved Pkg	50
1074A	14 Fr	Soft, Curved Pkg	50
1050	12 Fr	Coudé	30
1066	14 Fr	Coudé	30
1086	16 Fr	Coudé	30
1021	8 Fr	Coudé, Olive Tip	30
1035	10 Fr	Coudé, Olive Tip	30
1097	18 Fr	Coudé, Olive Tip	30
1087	16 Fr	Coudé, Curved Pkg	50

Self-catheterization should only be carried out after medical advice and only in accordance with the instructions provided. Always follow the care plan and advice given by your healthcare professional. For urethral intermittent self-catheterization (ISC), it is typical to catheterize at least 4 times a day at intervals of 6 to 8 hours. If you are unsure about your catheterization, please contact your regular healthcare professional.)

Support Networks

The following are some support networks to assist in answering your questions and guiding you to the best solution for you.

Christopher and Dana Reeve Foundation

www.crfp.org
1.800.225.0292

The Miami Project to Cure Paralysis

www.miamiproject.miami.edu
1.888.STANDUP (1.888.782.6387)

National Spinal Cord Injury Association

www.spinalcord.org
1.800.404.2898

Paralyzed Veterans of America

www.pva.org
1.800.555.9140

Spinal Cord Injury Information Network

www.spinalcord.uab.edu
1.205.934.3283



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