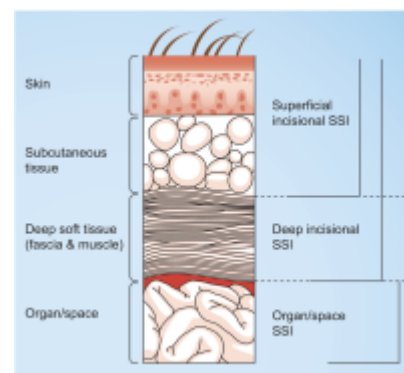


Surgical site infection risk factors



- [Impact of Dual Antibiotic Prophylaxis on 90-Day Surgical Site Infection Rates Following Posterior Spinal Fusion for Juvenile Scoliosis: A Single-Center Study of 296 Cases](#)
- [Surgical site infections with multi-drug resistant organisms in patients undergoing neurosurgery: a retrospective comparative cohort study from Turkey](#)
- [Risk factors for surgical site infection in patients after hysterectomy: A systematic review and meta-analysis](#)
- [Affordable Irrigation-Drainage System for Early Postoperative Adhesion and Surgical Site Infection Prophylaxis in Posterior Lumbar Surgery: A Technical Note](#)
- [Patient nutritional status is associated with surgical site infections in meningioma patients undergoing craniotomy for tumor resection](#)
- [Effect of the number of door openings in the operating room on surgical site infections: individual-patient data meta-analysis](#)
- [Risk Factors and Outcomes of Surgical Site Infections of the Spine: A Retrospective Multi-Center Analysis](#)
- [Impact of Hypothyroidism on Short-Term and Long-Term Outcomes After Lumbar Fusion: A Nationwide Propensity-Matched Cohort Study](#)

Emergency, clean-contaminated [wound](#) or dirty surgery, operative time >4 hours, reoperation, and implanted materials are independent predictive factors for postoperative infections after craniotomy ¹⁾.

Having other medical problems or diseases

Being an elderly adult

Being overweight

Smoking

Having cancer

Having a weak immune system

Having diabetes

Having emergency surgery

Having abdominal surgery

Of 16,513 patients in a study, 1.20% required at least one further operation to treat a [surgical site infection](#) (SSI). Wound [leak](#) (odds ratio [OR]: 27.41), [dexamethasone](#) use (OR: 3.55), [instrumentation](#) (OR: 2.74) and [operative time](#) >180 minutes (OR: 1.85) were statistically significant risk factors for [reoperation](#) ²⁾.

It is still discussed if the dual use increases the [risk](#) of [surgical site infections](#) (SSI). Increase of [extent of tumor resection](#) using [intraoperative magnetic resonance imaging](#) (iMRI) is evident. SSI rate is within the normal range of [neurosurgical procedures](#). A dual-use iMRI suite is a safe concept ³⁾.

Despite the general consensus on the use of single-dose antimicrobial prophylaxis (AMP) in instrumented spine surgery, evidence supporting this approach is not robust. Analysis of individual categories of data suggests that 72 h prophylaxis was the most important factor for minimizing the risk of wound infection in a study group ⁴⁾.

Cassir et al. identified the following independent risk factors for SSI postcranial surgery: intensive care unit (ICU) length of stay ≥ 7 days (odds ratio [OR] = 6.1; 95% [confidence interval](#) [CI], 1.7-21.7), duration of drainage ≥ 3 days (OR = 3.3; 95% CI, 1.1-11), and Cerebrospinal fluid fistula (OR = 5.6; 95% CI, 1.1-30).

For SSIs postspinal surgery, they identified the following: ICU length of stay ≥ 7 days (OR = 7.2; 95% CI, 1.6-32.1), [coinfection](#) (OR = 9.9; 95% CI, 2.2-43.4), and duration of drainage ≥ 3 days (OR = 5.7; 95% CI, 1.5-22) ⁵⁾.

Subcutaneous fat thickness

[Nuchal thickness](#) and [subcutaneous](#) fat thickness are associated with [SSI](#), in patients undergoing [posterior cervical spine surgery](#). The risk of [infection](#) increases with very thin and very thick nuchal measurements ⁶⁾.

Local subcutaneous fat thickness is a better indicator for predicting incision infection compared with BMI. In diabetic patients undergoing lumbar surgery, actively controlling blood glucose fluctuations, restoring normal diet early after surgery, and optimizing surgical procedures to reduce trauma and operative time can effectively reduce the risk of infection after posterior lumbar surgery ⁷⁾.

Many patients carry a label of penicillin allergy, either because they have experienced an allergic reaction to penicillin in the past or because they were mistakenly labeled as allergic due to other symptoms. This can result in the use of alternative, less effective antibiotics for surgical prophylaxis or treatment of infections, which can increase the risk of adverse outcomes such as [surgical site infections](#).

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