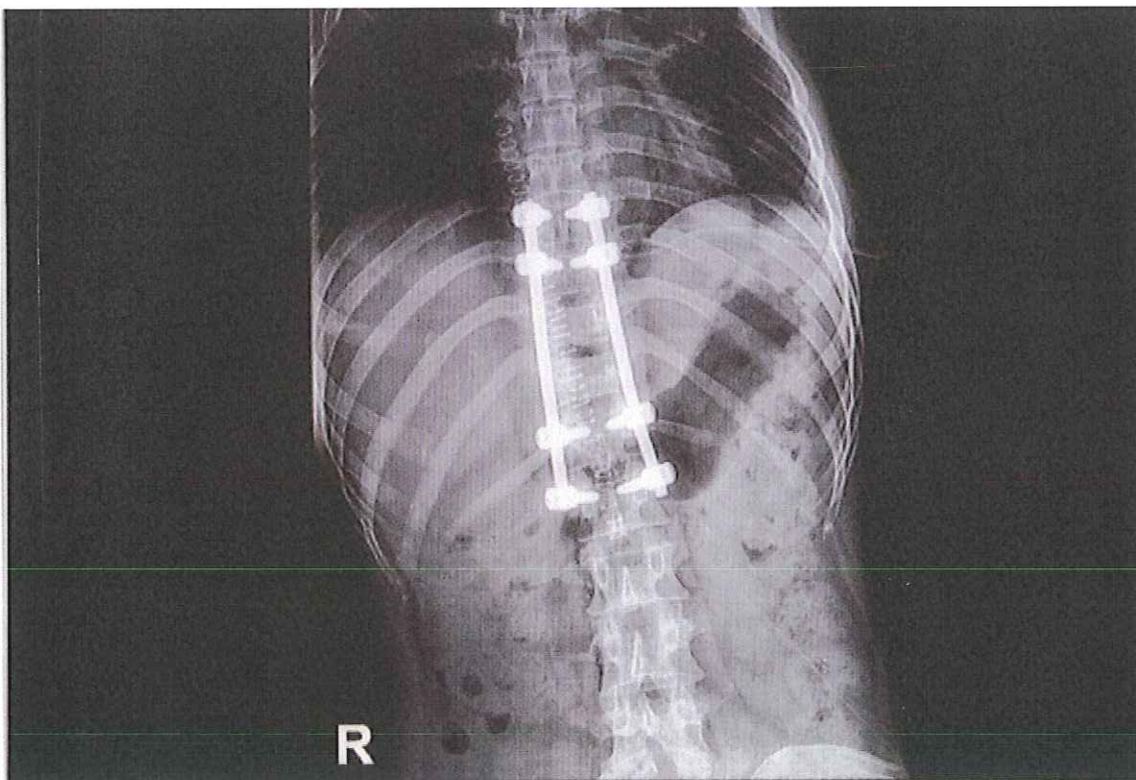




Spinal Fusion Instrumentation Removal: Pros and Cons

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Though [spinal fusion](#) (/treatments/surgery/what-spinal-instrumentation-spinal-fusion) is one of the most common types of spine surgery, it's not without risks. And, spinal instrumentation problems are among the most feared and reported complications of this type of surgery. When your surgeon discovers an issue with your spinal instrumentation, he or she may recommend removing the instrumentation or leaving it in place. Why would your doctor suggest one or the other? I'll explain why in this article.



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But, First: A Simple Definition of Spinal Instrumentation

Spinal instrumentation is any combination of rods, plates, cages, interbody spacers, wires, hooks, and screws used to stabilize the spine during the bone fusion process. They work by holding the affected spinal bones in place until they fuse together as one bone. Think of the instrumentation as an internal cast holding the bones stable until they heal, much like a cast on a broken arm.

Your surgeon may refer to spinal instrumentation by another term, such as spinal implant or spinal hardware.

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Spinal Instrumentation: When Things Go Wrong

After you undergo a spinal fusion, you'll meet with your surgeon periodically to monitor how your spine is healing after surgery. Imaging scans during these visits will illuminate any problems with your spinal instrumentation.

However, it's important to call your surgeon between those appointments if you experience pain outside what was described to you as typical post-operative pain. Severe pain could indicate a problem with your instrumentation, including loosening, displacement, infection, or irritation of the surrounding spinal structures.

Below are some of the most common spinal instrumentation problems:

- **Loosening of instrumentation:** This often occurs when the bones are not healing or fusing together properly. Infection is another common cause.
- **Broken instrumentation:** Instrumentation can break when the bones are not healing, and the rods or screws fatigue. This process is somewhat like a wire coat hanger you continuously bend until it breaks.
- **Moved instrumentation:** Weak bone ([osteoporosis \(/conditions/osteoporosis/\)](#)) can cause spinal instrumentation to shift or plough through the bone out of the proper position.
- **Subsidence of a cage or interbody device:** Weak bone is the common culprit for this problem.

Certain types of spinal fusion surgeries increase your risk for having an instrumentation complication. The more spinal levels instrumented increases your risk of having a problem with the instrumentation. Also, the most vulnerable level of your spine to these types of complications is the lumbosacral junction (L5-S1, where the lumbar spine and sacrum meet), followed by the thoracolumbar junction (T12-L1), where the thoracic spine and lumbar spine meet). Patients who have [osteoporosis \(/conditions/osteoporosis/causes-osteoporosis/\)](#) and with weak bones, the immediate level above the surgery site are also vulnerable to instrumentation complications.

Why Your Surgeon May Remove Your Spinal Instrumentation

Your surgeon may decide to remove your spinal instrumentation for any of these reasons:

- If the pain is relentless
- If the hardware has loosened
- If the hardware has become infected
- If the hardware is irritating other tissues such as the nerves or spinal cord

Your surgeon may refer to this second surgery as a revision surgery or a reconstruction surgery. These terms are frequently interchangeable and used together, but there are slight differences between two.

- Revision surgery means removing or exchanging the spinal instrumentation.
- Reconstruction surgery means rebuilding the spine.

Spine surgery to remove instrumentation is not typically considered an emergency unless there is risk of injury to the spinal cord or nerves by not doing the surgery. This may occur if the instrumentation has moved and is putting pressure on the nerves.

Why Your Surgeon May Recommend Not Removing Your Spinal Instrumentation

While it may be clear that problematic spinal instrumentation is causing your pain after surgery, your surgeon may recommend not removing the instrumentation. Why? Because undergoing a second surgery puts you at risk for additional complications. Remember, spine surgery is a major procedure and should not be taken lightly. Plus, removing the instrumentation alone may not eliminate your pain.

Ultimately, it's essential to have an open and honest dialogue with your spine surgeon about the pros and cons of undergoing a second surgery to remove spinal instrumentation. Simply because the instrumentation did not perform as expected may not warrant an additional surgery. Understanding the clear risks and benefits of undergoing a second surgery will help you make a decision that is best for you. Always remember "the decision is far more important than the incision."

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