

## Outcomes of Direct Anterior versus Posterior Approaches in Total Hip Arthroplasty:

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### **Abstract**

**Background:** The ideal surgical approach for Total Hip Arthroplasty (THA) remains debated. The Direct Anterior Approach (DAA) has gained popularity for potentially reducing complications, particularly dislocation, compared to the traditional Posterior Approach (PA). However, there is no consensus on the superiority of DAA over PA.

**Purpose/Hypothesis:** This study evaluates current literature comparing DAA and PA in THA, focusing on limitations and complications of each approach. The hypothesis is that DAA and PA are comparable in terms of overall patient complications and success rates.

**Study Design:** Systematic Review

**Methods:** The study protocol was registered with PROSPERO (ID: CRD42024538589) and conducted following PRISMA guidelines. A comprehensive search of MEDLINE and PubMed databases identified studies comparing DAA and PA in THA, including randomized controlled trials, non-randomized clinical trials, prospective and retrospective cohort studies, and case-control studies. Data extraction captured study demographics and significant outcomes.

**Results:** A total of 38 studies were included. Key findings:

- **Dislocation Rates:** Nine studies reported higher dislocation rates in PA compared to DAA, while seven found no significant difference.
- **Infection Rates:** Ten studies analyzed infection rates with mixed results; one reported higher rates in PA, and five found no significant difference.
- **Hip Revisions:** Fifteen studies discussed revisions; six showed higher rates for PA, and five for DAA.
- **Satisfaction and Pain:** Eleven studies covered satisfaction and pain. Six reported higher satisfaction scores for DAA, and four found no significant difference.
- **Hospital Stays:** Three studies reported shorter stays for DAA.

**Conclusion:** While DAA offers advantages such as reduced dislocation rates and shorter hospital stays, both approaches present comparable overall complication rates and long-term outcomes. Surgeon preference and patient-specific factors remain paramount. Future research should include prospective, multicenter RCTs, longer follow-up periods, and economic analyses. The debate over the ideal THA approach continues, with both DAA and PA remaining viable options.