What to Expect after Spinal Cord Injury
A Guide to Your Care
# Table of Contents

- Introduction ...................................................................................... ii
- Treatment Information .................................................................. 1
- Your Medical Team ........................................................................ 3
- About the Spinal Cord and SCI .................................................. 5
- Respiratory Functions .................................................................... 9
- Skin Health ..................................................................................... 11
- Limb Preservation and Range of Motion ..................................... 13
- The Circulatory System ................................................................. 15
- Pain Management ........................................................................... 17
- Nutrition ........................................................................................ 19
- Bowel & Bladder Management .................................................. 21
- Resources ......................................................................................... 23
- Frequently Asked Questions ...................................................... 25
- Notes Page ....................................................................................... Inside Back Cover
This guidebook will help you become a more knowledgeable, active participant in your recovery after a spinal cord injury. The information presented here may answer many of your questions, but please talk to any of our staff if you have further questions or concerns. We are here for you.

This guidebook should remain in your hospital room so that healthcare providers may add material that is specific to your case. This guidebook is intended to be an introductory resource and to serve as part of your comprehensive rehabilitation program.

If you choose to complete your spinal cord injury rehabilitation here at St. Joseph’s, you will also receive a patient education manual titled: *Yes, You Can! A Guide to Self-Care for Persons with Spinal Cord Injury*. If you decide to go elsewhere for your acute SCI rehabilitation, we highly recommend that you obtain a copy through the Paralyzed Veterans of America. You can purchase this education manual through their website which is listed below.

Please let us know if we can assist you in any way.

Thank you,
Your Healthcare Team


This information is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Consult your medical doctor or healthcare provider with any specific medical questions.

St. Joseph’s Hospital and Medical Center
Barrow Neurological Institute
350 W Thomas Road
Phoenix, AZ 85013
## Treatment Information

**Diagnosis:**

---

### Treatment Team

<table>
<thead>
<tr>
<th>Staff Member</th>
<th>Name</th>
<th>Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Procedures Performed

<table>
<thead>
<tr>
<th>Date</th>
<th>Procedure</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Patient: You are the most important member of the medical team and will be included in decision making regarding your medical management, when appropriate. If you are unable to assist with decision making, legal paperwork will need to be completed so that a family member, other loved one or other designated person can do this for you.

Physicians (MD or DO): The physicians who will work together in managing your care may include specialists in multiple areas, including: neurosurgery, trauma, critical care, internal medicine, neurology, and other specialties, depending on your specific needs.

Physician Assistant (PA): The Physician Assistant works with the trauma team to manage your care. PAs can also order and perform medical treatments and write prescription for medications.

Neurosurgical or Trauma Nurse Practitioner (NP): This type of nurse practitioner is a nurse with specialized, advanced training and works with neurosurgeons and trauma specialists in managing your care. Nurse practitioners can also write prescriptions for medications and treatments.

Registered nurse (RN): The registered nurse is responsible for most of your daily care needs, including administration of medication. This nurse also serves as a liaison between you and other members of your care team.

Patient care technician (PCT): The patient care technician is an aide to the RN. The PCT can assist with daily hygiene, monitoring your vital signs, and helping you move in and out of bed.

Respiratory therapist (RT): The respiratory therapist is primarily concerned with helping you breathe fully to ensure oxygen reaches your body’s organs and in managing respiratory concerns that may arise. The respiratory therapist is also responsible for keeping your airways clear and for operating the machines that help you breathe.

Physical therapist (PT): The physical therapist works with you to increase your ability to move as independently as possible. Initially, the focus is on helping you turn and move in bed, finding your balance, getting you into an upright position, and increasing your tolerance for activity.

Occupational therapist (OT): The occupational therapist focuses on your ability to do activities of daily living, such as toileting, bathing, dressing and grooming. If your arms and hands are weak from your injury, the OT may help you exercise, make splints for your hands/wrists and provide adaptive equipment to help you begin to do things for yourself as early as possible.

Speech-language pathologist (SLP): The speech-language pathologist works with people whose injury has hindered their ability to swallow or communicate. This specialist also addresses any difficulty with memory or thinking, if those functions have been affected.
Social worker (SW): The social worker is a valuable resource for patients and their families. With a vast knowledge of benefits and services offered to patients, the social worker’s primary focus is helping you smoothly transition out of the hospital. The social worker communicates with your insurance provider, as well as the rest of your care team, to prepare for the “next step.”

Nurse case manager (CM): The nurse case manager is a registered nurse who has specialized training in the benefits and services that health insurers provide their members. He/She works closely with social workers and other team members to ensure you are getting your health care needs met within the covered benefits of your health insurance plan.

Registered dietitian (RD): The dietitian ensures that you are receiving balanced nutrition to promote healing. If a specialized diet is necessary, the dietitian determines the appropriate nutritional program.

Orthotist: If your doctor recommends a body brace or neck collar for you to wear to physically support your spine while it is healing, an orthotist will be called in. An orthotist has been trained to make and fit braces. He/She works for an outside company/vendor and is not employed by the hospital.

Chaplain: The Chaplain is available for emotional and spiritual support.
Although the brain controls the functions of the entire body, it only extends to the top of the neck. Below that, the spinal cord is what carries messages from your brain to the rest of your body.

The spinal cord extends from the base of your brain down to the lower part of your back. When your spinal cord is injured, parts of your body below the level of the injury are affected, and can lead to a loss of movement and feeling.

The spinal cord is protected by your backbones (the spine). The backbones are 29 small bones stacked on top of each other. These bones are called vertebrae. These bones are held in place by ligaments and are cushioned from each other by spongy discs. Blood vessels that feed the spinal cord travel in and out between these vertebrae.

Your spine has four sections. The top is the cervical section, which is your neck. Beneath the cervical section is the thoracic section, which extends from the bottom of neck to your lower ribs. The lumbar section is your lower back, and the sacral section is your tailbone. The cervical section contains 8 pairs of nerves. There are 12 pairs of thoracic nerves, 5 pairs of lumbar nerves, and 5 pairs of sacral nerves.
How the Spinal Cord Functions

The spinal cord acts as the messenger between the spinal nerves and the brain. The spinal cord transmits signals down from the brain to different muscle groups to coordinate motion (such as standing up or walking). In this way, the brain controls movement. Signals flow the other direction as well. Sensory nerves collect information about sensations from different body parts or areas of skin, such as feelings of heat, cold, or pain. These nerves gather information and send it up the spinal cord to the brain.

Causes of Spinal Cord Injury

Damage to your spinal cord can affect movement, sensation, bladder control, or other bodily functions. The changes depend on the location and severity of the SCI.

Many types of injuries and medical conditions can cause spinal cord injury or dysfunction:

- Narrowing of the spinal canal (the space for the spinal cord that runs through your back bones) can cause injury to the spinal cord. This can happen when ligaments are torn or when bones in your back or neck are broken.
- Gunshot wounds or stab wounds can directly damage the spinal cord without much bone damage.
- Infections and tumors near or in the spine can compress the spinal cord.
- Infections and tumors within the spinal cord.
- Arthritis can sometimes affect the bones and can slowly put pressure on the spinal cord.
- The blood supply to the spinal cord can be blocked, causing part of the spinal cord to die because it doesn't receive any oxygen and nutrients. This is similar to how a stroke affects the brain.

Classifications of Spinal Cord Injury

To classify the level of injury, your healthcare team will use a numbering system similar to the one used to name bone and nerve levels in your back. A spinal cord injury is named for the lowest level of the spinal cord that still functions the way it did before the injury. It is important to your rehabilitation that you know your level of injury and how it affects your body.

When the spinal cord injury is at a cervical level, it is called tetraplegia or quadriplegia. When it is at a lower level (thoracic, lumbar, or sacral), it is called paraplegia. People with tetraplegia have some numbness or weakness or lack of movement in their arms or hands. Paraplegia does not affect the arms or hands. More details on the expected function of each specific level of spinal cord injury can be found in the Functional Outcomes section.
Levels of Injury & Functional Outcomes

The following are general guidelines on functional (the ability to perform specific movements) recovery as it corresponds to level of injury. Keep in mind that everybody’s injury is different, even those with similar level of SCI. During the initial 2–4 weeks after injury, there can be many changes in function, and people may continue to see incremental improvements over months and years to come.

C1-4: An injury at this level usually requires help with breathing from a ventilator because the nerves coming from and going to the diaphragm are affected. The need for a ventilator may only be temporary. People with injuries at these levels are typically unable to move below their neck.

C5: Persons with an injury at this level are usually able to move their shoulders, bring their elbows out to the side and bend them, and turn their palms upward. They usually need help from gravity to straighten their elbows. Depending on the severity of the injury, help with breathing may be needed for a short period of time.

C6: In addition to the functions listed above, these patients can usually press their hands together with some force and are able to extend (bend up) their wrists. At the C5 and C6 levels, your therapists will be actively encouraging you to keep your fingers in a curled position. This promotes a natural reflex grasping motion called a tenodesis grasp.

C7: In addition to the abilities listed above, patients with this level of injury are able to extend (straighten) their elbows and hold them there against force, are able to turn their palms down, are able to flex (bend down) the wrists, and are able to extend (straighten) the fingers.

C8: In addition to the above, these patients are able to flex the fingers. Their grasp may be weaker than it was before their SCI.

T1-12: These patients have full functional use of the arms and hands. The higher the injury in the thoracic spine (smaller numbers), the less muscle control you have in the trunk. The lower the injury (larger numbers), the more muscle control you have in the trunk.

L1-5: Patients with an injury at this level have full functional use of the arms and trunk. Injuries in the lumbar region can vary greatly. Typically, people with injuries to L1 or L2 will require braces to stand due to weakness or paralysis in the hips and knees. People with lower lumbar injuries may be able to stand and walk, although they may require continued use of foot and ankle braces to do so.
Nerves in this region are responsible for sensation and motor function in the groin or “saddle” area of the body. Loss of these abilities in this area can result in changes to bowel, bladder and sexual function.

Injuries at all levels of the spinal cord may impact bowel, bladder, and sexual function. Specific impacts to these functions are highly individualized.

**Recovery**

Immediately after a spinal cord injury, the spinal cord stops doing its job for a period of time. This is referred to as spinal shock, and it may last anywhere from a few days to several weeks. All the reflexes below the level of injury are absent during this period, and the return of these reflexes below the level of injury marks the end of spinal shock, in most cases. Reflexes are immediate motor reactions to certain sensations, such as when a doctor hits below your knee with a small hammer and your leg jumps forward. For example, a sudden uncontrolled movement of your foot or leg would be a sign that spinal shock has ended.

Depending on the SCI, some feelings and voluntary or controlled movement may come back. No one can say with certainty how each person will be affected. If you do regain some feeling and movement, it will likely start happening in the first few weeks after the injury. Regaining feeling or movement may occur in two separate ways, as voluntary movement or as spasticity. Spasticity refers to increased muscle reflexes or muscles moving on their own. Muscle spasms are not voluntary movements, and various things can trigger them. Touching your skin, changing body position, stretching your muscles, or having a bladder infection can cause these spasms.

As part of the recovery process, rehabilitation begins immediately. You will learn stretching and strengthening exercises, new ways to use the muscles that are still moving, and how to use special equipment to achieve higher levels of function and complete everyday tasks.

Your healthcare team will update and modify your rehabilitation goals as you recover more feeling or voluntary movement.
Respiratory Function

Depending upon the level of SCI, the muscles that are responsible for breathing and coughing may not function or only partially function, especially in cases of cervical and upper thoracic injuries. Sometimes, the swallowing muscles which help keep food and fluids out of the lungs may be affected, which increases the risk of a particular type of pneumonia known as aspiration pneumonia. Your medical team will take measures to prevent and manage any respiratory problems.

In some cases of SCI, it is too difficult for a person to breathe easily and deeply to ensure enough oxygen gets to the body. These patients may require a ventilator or respirator to help move air in and out of the lungs. There are two ways to provide assistance with breathing. One is where a tube is passed through the mouth and down the throat to the lungs. This is called an endotracheal tube and usually is a temporary measure. Another way is where a tube is surgically placed directly through the neck. This is called a tracheostomy and can remain in place for longer periods of time. Most people are able to speak and swallow food with a tracheostomy. This tube can eventually be removed.

Preventing and Managing Respiratory Problems

Here are some ways to prevent or manage respiratory problems:
- Limit exposure to adults and children with symptoms of fever, cold and coughs.
- Adhere to any swallowing precautions that are recommended by the medical team. These may include things like proper positioning of the head and neck or a temporary restricted diet.
- Change your position regularly, and follow all instructions recommended by your medical team to promote respiratory health.
- Use your incentive spirometer as directed by your medical team every hour you are awake.
Skin Health

Your skin plays a vital role in protecting your body from infection. Healthy skin is maintained primarily by adequate blood circulation, which keeps the cells of your skin and body tissues alive. Before your SCI, your sense of touch and sensation triggered you to automatically change positions when blood circulation was decreased. However, SCIs frequently impair your sensation and make it difficult to feel some areas of your skin. This means that you will not automatically feel the need to reposition your body.

When you remain in one position for too long, the pressure of your weight against the surface of the chair or bed compresses or pinches your blood vessels. This occurs more severely in areas where bones are more prominent, like the pelvis or the heels. When this happens, blood cannot get past the compressed area so oxygen and nutrients cannot reach your skin cells and underlying tissue. When blood circulation to your skin and other tissues is cut off for a prolonged time, the tissue can die which causes decubitus ulcers (also known as pressure sores, pressure ulcers or bed sores).

Repositioning your body, also known as pressure relief, is the best way to make sure blood is flowing to the skin cells and helps prevent pressure ulcers from developing. Because of decreased movement and sensation related to your injury, pressure relief will be an area of special focus for you and your healthcare team. To help promote healthy skin and lessen the incidence of pressure ulcers, staff will assist you with pressure relief when you are in bed and when you are in a chair. If you feel you have been in the same position for too long a period of time, you can ask the staff to change your position.

Pressure relief in bed:
- A pressure-relieving mattress may be used.
- Repositioning from side-to-side-to-back every two hours is effective for pressure ulcer relief.
- Pressure on your heels and ankles can be avoided by “floating” them over the edge of a pillow or using special foot splints.

Pressure relief in a chair:
- A pressure-relieving cushion may be placed on the seat of the chair.
- Your therapists will teach you different pressure relief techniques.
- Pressure relief should be performed every 15-20 minutes and should last 30-60 seconds each time.

Please remember that you can keep your skin healthy by being watchful and consistent about doing your pressure reliefs when you are lying down or sitting in a chair. Pressure ulcers are preventable.
Limb Preservation and Range of Motion

Preventing and Managing Respiratory Problems

Limb preservation means keeping your arms and legs in the best possible health by protecting your joints, nerves, muscles, and bones.

After an SCI, both the upper limbs (arms) and the lower limbs (legs) are at increased risk for injury. Active use of your non-paralyzed limbs requires strong muscles and a working nervous system, especially now since they may have to do some of the work of your weak or paralyzed limbs. Paralyzed or weak limbs need special care to avoid further injury. Limb injuries can have serious effects on functional abilities and overall quality of life. There can be postural changes, skin ulcers, chronic pain, and decreased use of the limb which can cause problems with the ability to feed yourself, to dress, to propel a wheelchair, getting to work, etc.

Range of Motion (ROM)

The flexibility of a joint—how far it will move in any direction—is also referred to as range of motion (ROM). The muscles which cross a joint create movement of the bones on either side. The tightness or looseness of the structures surrounding your joints will determine the available range of motion for each joint. If the joint is too tight, the less range of motion it will have. Sometimes a joint’s muscles can be too loose to adequately support the joint. This occurs most often in the shoulder and is called subluxation.

For limbs with normal strength and mobility, everyday movements are enough to keep your joints healthy and the muscles that cross them will remain loose and flexible. However, weakness caused by your SCI may restrict the ROM of your joints. Because of this loss of movement, you may have to learn other techniques to stretch your muscles and to help maintain flexibility in the joints and their surrounding structures. If you don’t move a joint through its full range of motion regularly, the structures will begin to tighten. Over time, tightness of the structures around a joint can lead to a permanent shrinking of the muscles. This is called a contracture, and it can cause problems such as pressure ulcers, postural changes, and loss of the ability to perform some physical activities.

If you’ve sustained an SCI, you must work to prevent contractures by making certain your joints are stretched and put through their full range of motion daily. This can be done by yourself or by another person.

In some cases, your physical or occupational therapists may allow a certain amount of tightening in some of the tendons of your hands and wrists. This selective tightening or shortening can increase the function of your hands through a reflex action called tenodesis. In tenodesis, when you raise your wrist, the fingers automatically draw together. This action allows you to use your hands
to grasp items even though there may be a decrease or no strength in the muscles that bend the fingers. It is important not to over stretch these muscles in order to maintain tenodesis.

Your physical and occupational therapists will show you how to perform appropriate ROM exercises in an exercise program tailored specifically to you. If you can’t do the exercises by yourself, the therapists will train another person (whom you identify) on how to do them. If you require someone to consistently perform them for you, you will be trained on how to instruct others to do them for you.
Your circulatory system includes your heart, arteries, capillaries, and veins, which function together to maintain blood pressure and pump blood throughout your body. SCI causes some changes to this system. Two common problems after an SCI are orthostatic hypotension and deep vein thrombosis (DVT).

**Orthostatic Hypotension**

Orthostatic hypotension refers to a drop in blood pressure after changing position, such as going from lying down to sitting up. If your blood pressure is too low, not enough blood is pumped to your brain, resulting in feelings of dizziness or lightheadedness when you change to upright positions. The sudden decrease in blood pressure can cause you to faint because not enough oxygen filled blood reaches your brain cells.

While you are in the hospital, your nurses and therapists will be monitoring your blood pressure and heart rate. They will make certain to take the appropriate steps to minimize any significant drops in blood pressure. When you are medically stable, staff members will help you out of bed. Getting out of bed daily is an important part of the recovery process because this will help your body and circulatory system adjust to being in an upright position.

**Deep Vein Thrombosis (DVT)**

Circulation of the blood is aided by tension in the walls of the blood vessels and by contraction of the nearby muscles upon those blood vessels. After an SCI, both of these mechanisms are affected, thereby increasing your risk of developing blood clots, or DVT. Treatments such as administration of medication to reduce the risk of DVT and the wearing of the abdominal binder, TED stockings and/or boots, will be initiated while you are in the hospital to prevent DVTs from developing. If a DVT does occur, additional measures will be taken to prevent the DVT from moving to your lungs, creating what is known as a pulmonary embolism.
Pain Management

You may have pain from your new injury or the operations that you have had. Your doctors and nurses will work with you to manage it as efficiently and effectively as possible.

**Bone, Skin, and Soft Tissue Pain**
This type of pain results from injury to bone, skin or soft tissue. Patients with this type of pain might describe it as aching or throbbing. The pain usually has a focal point, and patients are able to identify exactly where it hurts.

**Organ Pain**
Organ pain occurs from injury to the organs such as the liver, stomach, lungs, and others. Patients often describe this type of pain as pressure, deep aching, or cramping. It is often difficult to pinpoint where it hurts.

**Nerve and Spinal Cord Pain**
The pain from nerve injury is sometimes referred to as *neuropathic pain*. It includes pain from injury not only to the nerves themselves, but also pain from injury to the spinal cord. Patients with this type of pain might describe it as electric shock-like, a feeling of coldness, burning, tingling, prickling, or itching.

**Pain Management**

The treatment course for your pain will be determined by your description of the pain and our knowledge of your specific injuries. It will also be based on trials of different treatments. Your feedback on how these treatments are managing your pain is extremely important during this process.

Treatments may include a variety of methods beyond traditional pain medication which includes other types of medicines, application of ice, massage, use of nerve stimulators, or other modes of pain management. It is important to remember that pain medicines, even when used for an extended period of time, rarely lead to addiction. If any part of your treatment plan worries you, please talk to your nurses and doctors.

**Our Goals when Treating Your Pain:**
**Goal 1:** The severity of your pain has been reduced to a tolerable level.
**Goal 2:** You are able to participate in various prescribed therapies.
**Goal 3:** You do not have unwanted side effects from treatment.
After a traumatic injury, your body requires increased levels of protein to promote muscle regrowth and to alleviate the stress caused to the body. It is very important to meet your caloric and fluid needs. Initially, intravenous fluids will be used to restore your body to its normal fluid levels. The registered dietitian will work with you to personalize a nutrition plan to promote healing and recovery and to prevent weight loss. Please keep in mind that most persons with a new SCI caused by a traumatic event, such as a car accident, can lose about 10-15% of their body weight. However, most people start to regain this weight once they become medically stable, feel like eating again and start their rehabilitation process.

Adequate caloric intake and sufficient amounts of protein will help you to maintain lean muscle and avoid skin breakdown or bedsores. High-protein foods include meat, fish, nuts, beans, soy, and dairy products. High-protein shakes may be included with meals if you are not getting enough protein from your food alone. A daily multivitamin is also recommended.

**Special Considerations for those Using a Ventilator for Breathing**

Mechanical ventilation to assist with breathing is often required after a high level spinal cord injury. Nutrition may initially be delivered through a temporary feeding tube. This tube passes through the nose and down into the stomach or intestine.

Once the ventilator is no longer needed, a speech-language pathologist (SLP) may be asked to evaluate your swallow function and will recommend foods that are safe to swallow. If you are not swallowing properly, food or liquid can pass into your lungs. This is called *aspiration*, and it greatly increases your risk of pneumonia. If you cannot eat the foods that are necessary to meet your nutritional needs, another type of feeding tube may be placed into the stomach or small intestine directly through the abdominal or stomach wall. As your swallowing function improves, this feeding tube can be removed.
Bowel and Bladder Management

Bowel Management

The ability to control your bowel movements comes from your nerves that travel from your bowel, to your lower spinal cord and then up to your brain and vice versa. After an SCI, you may have difficulty sensing when you need to relieve yourself, and many people have trouble controlling the process. The nursing staff follows a bowel protocol (a special regimented program) to help prevent accidents, establish regular and predictable bowel movements, and to minimize complications. The protocol may include various bowel medications, changes in diet, or other techniques. It will take some time to develop a regular and effective bowel program, so please be patient with yourself and with your healthcare team.

What you can do to help:

1. Eat a nutritious diet. Let the dietitian know what foods you like, and let your family know that they may bring in nutritious food for you. Just the act of eating can stimulate peristalsis, which can lead to a bowel movement.
2. Sometimes after a trauma, your body has adjusted to not eating and has to be coaxed into wanting food again. While recovering, try to eat even when you do not feel like it. Sometimes having your favorite foods brought in from home will stimulate your appetite.
3. If you are experiencing constipation, increase your fiber intake by eating plenty of fruits and vegetables. Make sure you are drinking enough fluids every day.
4. Ask to meet with the dietitian if you feel a need to do so or want more information.
5. If you are sweating a lot, be sure to make up for that fluid loss by drinking more water.
6. Actively participate in your therapy sessions because increased mobility and exercise can help make your bowel management program more successful.
7. Stay involved in your bowel care routine so you know what works and what doesn’t. This will make problem solving any bowel issues easier over time.

Bladder Management

The ability to control your bladder comes from the nerves that travel from your bladder, to your lower spinal cord and then up to your brain and vice versa. After a spinal cord injury, you may be unable to empty your bladder. Most patients with SCI have an indwelling catheter at first. This is a tube that goes into your bladder and stays there to continually drain urine into a bag. When you become medically stable, the catheter is removed. At this time, the staff will evaluate your ability to urinate on your own. If you do not urinate within a certain time frame or if you only urinate a small amount, a nurse will scan your bladder to see how much urine is in your bladder. If you are unable to urinate at all or if you do not fully empty your bladder when you do urinate, a nurse will use an ultrasound machine to scan your bladder to see how much urine is in your bladder. An ICP allows normal bladder filling and then empties the bladder by inserting a catheter into your urethra every 4-6 hours. This catheter does not stay in the bladder. This routine will lessen the chance for
urinary tract infection and will help maintain the health of your bladder because it is filling and emptying like it is supposed to do. You and/or a another person(whom you identify) will be trained on how to do intermittent catheterization before you leave the hospital.

**What you can do to help:**
1. Drink enough fluids throughout the day. Check with your medical team on the amount they would like you to take in per day.
2. Make certain to catheterize on time according to your ICP schedule.
3. When catheterizing, maintain sterile technique in the hospital and clean technique at home.
4. Keep catheterized volumes under 500cc. Stay involved with your ICP in the hospital so you know how to manage your ICP and problem solve any issues.
5. Learn the signs & symptoms of urinary tract infection and tell your doctor if you think you have one.
Resources

Information, Research and Support Groups for SCI

American Spinal Injury Association
www.asia-spinalinjury.org

Arizona Bridge to Independent Living
5025 E. Washington St., #200, Phoenix, AZ 85034 | (602) 256-2245
www.abil.org

Arizona Spinal Cord Injury Association
5025 E. Washington St., #110, Phoenix, AZ 85034 | (602) 507-4209
www.azspinal.org

Barrow Connection
Bridging the gap between hospital and community | (602) 406-6280
www.thebarrow.org/Connection

Barrow Spinal Cord Injury Wellness Program | (602) 406-5195
https://hospitals.dignityhealth.org/stjosephs/Pages/services/rehabilitation/Spinal-Cord-Injury.aspx

The Christopher & Dana Reeve Foundation
www.christopherreeve.org

Foundation for Spinal Cord Injury Prevention, Care and Cure
www.fscip.org

Miami Project
www.miamiproject.miami.edu

National Spinal Cord Injury Association
www.spinalcord.org

Paralysis Resource Center
www.paralysis.org

Project Enable
www.projectenable.com

SCI Info Pages
www.sci-info-pages.com
Frequently Asked Questions

How long will I be in the hospital?

The length of your stay in the hospital depends upon the severity of your injuries and whether surgical intervention was required. People typically stay in the Intensive Care Unit (ICU) until their blood pressure, respiratory function, and other medical issues are fairly stable. This may take a few days to a couple of weeks. Many patients are then transferred to a regular hospital floor for a few more days. Once medical issues have been stabilized, the patient usually goes to an inpatient rehabilitation program. There, patients receive round the clock nursing care and intensive therapy with the goal of regaining as much independent function as possible and to return home. People typically stay in the rehabilitation setting for several weeks. Your medical team can answer specific questions about your anticipated length of stay. Don’t hesitate to ask!

Why can’t I talk?

Some injuries initially require specialized respiratory management, which may include a breathing tube (refer to the Respiratory Function section). If you have a tracheostomy (or trache), air is rerouted away from the vocal cords. During this time the staff will make every effort to help you communicate through alternate methods. As your status improves, the staff may change out or modify the trache to allow air to pass through your vocal cords so you can speak again.

Will I walk again?

The answer to this question depends on the extent of your injury. The medical team can best explain the specifics of your injury and your potential for neurological recovery.

Why are parts of my body swollen?

Depending on the level of your injury, you may find that you have swelling in your hands, legs, and feet. The swelling occurs because the weak or paralyzed muscles in your affected arms and legs cannot help blood return to your heart. This can cause some fluid from the blood vessels to seep into the surrounding tissues causing swelling. The staff assists with decreasing the swelling by elevating the swollen body parts, making sure you are wearing TED hose, doing exercises to the affected body part and with medications, if needed.

Will my sex life be affected?

During the first 6–8 weeks after an SCI, swelling of the spinal cord interferes with all function below the level of injury, including sexual function. Once the swelling is gone, sexual function can be fully evaluated and management options provided, if needed. How you experience sex may be different from the way it was before because of weak or paralyzed muscles and loss of feeling in body parts. It is important to stress that people living with SCI are capable of having fulfilling sex
lives, marriages and children. Your healthcare team will be able to give you more specific information.

**Will I be able to have children?**

For women who have sustained an SCI, it may take several weeks to months before the menstrual cycle returns. Spinal cord injury does not affect your ability to get pregnant. However, there may be specific management options needed during the months of pregnancy and during labor and delivery depending upon the level of SCI. Many women with all levels of SCI have delivered healthy babies. If you do not wish to have children, you need to speak to your health care provider about birth control options. Please note that pregnancy can occur before the return of the first menstrual cycle following SCI.

For men, having children is possible. However, whether fathering children will be in the traditional manner or whether it will require some medical assistance depends upon level of injury, severity of injury and other factors. You will need to talk to your health care provider for information more specific to your case.