

Disc arthroplasty, Surgical approaches

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A surgical approach requires knowledge of surface anatomy, radiological anatomy and finally surgical approach anatomy. Patients expect a cosmetically acceptable scar leading to minimally invasive approaches. Current disc replacements, however, require a strict anterior approach. The exact position of the ilio-cava junction and left iliac vein has to be known. It is essential to have a table which is adjustable during surgery, allowing for orthogonal fluoroscopy. The surgical approaches are different for a one level L5-S1 and for more than one level. The two surgical approaches are discussed. Special attention has to be given to the superior hypogastric plexus: cauterization has to be avoided, especially in males (retrograde ejaculation). Other potential complications comprise vascular injuries, urethral injuries, postoperative ileus, and abdominal hernias. Limitations to the indication of disc replacement surgery are not yet established according to 'evidence based' principles and are mostly flowing out of 'common medical sense': one needs facet joints devoid of advanced osteoarthritis, good quality abdominal vessels and therefore a relatively young patient, spondylolysis or listhesis are considered to be contra indications as are spinal stenosis, major radiculopathy and a history of anterior (retroperitoneal) surgery. Previous spinal surgery other than discectomy at the painful level is also thought to be a contra indication as are fracture, spinal tumor, general or local infection, evolving autoimmune disease, pregnancy, morbid obesity, psychiatric disturbances, and major bone disease.