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# Managing Pain after Spinal Fusion: Medications and Techniques

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## Description

Prior to the surgery, the patient undergoes a thorough evaluation, including medical history assessment, physical examination, and diagnostic tests such as X-rays, MRI scans, or CT scans. These help the surgeon determine the precise location and extent of the spinal problem. Once in the operating room, the patient is administered general anesthesia to ensure comfort and unconsciousness throughout the procedure. Sometimes, local anesthesia with sedation may be used instead. The surgeon makes an incision in the back, usually over the affected area of the spine. The length and location of the incision depend on the specific condition being treated. The surgeon may harvest bone graft material from the patient's own body (autograft) or use a synthetic or cadaveric bone graft (allograft). Autografts are often preferred as they have a higher chance of successful fusion due to their living bone cells. The surgeon removes any damaged or diseased discs or bone spurs that may be compressing nerves or causing instability in the spine. This helps create space for the bone graft and promotes proper alignment of the vertebrae [1].

The bone graft material is placed between the adjacent vertebrae or within the space left by the removed disc. The graft acts as a scaffold, promoting the growth of new bone and facilitating fusion. In many cases, the surgeon uses screws, rods, plates, or cages to provide additional stability during the fusion process. These implants are usually made of metal and help to hold the vertebrae in the correct position while the fusion occurs [2]. Once the bone graft and instrumentation are in place, the surgeon closes the incision with sutures or staples. Sterile dressings are applied to the wound to promote healing. After the procedure, the patient is taken to the recovery room, where vital signs are monitored. Pain medications and antibiotics may be administered to manage discomfort and prevent infection. The patient may need to wear a brace or undergo physical therapy to support the spine during the healing process. Over the course of several months to a year, the bone graft stimulates the growth of new bone, fusing the adjacent vertebrae together. During this time, it is essential to follow post-operative instructions, which may include restrictions on physical activity and the use of medications to aid in the healing process [3].

Spinal fusion is a complex procedure, and the specific details may vary depending on the patient's condition and the surgical technique employed. It is crucial to consult with a qualified spine surgeon to discuss individual circumstances, risks, benefits, and potential outcomes of the procedure. In this approach, the surgeon places the bone graft between the transverse processes of the vertebrae. It is a common technique for fusing the lumbar (lower) spine [4]. This technique involves removing the intervertebral disc entirely and replacing it with a bone graft or a cage-like device filled with bone graft material. Interbody fusion can be performed from various approaches, including anterior (from the front), posterior (from the back), or lateral (from the side) approaches. In ALIF, the surgeon accesses the spine through an incision in the lower abdomen. This approach allows for the removal of the damaged disc and insertion of the bone graft or cage into the empty disc space. Posterior Lumbar Interbody Fusion (PLIF) and Transforaminal Lumbar Interbody Fusion (TLIF) approaches involve accessing the spine from the back. In PLIF, the disc is removed from the back of the spine, while in TLIF; the disc is removed from the side. Both procedures involve inserting the bone graft or cage into the disc space [5].

## References

1. Fell, Daniel, Elias Diarbakerli and Paul Gerdhem. "Serum metal ion levels following spinal deformity surgery: A case-control study of 182 individuals." *Eur Spine J* 31 (2022): 3036-3041.
2. Kelmer, Grayson, Andrea H. Stone, Justin Turcotte and Paul J. King. "Reasons for revision: Primary total hip arthroplasty mechanisms of failure." *JAAOS- J Am Acad Orthop Surg* 29 (2021): 78-87.
3. Leyssens, Laura, Bart Vinck, Catherine Van Der Straeten and Floris Wuyts, et al. "Cobalt toxicity in humans—A review of the potential sources and systemic health effects." *Toxicol* 387 (2017): 43-56.
4. Paustenbach, Dennis J., Brooke E. Tvermoes, Kenneth M. Unice and Brent L. Finley, et al. "A review of the health hazards posed by cobalt." *Crit Rev Toxicol* 43 (2013): 316-362.
5. Gessner, Bradford D., Thomas Steck, Erik Woelber and Stephen S. Tower. "A systematic review of systemic cobaltism after wear or corrosion of chrome-cobalt hip implants." *J Patient Saf* 15 (2019): 97.

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