

Adult spinal deformity outcome

The mean preoperative ODI was 48.6, and the mean postoperative reduction in ODI was 24.1. The mean preoperative VAS score was 7.7 with a mean postoperative decrease of 5.2. There were 311 reported complications for 815 patients (38%) and 5 deaths for 659 patients (< 1%).

Elderly patient outcomes were inconsistent in the published studies. Overall, most elderly patients obtained favorable outcomes with low operative mortality following surgery for adult spinal deformity ¹⁾.

The growth of these complex deformity procedures is partially driven by the poor ability of nonoperative management of ASD to improve pain and function. A recent study of adult patients with scoliosis treated using non-operative techniques found that there were no significant improvements in any of the health-related quality of life (HRQOL) outcome measures over the evaluation period ²⁾.

Op treatment for ASD can provide significant improvement of HRQL measures at min 2-year follow-up. In contrast, nonop treatment appears to at best maintain presenting levels of pain and disability ³⁾.

Poor HRQOL uniformly determined operative treatment for ASD. Spinal deformities differed between age groups. Younger OP had larger scoliosis but similar [spino-pelvic alignment](#) (SPA) and sagittal vertical axis (SVA) than nonoperatively (NON). Older OP had similar scoliosis but worse SVA than NON. Age associated differences for poor HRQOL must be considered when evaluating ASD patients ⁴⁾.

High prevalence of residual [cervical spine deformity](#) (CD) has been identified after surgical treatment of [adult spinal deformity](#). Development of new onset CD is less understood and its clinical impact unclear.

A total of 47.7% of patients without preoperative CD developed new onset postoperative CD after thoracolumbar surgery. Independent predictors of new onset CD at 2 years included diabetes, higher preoperative T1 slope minus cervical lordosis, and ending instrumentation above T4. Significant improvements in health-related quality of life scores occurred despite the development of postoperative CD ⁵⁾.

For elderly patients with ASD, [osteoporosis](#) increases the risk of revision surgery, while [BMP](#) use decreases the risk. Other comorbidities were not found to be significant predictors of long-term revision rates. It is expected that within 5 years following the index procedure, over 30% of patients will require revision surgery ⁶⁾.

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Drazin D, Shirzadi A, Rosner J, Eboli P, Safae M, Baron EM, Liu JC, Acosta FL Jr. Complications and outcomes after spinal deformity surgery in the elderly: review of the existing literature and future directions. *Neurosurg Focus*. 2011 Oct;31(4):E3. doi: 10.3171/2011.7.FOCUS11145. Review. PubMed PMID: 21961866.

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Glassman SD, Carreon LY, Shaffrey CI, Polly DW, Ondra SL, Berven SH, et al: The costs and benefits of nonoperative management for adult scoliosis. *Spine (Phila Pa 1976)* 35: 578-582, 2010

3)

Smith JS, Lafage V, Shaffrey CI, Schwab F, Hostin RA, Boachie-Adjei O, Scheer JK, Akbarnia BA, Klineberg E, Gupta M, Deviren V, Hart R, Burton DC, Bess S, Ames CP. 117 Outcomes of Operative and Nonoperative Treatment for Adult Spinal Deformity: A Prospective, Multicenter Matched and Unmatched Cohort Assessment with Minimum 2-Year Follow-up. *Neurosurgery*. 2014 Aug;61 Suppl 1:197-8. doi: 10.1227/01.neu.0000452391.08672.bb. PubMed PMID: 25032568.

4)

Fu KM, Bess S, Shaffrey CI, Smith JS, Lafage V, Schwab F, Burton DC, Akbarnia BA, Ames CP, Boachie-Adjei O, Deverin V, Hart RA, Hostin R, Klineberg E, Gupta M, Kebaish K, Mundis G, Mummaneni PV. Adult Spinal Deformity Patients Treated Operatively Report Greater Baseline Pain and Disability than Patients Treated Nonoperatively: However, Deformities Differ Between Age Groups. *Spine (Phila Pa 1976)*. 2014 May 22. [Epub ahead of print] PubMed PMID: 24859590.

5)

Passias PG, Soroceanu A, Smith J, Boniello A, Yang S, Scheer JK, Schwab F, Shaffrey C, Kim HJ, Protosaltis T, Mundis G, Gupta M, Klineberg E, Lafage V, Ames C; International Spine Study Group. Postoperative Cervical Deformity in 215 Thoracolumbar Patients With Adult Spinal Deformity: Prevalence, Risk Factors, and Impact on Patient-Reported Outcome and Satisfaction at 2-Year Follow-up. *Spine (Phila Pa 1976)*. 2015 Mar 1;40(5):283-291. PubMed PMID: 25901975.

6)

Puvanesarajah V, Shen FH, Cancienne JM, Novicoff WM, Jain A, Shimer AL, Hassanzadeh H. Risk factors for revision surgery following primary adult spinal deformity surgery in patients 65 years and older. *J Neurosurg Spine*. 2016 Oct;25(4):486-493. PubMed PMID: 27153147.

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