

How Sacral Fractures Are Diagnosed and Treated After a Car Accident

The Break Sits at the Base of the Spine, Where Fracture Stability and Nerve Function Can Change the Treatment Plan

A sacral fracture can be easy to underestimate because the sacrum is buried deep at the back of the pelvis. After a serious car crash, the first complaint may sound like ordinary low-back or buttock pain. The problem is that a fracture in this location can involve the pelvic ring, the sacroiliac joints, the nerve roots that pass through the sacrum, or the connection between the spine and pelvis.

That makes diagnosis more complicated than finding a crack on an X-ray. Doctors need to know where the fracture runs, how far the bone has moved, whether the pelvis remains stable, and whether the injury is compressing or stretching nerves. Those answers can separate a fracture treated with protected weight bearing from one that needs screws, lumbopelvic fixation, or urgent decompression.

[Gary Martin Hays & Associates](#) represents people throughout Georgia whose [car accident injuries](#) involve serious fractures and neurologic complications. With a sacral fracture, the medical record needs to capture much more than the diagnosis itself because the long-term outcome can depend on the exact fracture pattern and the symptoms that follow it.

Key Takeaways About Sacral Fractures

- **CT usually matters more than a plain X-ray.** Sacral fractures are easy to miss on routine radiographs, while CT is the standard test for defining the fracture pattern after high-energy trauma.
- **The neurologic exam can change the urgency.** New leg weakness, saddle numbness, urinary retention, incontinence, or bowel changes can signal nerve-root or cauda equina involvement and need prompt evaluation.
- **Not every sacral fracture needs surgery.** Stable, minimally displaced injuries may be treated with pain control, protected weight bearing, and follow-up. Unstable or displaced injuries may need fixation.
- **The fracture pattern guides the operation.** Surgeons may use percutaneous sacroiliac or transsacral screws, open fixation, or lumbopelvic stabilization depending on pelvic and spinopelvic stability.
- **Healing the bone doesn't always end the recovery.** Nerve symptoms, gait changes, SI-region pain, chronic pain, and work restrictions can continue after the fracture unites.

What Is the Sacrum and Why Does a Fracture There Matter?

The sacrum is the triangular bone at the bottom of the spine. It sits between the two halves of the pelvis and connects with them at the sacroiliac joints. Above it is the lumbar spine. Below it is the coccyx. Several sacral nerve roots travel through openings in the bone on their way to the legs, pelvic organs, bowel, bladder, and sexual structures.

A high-energy crash can therefore create several problems at once. The bone can fracture, the pelvic ring can lose stability, the [sacroiliac joint](#) can be disrupted, and nearby nerve roots can be injured. Sacral fractures are also frequently associated with other [pelvic fractures](#) rather than occurring as a completely isolated break.

A major review of [sacral fractures](#) notes that these injuries occur with a substantial share of pelvic ring injuries and can be missed because the sacrum is difficult to see on standard radiographs, especially when a badly injured patient has several more obvious injuries competing for attention.

Car Wrecks Usually Cause Sacral Fractures Through High-Energy Force

A sacral fracture after a motor vehicle collision doesn't always come from a direct blow to the tailbone. More often, force travels through the pelvis and spine. A side impact can compress one side of the pelvic ring. A frontal collision can load the pelvis through the legs or seat. A rollover can combine compression, rotation, and vertical loading.

The direction of the force influences the fracture. Some lines run vertically through one side of the sacrum. Others cross the central canal. U-shaped or H-shaped patterns can separate the upper sacrum and spine from the lower pelvis, creating what doctors call spinopelvic dissociation.

That last pattern is particularly important because it can be mechanically unstable and is more likely to involve neurologic injury. The crash report may describe one collision, but the CT can reveal a much more complicated injury to the structure that transfers weight between the spine and pelvis.

Plain X-Rays Can Miss Sacral Fractures

Pelvic X-rays are often part of the initial trauma workup, but they have important limits. The sacrum overlaps with bowel, pelvic structures, and other bones on a two-dimensional image. A nondisplaced fracture or a line through the sacral foramina may be difficult to see.

That's why CT has become central to diagnosis after high-energy pelvic trauma. A radiology review in [Radiographics](#) describes CT as the standard of care for diagnosing and characterizing sacral fractures. CT can show the fracture line, displacement, foraminal narrowing, pelvic-ring disruption, and fracture patterns that affect stability and surgical planning.

The distinction can also matter in a personal injury claim. A first X-ray reported as negative doesn't prove that later sacral pain came from something unrelated to the crash. [Medical imaging after a Georgia car accident](#) has to be interpreted alongside the mechanism, examination, later CT findings, and the full symptom timeline.

MRI Has a Different Job When Nerves or Soft Tissue Are the Concern

CT is excellent for mapping the bone, but it doesn't answer every neurologic question. When a patient has new weakness, sensory loss, bowel or bladder changes, or another sign that nerve roots may be compressed, MRI can show the lumbosacral canal, nerve roots, hematoma, and surrounding soft tissue in greater detail.

A 2023 expert [consensus on sacral fracture management](#) identifies CT and MRI as useful tools when a complete neurologic examination can't be performed and specifically emphasizes the importance of MRI when nerve compression is suspected. The same consensus says lower-extremity EMG isn't useful as an acute diagnostic test immediately after the injury.

That timing point matters. Electrodiagnostic testing can become useful later in selected nerve injuries, but it isn't a substitute for urgent imaging and neurologic assessment when a fracture may be compressing the cauda equina or sacral roots.

Doctors Pay Close Attention to Where the Fracture Crosses the Sacrum

One traditional system, the Denis classification, divides the sacrum into three zones. Zone I fractures are lateral to the neural foramina. Zone II fractures pass through the foramina. Zone III fractures extend into the central sacral canal.

The classification isn't just a naming exercise. Fractures that move closer to or through the neural structures tend to raise greater concern about nerve injury. More modern systems also consider displacement, transverse components, pelvic instability, spinopelvic dissociation, and the patient's neurologic status.

In other words, two people can both have a diagnosis of "sacral fracture" and face very different recoveries. One may have a stable fracture through the sacral ala. Another may have a displaced U-shaped fracture that disconnects the spine from the pelvic ring and threatens several nerve roots.

The Neurologic Exam Can Be Just as Important as the CT

A careful examination looks beyond pain. Doctors may test leg strength, sensation, reflexes, rectal tone when appropriate, perineal sensation, and the ability to urinate normally. The purpose is to determine whether the fracture has affected the lumbosacral plexus, individual nerve roots, or the cauda equina.

Symptoms that deserve urgent attention include:

- **New Leg Weakness:** Difficulty lifting the foot, pushing off, standing, or walking can indicate motor nerve involvement rather than pain alone.
- **Saddle Numbness:** Loss of sensation around the buttocks, groin, or perineum can point to injury involving lower sacral nerve roots.
- **Urinary Retention or Incontinence:** A new inability to empty the bladder, loss of bladder control, or major change in urinary sensation can be a neurologic emergency.
- **Bowel Dysfunction:** New loss of bowel control or inability to sense bowel function can reflect severe sacral nerve involvement.
- **Progressive Radiating Pain or Numbness:** Worsening leg pain, tingling, or sensory loss may suggest nerve-root compression and can change the urgency of treatment.

These symptoms overlap with [cauda equina syndrome](#), which requires emergency evaluation. A person doesn't have to be completely unable to walk for the condition to be serious.

Stable, Minimally Displaced Fractures May Heal Without Surgery

Not every traumatic sacral fracture needs fixation. A stable fracture with little displacement, no major pelvic-ring instability, and no concerning neurologic deficit may be treated without surgery.

The plan can include pain medication, temporary limits on weight bearing, crutches or a walker, blood-clot prevention when appropriate, and repeat imaging or orthopedic follow-up. Physical therapy is usually introduced according to fracture stability and the patient's other injuries rather than on a single universal timetable.

Even a nonoperative fracture can be disabling for weeks or months. Sitting, rolling in bed, climbing stairs, standing from a chair, and walking can all load the sacrum. This is one reason a fracture that looks modest on imaging can still create meaningful [long-term impairment](#) during recovery.

Unstable or Displaced Fractures Often Need Surgical Fixation

Surgery becomes more likely when the fracture is displaced, the pelvic ring is unstable, the spine is no longer securely connected to the pelvis, or neurologic structures are threatened. The exact operation depends on the geometry of the injury.

For some vertical fractures, surgeons can place iliosacral or transsacral screws through small incisions under imaging guidance. These screws cross the posterior pelvic ring and stabilize the sacrum relative to the ilium.

More complex U-shaped or H-shaped injuries may require lumbopelvic fixation, in which rods and screws connect the lower lumbar spine to the pelvis. Some constructs combine spinal and

pelvic fixation in a technique often called triangular osteosynthesis. These stronger constructs are intended to control an injury that behaves more like a separation between the spine and pelvis than a simple isolated crack.

Nerve Decompression Isn't Automatic With Every Sacral Fracture

A common misconception is that any numbness or leg pain automatically means a surgeon has to perform a laminectomy. The decision is more specific than that.

The expert consensus on traumatic sacral fractures recommends early reduction and fixation when a sacral fracture is associated with cauda equina syndrome. It also supports decompression when a displaced fracture is accompanied by a complete or worsening neurologic deficit and imaging shows nerve-root compression.

By contrast, an isolated incomplete radicular deficit isn't automatically an indication for laminectomy after the fracture has been reduced. Doctors need to match the neurologic findings to the displacement and imaging evidence rather than operating on symptoms in isolation.

That distinction can become important months later if a patient is still dealing with [nerve pain](#), weakness, or numbness. The operative report, preoperative neurologic exam, and CT or MRI findings can help explain what the nerves were exposed to at the time of injury.

Imagine a Crash That Produces a U-Shaped Sacral Fracture

Picture a scenario involving a driver whose vehicle is struck hard from the side and then pushed into a concrete barrier. The pelvis absorbs force from more than one direction. In the emergency department, the driver reports severe low-back and pelvic pain and tingling in both legs.

The first pelvic X-ray doesn't make the full injury obvious. CT later shows bilateral vertical sacral fractures connected by a transverse fracture, creating a U-shaped pattern. The upper sacrum has shifted relative to the pelvis, and MRI shows narrowing around the sacral nerve roots.

Because the injury is unstable and the neurologic symptoms are progressing, the surgical team reduces the fracture, stabilizes the spine-pelvis connection, and decompresses the affected neural structures. Months later, the bone has united, but the driver still has weakness, altered sensation, and difficulty sitting or standing for a full workday.

That hypothetical shows why the words "sacral fracture" don't tell an insurer what the injury is worth. The medical story includes instability, surgery, nerve involvement, rehabilitation, work restrictions, and the possibility that some neurologic symptoms may persist after the bone itself has healed.

Recovery Depends on Stability, Nerve Injury, and Associated Trauma

There isn't one recovery schedule for sacral fractures. A stable fracture treated without surgery can follow a very different course from spinopelvic dissociation repaired with a major fixation construct.

Early rehabilitation may focus on transfers, safe use of a walker or crutches, preventing deconditioning, and working within weight-bearing restrictions. Later therapy can address gait, core and hip strength, endurance, balance, and the ability to sit, bend, lift, or return to work.

Nerve recovery can lag behind bone healing. A fracture may unite while numbness, weakness, burning pain, bowel or bladder changes, or sexual dysfunction remain. Research on [sacral fractures with associated injuries](#) explains that lower sacral nerve-root injuries can affect bowel, bladder, and sexual function and may be underrecognized during the initial trauma evaluation.

Persistent Pain Doesn't Always Mean the Fracture Failed to Heal

Months after a crash, imaging may show that the fracture has united even though the person still has pain. That doesn't automatically mean the symptoms are unrelated.

The original trauma can leave nerve irritation, altered gait, hardware-related discomfort, pelvic asymmetry, muscle weakness, or SI-region pain. A person may also compensate for months of limited weight bearing in ways that change how the hips and low back move.

The challenge is figuring out which structure is driving the remaining symptoms. Follow-up CT or X-rays, MRI when neurologic concerns persist, physical examination, and the response to rehabilitation can help distinguish fracture healing from ongoing [spinal or pelvic dysfunction](#).

Work Restrictions Can Continue Long After Hospital Discharge

A sacral fracture can make physical work particularly difficult because the sacrum transfers load between the trunk and lower body. Jobs involving driving, lifting, climbing, prolonged standing, or repeated bending may remain restricted even after a person can walk independently.

If permanent weakness, nerve dysfunction, or pain prevents someone from returning to the same occupation, the financial loss can extend far beyond a few missed paychecks. A claim for [lost earning capacity](#) can address the reduction in future earning ability when the medical and vocational evidence supports it.

Catastrophic sacral injuries may also lead to future surgeries, mobility equipment, long-term therapy, home modifications, or assistance with daily activities. When those needs are expected to continue, a [life care planner](#) can help organize the future-care picture around the recommendations of the treating medical team.

The Injury Claim Should Reflect More Than the Fracture Line

A sacral fracture claim becomes much clearer when the medical evidence is organized around function. The CT explains the fracture. The neurologic examination explains whether the nerves were affected. Operative reports show what had to be stabilized or decompressed. Therapy records show what the person could and couldn't do during recovery.

That documentation also matters when an insurer focuses on the fact that a fracture eventually healed. Bone union isn't the same thing as full neurologic or functional recovery. A person can have a healed sacrum and still live with weakness, numbness, chronic pain, gait changes, or restrictions that alter work and daily life.

At Gary Martin Hays & Associates, we can gather that full record, connect the crash forces to the orthopedic findings, and make sure the claim accounts for the consequences that continue after the first round of treatment.

A Serious Sacral Fracture Needs Both Orthopedic and Neurologic Attention

Sacral fractures sit at a complicated intersection of the spine, pelvis, SI joints, and nerve roots. That is why the diagnosis often depends on CT rather than a plain X-ray and why the treatment can range from observation to complex lumbopelvic fixation.

If you were diagnosed with a sacral fracture after a Georgia car accident, [contact us](#) for a free consultation. If you decide to hire us, we handle the case on contingency rather than sending hourly legal bills while you're trying to recover. Our attorney's fee is paid from the compensation we obtain for you, and if the case doesn't result in a recovery, you won't owe us anything.