

# Living with a Spinal Cord Injury



Attention to Detail. Attention to Life.



# Living with a Spinal Cord Injury

## A Guide for the Newly Injured

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# Introduction

If you have a new spinal cord injury, or you are close to someone who does, you may have many questions or concerns. You are probably 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 Kingdom there are around 1,000 people who sustain spinal cord injuries. The number of people living with spinal cord injury in the U.K. is thought to be about 36,000.

This book was designed to help answer some of the most common questions you may have, as well as provide insight and encouragement from people who have experienced spinal cord injury and have learned to adjust to the many changes a spinal cord injury brings.

The most common causes of spinal cord injury in the UK are:

- Motor vehicle accidents
- Falls
- Acts of violence
- Sporting injuries

This book has been made possible thanks to the following individuals who took time to share their stories and provide insight and suggestions about adapting to life with a spinal cord injury.

We appreciate their contributions, candour and expertise.



Christina, from Germany  
She was injured at age 25.



Joan, a Nurse Practitioner  
who works with spinal cord  
injured patients.



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



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



Matthias, from Germany  
He was injured at age 19.



Thomas, from Germany  
He was injured in an accident  
at age 23.

Lynne, from the United Kingdom  
She was injured in a horse  
riding accident.

Manuel, from France  
He is paraplegic.

# The Nervous System and How it Works

## Table of contents

In order to understand your injury, it helps to first review the way the healthy nervous system functions. The critical parts 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 8* show the vertebral column, the bony structure that protects your spinal cord, and the different sections of the spinal cord.

### Paraplegia

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

### Quadriplegia

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

The spinal cord is the largest nerve in the body. It is about 45cm and extends from the base of the brain down the middle of the back to about the waist. Nerves are cord-like structures made up of nerve fibres. Nerve fibres are responsible for the communication of impulses throughout the body.



**“Things haven’t really changed that much, now that I have adjusted. I need a wheelchair-accessible home now, and had to have the car adapted, but other than not playing football, I do the same things I always did.”**

Christina, Germany

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). To find out whether your injury is complete or incomplete your healthcare provider will do physical examinations. You will be tested several times in both inpatient and outpatient settings, because the completeness of your injury may change over time.

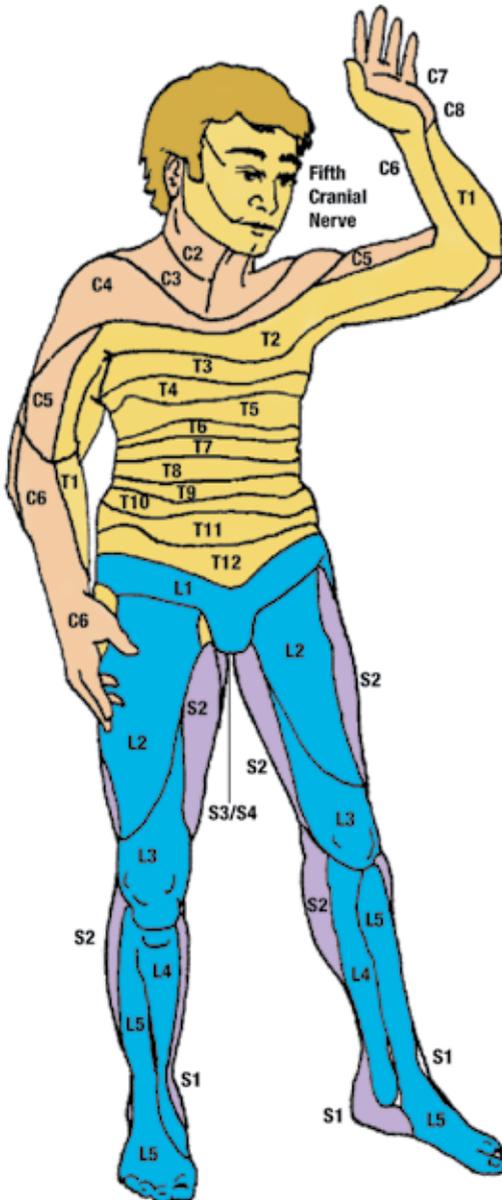
As the body grows, the vertebral column grows more in length than the spinal column. Because of this, there is often a discrepancy between the skeletal level of vertebral fracture and the neurologic level of spinal cord injury. The neurological level of injury refers to the lowest level of the spinal 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.

**“I learned how to do things myself; I practiced, and now I can handle my daily life without help. Sometimes I need help for tasks such as window cleaning or reaching high shelves, but otherwise, it’s all me.”**

**Matthias, Germany**



# The Nervous System and How it Works *Continued*

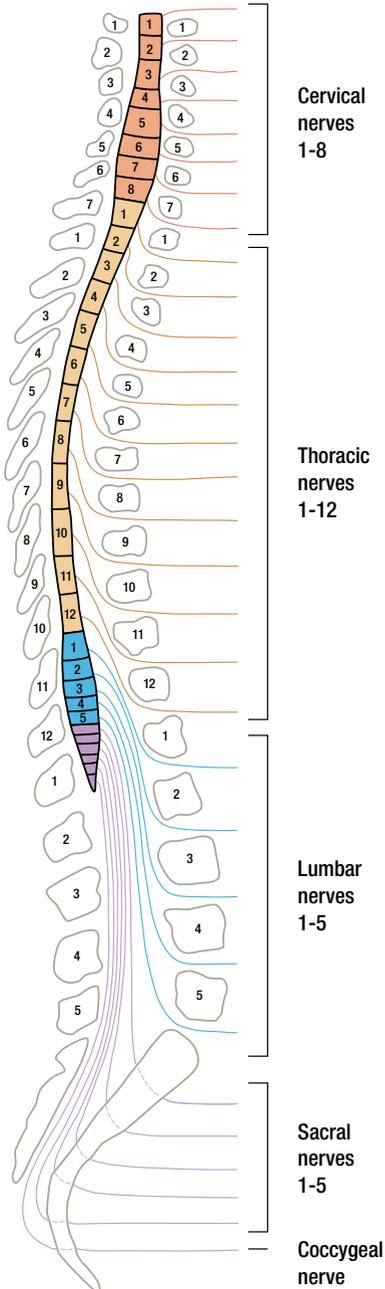


## Spinal Cord Segments and Corresponding Functions

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
<b>C1-3</b>	Limited head control
<b>C4</b>	Breathing and shoulder shrug
<b>C5</b>	Lift arm with shoulder, elbow flex
<b>C6</b>	Elbow flex and wrist extension
<b>C7</b>	Elbow extension and finger extension
<b>C8</b>	Finger flexion
<b>T1</b>	Finger movement (spread and pull together)
<b>T2-T12</b>	Deep breaths, deep breathing
<b>T6-L1</b>	Deep exhale of breath, stability while sitting
<b>L1-L2</b>	Hip flexion
<b>L2-L3</b>	Hip movement toward middle of body
<b>L3-L4</b>	Knee extension
<b>L4-L5</b>	Ankle extension
<b>L5</b>	Extension of big toe
<b>S1</b>	Movement of foot and ankle
<b>S1-S2</b>	Toe movement
<b>S2-S4</b>	Function of bladder and bowel

# Your Rehabilitation

## In the Hospital

The first days after a spinal cord injury are filled with physical examinations and diagnostic tests. Medication may be given to reduce the inflammation of the spinal cord and to prevent blood clots. The x-rays and scans you have help the doctors find the level of your injury and whether you sustained damage to other parts of your body. If your vertebral column is fractured or compressing the spinal cord, you may have surgery to stabilise it, or you may be fitted for a brace.

The higher and more extensive your injury, the more equipment and assistive devices you will need for daily living. Your injury level will also indicate whether you will need a power or manual wheelchair. You may need someone to help you with your daily living activities (bowel and bladder care, positioning, transfers, dressing, and bathing).

You won't be alone in learning how to adjust to your injury. A team of healthcare providers will be involved in your care during your hospitalisation and rehabilitation.



**“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.”**

Lynne, United Kingdom

**“It was very important to me to be mobile again; to get out on my own. I am free to go wherever I want.”**

Thomas, Germany

**“Since my injury, I have become a professional athlete. Racing is very aggressive and technical. I find it very rewarding. I have met fantastic people and gone to countries all over the world.”**

Kenny, United Kingdom

**“I enjoy exercise and sports (basketball, waterskiing, bicycling). In the winter I ski. I think it’s very important to talk to other people with SCI to share experiences and suggestions about sports.”**

Matthias, Germany

## **Exercise**

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

Initially, your exercise programme will be designed to increase your strength so you can accomplish a number of new activities like using a wheelchair, transferring your body, and moving in bed. Learning proper technique in these activities is important to help maintain your safety. You will have a programme 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 will undoubtedly want to continue.



# Your Rehabilitation *Continued*

## 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 spasm can be good, because it helps 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.

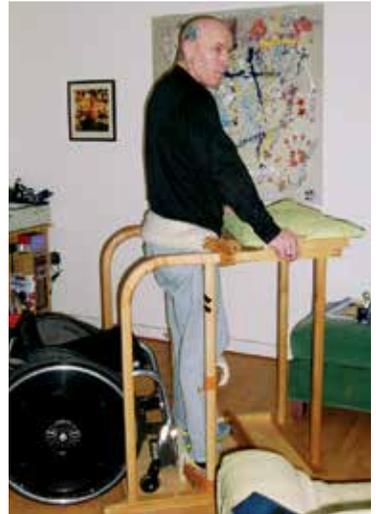
Here are some management options for spasms:

- Identify and eliminate the possible causes, such as pressure ulcers or bladder infection
- Stretch and work-out your muscles; exercise and apply pressure to the limb when it spasms
- Medication
- 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.

## Pain

Following your injury it is normal to experience pain. Two common types 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, 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.



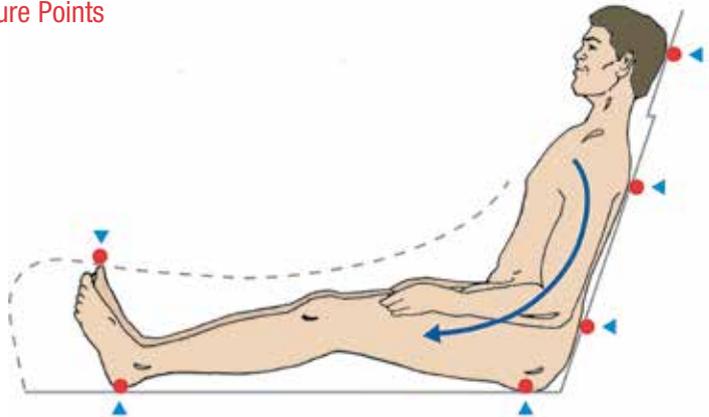
## Pressure Ulcers

After spinal cord injury, you are at risk for developing pressure ulcers. A pressure ulcer is any wound due to unrelieved pressure that 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 of 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 discolouration 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.

## Some Common Pressure Points



## Your Rehabilitation *Continued*

### 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 your 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 or 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 have a pressure ulcer, or think one may be developing, 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 dressings that help protect the area while it heals. In severe cases, surgery, hospitalisation, medication, 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, coffee cups, dropped cigarettes, and in the bath or shower, because they did not feel the temperature against their skin. 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 of severe infection.



## Bowel Care

After spinal cord injury, your bowel will function differently. During rehabilitation you will learn a bowel programme which will involve proper diet, exercise, medication and regularly scheduled bowel care. The goal of the programme 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 programme.

- Follow your bowel routine every day.
- Eat a balanced diet that includes 5 portions of fruit and vegetables, and drink plenty of fluids each day. This helps prevent constipation.
- Take medication as directed.
- Completely empty your bowels before leaving the toilet.

## Your Rehabilitation *Continued*

### 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.

The type of treatments most often used for neurogenic bladder problems include intermittent catheterisation, penile sheaths, and medication.

### 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 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 suspect you have an infection, contact your healthcare provider. Your urine will be tested and medication will be used if an infection is present. Be sure to take all of 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 than normal
- Leakage of urine between normal voiding or catheterisation
- Increased muscle spasms
- Fever
- Back pain
- Milky, cloudy, or darkly coloured urine
- Foul smelling urine.

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



## 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.

## Intermittent Catheterisation

Intermittent catheterisation can reduce the risk of kidney damage and also of urinary tract infections in a bladder that does not empty properly. People who use intermittent catheterisation as a method of emptying their bladder may need to do this up to four to six times each day. Intermittent catheterisation is easy to learn. Supplies can be carried discreetly in a pocket or bag, and the procedure can be done fairly quickly. 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 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 catheterisation. The procedure can also be performed by a caregiver or family member if you are unable to perform the procedure yourself.



Intermittent catheterisation can be done using the clean technique. Your healthcare professional will help you choose the most appropriate catheter for you.



## Your Rehabilitation *Continued*

Clean technique involves washing your hands, then cleaning the genital area with mild soap and water or a non alcoholic wet wipe before inserting the catheter. Some intermittent catheters have a no-touch technique to help prevent urinary tract infections. Most intermittent self catheters used in the UK are for single use only, to help prevent urinary tract infections.

### **Penile Sheaths**

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



## 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 it provides continuous drainage. Complications of indwelling catheters may include infections, urethral injury, bladder stones, and/or blood in the urine (haematuria). Long-term indwelling catheters are replaced up to every 12 weeks or as recommended by your healthcare professional.

A suprapubic catheter is an alternative for individuals who have difficulty managing intermittent catheterisation, such as those with paralysis of the arms. A suprapubic catheter is an indwelling catheter placed directly into the bladder through the skin above the pubic bone. The catheter is inserted by a qualified healthcare professional. With indwelling catheters, a drainage bag or catheter valve 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 trousers 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 placed on a stand by the bed.

Another option is a catheter valve which is attached to the end of the catheter and does away with the need for a drainage bag. The valve must be opened every three to four hours to drain the bladder. At night, it may be attached to a night drainage bag for continuous drainage.

## Returning to Everyday Life

Your rehabilitation will involve learning new skills. You will need equipment, such as a wheelchair, transfer bath 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 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) are recommended every two years.

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.



**“Everybody shops. I go to the same markets and buy the same food as I did before, although I am now more aware of food that’s healthy for me.”**

Letitia, United States

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.

<b>Fractures</b>	Broken Bones
<b>Osteopenia / Osteoporosis</b>	Chronic bone disease involving low bone mass and deterioration of bone, raising your risk of fractures.
<b>Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE)</b>	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 or DVT is a medical emergency.
<b>Orthostatic Hypotension</b>	Sudden low blood pressure that occurs with position changes. It may cause fainting, profuse sweating, and a rapid heart rate.
<b>Autonomic Dysreflexia (AD)</b>	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.
<b>Septicaemia</b>	An infection that enters the bloodstream. Symptoms can include fever and chills, confusion, nausea and vomiting, increased heart rate, and low blood pressure.
<b>Pneumonia</b>	Infection involving the lungs. This can be caused by bacteria, viruses, or other organisms. Symptoms may include fever, cough, weakness, and shortness of breath.
<b>Bladder and Kidney Stones</b>	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.

## Returning to Everyday Life *Continued*

### 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:

- 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 people 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 your active, fulfilling lifestyle. stroke is the same as people who don't have spinal cord injury.



## 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 will have to experiment with different activities and body positions. You will 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 centre, they result most often in healthy deliveries. Some men with spinal cord injury can obtain and maintain erections and others need to use medication, 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 fertilisation.

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 with intercourse, limiting the number of sexual partners and using effective birth control methods.



## Returning to Everyday Life *Continued*

### Travel

You can travel throughout the world, if you wish, after a spinal cord injury. It takes a bit more planning, however. Contact your airline carrier for special accommodation. Ask for assistance to board the plane if needed and request a larger baggage allowance. You should also familiarise yourself with the policies of your airline. Alert hotels about your needs before your arrival and request any equipment you will need (bath bench, roll-in shower, etc.) Even cruise lines must provide disabled facilities. Be very specific about what you need when making reservations.

Research your travel destination to prevent surprises with regard to physical barriers. Be sure you carry your medication and supplies for catheterisation 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.

**More than 25 people affiliated with The Miami Project to Cure Paralysis (US) ventured throughout Brazil in early 2005, through cities and the countryside.**



**“I like to travel very much!  
We take frequent holidays  
by car and by plane.”**

Matthias, Germany

**“I have seen almost the entire world.  
I enjoy meeting new people and  
seeing the world.”**

Letitia, United States

## 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.



**“I have hand controls on my car now (hand accelerator, hand brakes, and an automatic transmission). I just fold up my wheelchair, put it in the back seat, and drive away. It gave me such a sense of freedom to be able to drive again.”**

**Christina, Germany**

## Closing Advice

Coping with a spinal cord injury is very challenging. You will 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.

**“Everything takes more time.  
Everything.”**

Kenny, United Kingdom

## Research in 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 medication, 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](http://www.miamiproject.miami.edu)

**“When your spinal cord is injured, your brain continues to operate as usual. You still think, care, and problem-solve as before...”**

Letitia, United States



# Advance line of intermittent catheters

## Advance Intermittent Catheter

The Advance Intermittent Catheter features a ready-to-use gel reservoir, and a protective tip and sleeve, which help reduce the risk of urinary tract infections. Its ultra-smooth eyelets help provide comfort upon insertion and removal. The Advance Intermittent Catheter is available in 20 cm and 40 cm lengths.

- Unique gel reservoir
- Protective tip
- No-touch sleeve
- Ultra-smooth catheter eyelets
- Latex-free



Size	Length	Tip	Stock No.	Box Qty
Ch06	20 cm	Nelaton	92062	25
Ch08	20 cm	Nelaton	92082	25
Ch10	20 cm	Nelaton	92102	25
Ch12	20 cm	Nelaton	92122	25
Ch14	20 cm	Nelaton	92142	25
Ch08	40 cm	Nelaton	92084	25
Ch10	40 cm	Nelaton	92104	25
Ch12	40 cm	Nelaton	92124	25
Ch14	40 cm	Nelaton	92144	25
Ch16	40 cm	Nelaton	92164	25
Ch18	40 cm	Nelaton	92184	25

## Advance line of intermittent catheters

### Advance Plus Intermittent Catheter

For people wanting independence, the Advance Plus intermittent catheter is an option that can be used anytime, anywhere. The integral 1500 ml bag allows discrete and secure use, whether indoors or out and about. The unique gel reservoir, together with the ring cap, help prevent leakage by sealing off the bag while the built-in handle makes the bag easier to hold and to empty.

- Unique gel reservoir
- Unique protective tip
- 1500 ml bag
- Ultra-smooth eyelets
- Latex-free PVC material



Size	Length	Tip	Stock No.	Box Qty
Ch06	40cm	Nelaton	94064	25
Ch08	40cm	Nelaton	94084	25
Ch10	40cm	Nelaton	94104	25
Ch12	40cm	Nelaton	94124	25
Ch14	40cm	Nelaton	94144	25
Ch16	40cm	Nelaton	94164	25
Ch18	40cm	Nelaton	94184	25
Ch12	40cm	Tiemann	95124	25
Ch14	40cm	Tiemann	95144	25
Ch16	40cm	Tiemann	95164	25

# VaPro intermittent catheters

## VaPro Intermittent Catheter

The VaPro Intermittent Catheter distinguishes itself from all other hydrophilic catheters with its unique activation process – Vaporphilic technology. Sterile water vapour is used to activate the catheter coating. This makes the catheter ready to use without the addition of water.

**In addition to this the VaPro intermittent catheter also has the following features:**

- Novel technology
- Ready-to-use
- No-touch technique
- Protective tip
- Protective sleeve
- Easy access packaging
- Ultra-smooth catheter eyelets
- Latex-free

**The VaPro intermittent catheter is designed to be:**

- Spill-free
- Ready-to-use
- Hygienic



Size	Length	Tip	Stock No.	Box Qty
Ch10	20 cm	Nelaton	72102	30
Ch12	20 cm	Nelaton	72122	30
Ch14	20 cm	Nelaton	72142	30
Ch10	40 cm	Nelaton	72104	30
Ch12	40 cm	Nelaton	72124	30
Ch14	40 cm	Nelaton	72144	30



## Support networks

There are support networks to answer your questions and guide you to the best solution for you.

- **Spinal Injuries Association**  
www.spinal.co.uk T: 0800 980 0501
- **Spinal Back Up Trust**  
www.backuptrust.org.uk T: 020 8875 1805
- **ASPIRE**  
www.aspire.org.uk T: 020 8954 5759
- **Promocon**  
www.promocon.co.uk T: 0161 834 2001

For more information contact us FREE on:

**UK** 0800 521 377    **Ireland** 1800 503 400

For FREE samples contact us FREE on:

**UK** 0800 592 202    **Email** samples.uk@hollister.com  
**Ireland** 1800 503 400    **Email** customerservices.ie@hollister.com

Hollister Incorporated does not provide medical advice or services. The information provided herein is not a substitute for medical care. If you have, or suspect you have, a health problem, you should always consult with a licensed healthcare professional.

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