

GAME  READY®

The Complete Guide to
**A FASTER SPINAL AND
BACK INJURY RECOVERY**



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Introduction

Back and spinal injuries can be temporarily devastating for the person who suffers them. In addition to the pain that often comes with these types of injuries, you are often unable to perform certain daily functions while recovering. This might range from an inability to drive, to a requirement for extremely limited activity. In cases that require surgery, the recovery process is even more intense.

Regardless of the severity of the injury, taking steps to accelerate the healing process will help you return to normal activity as quickly as possible.



This e-book will describe some of the most common types of spinal and back injuries, the methods for treating them, the typical recovery timeline, and the benefits of including cold and compression therapy in your treatment plan.

Common Reasons for Spinal & Back Injuries

The human back is composed of the vertebral column, or spine, and several muscle groups, including the trapezius, latissimus dorsi, and the small muscles that facilitate movement of the spine. The spinal column is classified into three groups: the seven cervical vertebrae in the neck, the twelve thoracic vertebrae in the torso, and the five lumbar vertebrae in the lower back.

Back pain is often the result of factors such as traumatic injury, muscle strain, or hereditary disease. In addition to surgery, some of the most

common types of back injury include whiplash, degenerative spine disorders, and acute neck sprains.

Whiplash

Traumatic injury to the cervical spine, commonly known as whiplash, results from an abrupt distortion of the neck. This can be caused during a car accident, the recoil of a bungee jump, on a roller coaster, or by suddenly whipping your neck forward and/or backward. It is estimated that more than one million whiplash injuries are sustained each year due to car accidents.

When the head is quickly jerked forward and then backward, the lower cervical vertebrae (typically C-5 and C-6) go beyond their natural physiological limits and the surrounding soft tissue becomes damaged. Although it is possible for more severe conditions to develop from whiplash, it is usually a treatable injury.

Some of the symptoms of whiplash include:

- Pain in the neck and shoulders
- A “pins and needles” feeling in the arms and legs
- Headaches

In many cases, these symptoms appear the day after the traumatic injury occurred and not necessarily immediately after the incident. To determine whether you have whiplash, a doctor will perform a head and neck exam. They might also take x-rays to check for fractures and/or an MRI to look for soft tissue injuries.

When treated early, many people recover from whiplash relatively quickly, sometimes in a matter of days. However, if left untreated, symptoms can continue for six months or more, and the chronic pain is generally addressed with a rehabilitation program. The early treatment protocol typically includes:

- Temporary immobilization of the cervical spine with a neck brace
- Exercises to maintain rotation, flexion, and extension
- Acupuncture and/or massage
- Pain medication

As with any injury, it is important to seek medical attention sooner than later and to closely follow your doctor's instructions.

Degenerative Spine Disorders



The gradual loss of structure and function of the spine is often caused by degenerative spine disorders. This condition is commonly a result of the aging process or osteoarthritis, and less often by infection, tumors, or muscle strains. As the degeneration of the spine progresses, conditions such as a slipped disc or narrowing of the spinal canal might develop. These conditions put

pressure on the spinal cord and surrounding nerves, often resulting in pain and discomfort.

Although there is a range of degenerative spine disorders, some of the most common symptoms include:

- Limited range of motion
- Spinal deformity such as extreme curvature
- Muscle weakness
- Sensory loss

The types of pain you might feel with a degenerative spine vary significantly from sharp to chronic and can be associated either with movement or at rest, making it difficult to diagnose a condition based on the pain profile alone.

Doctors typically use a combination of x-rays, CT scans, and MRIs to examine all of the elements of the vertebral column before reaching a diagnosis. The treatment protocol varies dramatically depending on the type and extent of the injury and can range from surgery to physical therapy to spinal immobilization with a back brace.

Acute Neck Sprains and Strains

Certain activities can result in sprains or strains of the cervical spine, causing neck pain and other symptoms. Although the injury itself is generally not serious, the resulting pain can have a major impact on normal daily functions.

Some of the most common reasons for pain due to neck strain include:

- Staying in an awkward position for too long
- Sleeping in a position that strains the neck
- Carrying heavy objects
- Tripping, falling, or hitting your head

One of the reasons neck sprains and strains are so common is because they are caused by ordinary activities such as driving, working at a computer, carrying a suitcase, or holding a telephone with your shoulder.

The typical symptoms of a neck sprain or strain include difficulty moving the neck within the normal range of motion and associated pain. You might also feel stiffness in the neck and shoulders.

Some of the treatment options for this type of injury include:

- Application of cold
- Application of heat
- Analgesics
- Massage

Minor neck sprains and strains generally heal on their own within a few days if the cause of the injury is removed. If symptoms persist or get worse, always seek medical attention from a qualified professional.

Spinal Surgery

Occasionally, conditions such as a slipped disc, bone spurs, or scoliosis require back surgery. For most people, spinal surgery is a last resort when other courses of treatment are not effective for reducing pain.

Spinal surgery recovery varies depending on the type of injury and the type of surgery you have, but it might include:

- Immediate wound care at the surgical site
- Ice and heat therapy to control pain
- Wearing a back support
- Changing the way you perform certain activities
- Avoiding lifting heavy objects
- Limiting the intensity of certain activities
- Physical therapy
- Pain medication

This type of surgery comes with inherent risks such as infection, nerve damage, or blood clots, so it is important to discuss all of the options with your physician before making a decision.

Recovering from Spinal and Back Injuries

Every injury is different and the recovery process will vary from individual to individual, even for the same conditions. However, there are some standard approaches to recovering from back and spinal injuries.

Rest

Post-surgery recovery and overuse injuries such as neck sprains and strains require rest to aid the healing process. The more energy your body can devote to repairing damaged tissues in the back and neck, the faster your injury will heal. Talk to your doctor about the best body positions for you to be in to avoid exacerbating the injury. For example, you may need to avoid standing for long periods of time or staying in the same sleeping position for too long.

In some cases, too much rest is not recommended because it is important to keep the muscles in the neck and back strong and flexible. Talk to your

doctor or physical therapist about striking the right balance between rest and activity for your specific condition.

Immobilization

When joint immobilization is recommended as part of the recovery process, your doctor might prescribe a neck or back brace to prevent certain types of movement. Some of the reasons for joint immobilization include realigning the spinal cord, pain relief, or to support the neck after cervical spinal fusion. In many cases, the use of a neck or back brace is required only for a short period of time.

As with rest, sometimes too much immobilization is not beneficial because it is important to maintain range of motion.

Cryotherapy

Cold therapy, or cryotherapy, is a proven method for reducing the pain and swelling associated with traumatic injury or post-operative recovery. Applying cold as soon as possible after a traumatic event that impacted your neck or back will help control the initial swelling. Therapeutic cold also slows down cellular metabolism to help speed up the healing process and helps reduce the sensation of pain.

Compression Therapy

In addition to cryotherapy, compression also helps reduce pain and swelling. Although static compression is beneficial, active compression provides better results because it more effectively moves oxygenated blood to injured tissues and removes the cellular debris that is created during the healing process.



Pain Management

Always communicate openly with your doctor about pain management. In some cases, an over-the-counter medication might be sufficient to alleviate the discomfort you feel. In other cases, such as after spinal fusion surgery, some types of pain medication should be avoided because they inhibit the formation of bone and can have a negative impact on the recovery process.

Remember that medication is not the only method of pain management available to you. Cold therapy temporarily deadens nerve endings to reduce the perception of pain without the need for pharmaceuticals. Some patients also benefit from alternative treatments like massage or acupuncture.

Physical Therapy



Gentle exercises to improve or maintain range of motion are often an important part of the recovery process. Your physical therapist will specify which activities you should (and should not) do and for how long. Some of the exercises you might do include:

- Slowly turning your head to the left and right and applying gentle pressure to the chin to increase rotation

- Tilting the head from left to right and applying gentle pressure to the temple
- Bending your head forward to rest your chin on your chest
- Learning proper posture to reduce pain and avoid future injury

In general, it is not advisable to tilt the head backwards as this can increase compression on the discs in the cervical spine and possibly contribute to the problem.

Typical Injury Recovery Timeline

The time it takes to recover from a back or spinal injury depends on its cause and the course of treatment. A traumatic injury can take days or weeks to fully heal, while back surgery typically has a longer recovery period.

In the case of back surgery to remove all or part of a disc or widen part of the spinal column, symptoms tend to dissipate in a matter of weeks, with full recovery within several months. However, for spinal fusion surgery, the recovery period can take several months to a year.

More minor injuries such as neck sprains and strains often recover in a matter of days or weeks as long as you follow the recommended treatment protocol and eliminate the cause of the injury, when possible. In general, soft tissue injuries take about 6 weeks to fully heal.

Recovery from a traumatic neck injury such as whiplash varies depending on the severity of the injury and can range from days to months. In most cases, recovery from whiplash takes about 4-6 weeks, with a full recovery within 3 months for more severe cases.

Cold and Compression Therapy to Accelerate Recovery

Recovery from back surgery or a neck injury is an unpredictable path, but there are a few factors you can control along the way. Actively participating in your treatment is a good first step toward a speedy recovery, and employing proven techniques is an important part of the process. Active cold and compression therapy uses advanced technology to ensure cooling at a consistent temperature while fluids are pumped to and from the affected area.

There are many benefits of using active cold and compression to enhance the healing process, such as:

- Less pain and swelling
- Edema removal
- Enhanced fluid drainage
- Faster recovery from injury or surgery

The traditional methods of ice therapy and static compression are still effective, but modern technology has made it possible for your recovery to be both quicker and more comfortable.

How Cold Therapy Accelerates Healing

Cryotherapy has been used successfully for decades to provide the following therapeutic effects:

- **Improve blood flow** – The body's natural response to the application of cold is for the blood vessels to constrict, thereby restricting blood flow. Immediately following this constriction, the blood vessels quickly dilate to bring freshly oxygenated blood and healing nutrients back to the damaged tissues.
- **Decrease cellular metabolism** – Much like your body has a metabolism, individual cells also constantly go through a metabolic cycle that consumes and replenishes energy. When damaged tissues are repairing themselves, cells work extra hard and the amount of cellular waste that is created increases as more cells die in the process. The application of cold slows down this process and allows cells to work more slowly and consume less energy, thereby reducing the amount of cell death that occurs during the healing process.
- **Decrease pain** – Pain is a sensation that is felt because of the activity of nerve fibers. The application of cold reduces this activity, and therefore reduces the sensation of pain. This is particularly beneficial for people who want to reduce neck or back pain while limiting the amount of medications they take.

Better blood flow, slower cellular metabolism, and less pain all contribute to a faster and more comfortable healing process for back and spinal injuries as the body's natural inflammatory response is controlled.

The traditional method of cold therapy application is ice or gel packs. Although these are effective, they come with limitations such as gradual warming as heat is transferred from your body to the ice pack and skin damage because of temperatures that are too cold.

How Active Compression Accelerates Healing

Static compression is often used in combination with cold therapy to help reduce pain and swelling. Adding an active component to compression makes it even more effective and provides the following benefits:

- **Removal of edema** – Part of the body's natural inflammatory response after trauma or surgery is to generate excess fluid, which leads to swelling and associated pain. Active compression creates a pumping effect that draws this excess fluid away from the injured area so the damaged tissues have more ability to heal themselves.
- **Better blood flow** – The same pumping effect that cryotherapy creates is enhanced with active compression to bring fresh blood and nutrients to the injured area.
- **Improvement of cryotherapy** – Cold therapy alone is very effective, but the addition of active compression makes it even more powerful. Compression improves the contact and coverage of the cold source, and provides an insulating effect so the therapeutic cold can penetrate deeper.

The combination of cold therapy and active compression on the cervical spine or back can help you heal faster from back surgery or traumatic injury, and reduce the pain and swelling associated with degenerative spine disorders.

Game Ready® Wraps for Back and Spinal Injuries

Game Ready® has worked closely with surgeons, physical therapists, and chiropractors to develop two specialized wraps for back and spinal injuries: The C-T Spine Wrap and the Back Wrap. Both of these Wraps can be used together in treatment with a dual-hose, if necessary.

Some of the benefits of using Game Ready for back and spinal injuries include:

- Innovative design to enable cold and compression therapy for acute injury and post-operative recovery of the cervical and thoracic spinal areas, trapezius, upper pectorals, side of neck and lumbar region.
- Patented technology enables targeted compression for improved contouring, better surface contact, and more effective cooling while limiting circumferential compression and preventing constriction of the chest and spine.
- Patent-pending technology delivers continuous cooling throughout integrated sections of the Wraps (back, neck collar, and upper pectoral muscles), enabling superior coverage of complex treatment areas.



Game Ready Wraps use patented ATX®(Active Temperature Exchange) technology to maintain a constant therapeutic cold temperature. Each specialized Wrap allows cold water to circulate through an ice reservoir around the entire area enclosed by the wrap, and back to the ice reservoir.

This system enables the therapeutic cold to penetrate more deeply and last longer than ice packs alone, enhancing all of the healing benefits of cryotherapy.

In addition to providing consistent cold, Game Ready Wraps use the patented ACCEL® (Active Compression and Cold Exchange Loop) technology integrating compression and cold therapies like never before. Both the temperature and pressure are adjustable, so you can dial in the exact combination of cold and compression you need to heal faster.

Some of the features specific to the C-T Spine Wrap include:

- Optional insulation to avoid cooling of the ears while maintaining contact with the neck
- Plastic supports to enhance cooling by improving contact with the neck and spine
- An inner heat exchanger with integrated neck collar, outer sleeve, and easily adjustable/expandable chest straps for versatility, fit, and comfort
- An ergonomic center chest opening for easy application and removal

If you have experienced a traumatic neck injury, degenerative spine disorder, or recent back surgery, talk to your doctor about the many benefits of Game Ready, or contact us today to learn more and locate a provider near you.