

Transforaminal Lumbar Interbody Fusion

Understanding Your Risks

This document outlines the risks and potential complication rates associated with **transforaminal lumbar interbody fusion (TLIF) with pedicle screw fixation**. The following information is based on recent evidence from large studies, systematic reviews, and national registry data.

Common Risks and Estimated Incidence:

- **Any complication:** 13–25% (includes both minor and major complications)[1][2][3][4]
- **Durotomy (tear in the covering of the spinal cord or nerves):** 1.9–14.3% (higher in revision or multilevel surgery)[1][3][5][6]
- **Surgical site infection (superficial/deep):** 0.2–3.8% (higher in revision and multilevel cases)[1][3][7]
- **Symptomatic screw misplacement:** 2.1%[1]
- **Interbody cage migration or malposition:** 1.8%[1][8]
- **Hardware complications (screw loosening, rod fracture):** 2–7%[8][9]
- **Pseudoarthrosis (nonunion):** 0.9–5% at 2–5 years[4][10]
- **Reoperation (within 2–5 years):** 9–10% (for adjacent segment disease, hardware failure, or nonunion)[4][10][11]
- **Readmission (within 30–90 days):** 4–7%[7]
- **Nerve root injury or new neurological deficit:** 1–4%[6][8]
- **Bleeding or hematoma:** Less than 1%[3][7]
- **Wound dehiscence:** Less than 1%[7][11]
- **Deep vein thrombosis (DVT)/pulmonary embolism (PE):** Less than 1%[7]

Serious or Rare Risks:

- **Permanent neurological deficit:** Less than 1%[6][8]
- **Vascular injury:** Rare, less than 1%[8]

- **Sepsis:** Less than 1%[\[7\]](#)

- **Death:** Extremely rare, less than 0.2%[\[7\]](#)

Risk Factors for Increased Complications:

- **Revision surgery and multilevel fusion** increase the risk of durotomy, infection, and hardware complications.[\[1\]\[3\]\[10\]](#)

- **Advanced age, higher BMI, diabetes, tobacco use, and osteoporosis** are associated with higher complication rates and poorer outcomes.[\[2\]\[9\]\[10\]](#)

- **Use of bone morphogenetic protein (BMP)** may increase the risk of certain complications, such as radiculitis or heterotopic bone formation.[\[8\]\[10\]](#)

Patient Acknowledgment:

By signing below, you acknowledge understanding of the above risks, their estimated incidence, and the potential for both common and rare complications associated with transforaminal lumbar interbody fusion with pedicle screw fixation. All questions have been answered to your satisfaction.

Signature: _____ **Date:** _____

Patient Name: _____ **DOB:** _____

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