# Acetabular Reconstruction with Bone Graft in Total Hip Arthroplasty

*Thesis*

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# List of Abbreviations

| Abbr. | Full-term |
|---|---|
| **AAOS** | : American Academy of Orthopaedic Surgeons |
| **DDH** | : Developmental dysplasia of the hip |
| **PVNS** | : Pigmented villonodular synovitis |
| **THA** | : Total hip arthroplasty |

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# Introduction

Total hip arthroplasty is one of the most successful procedures in modern medicine and the number of patients receiving a total hip implant is increasing every year[(1)].

In the long term the main reason for failure of all types of total hip implant is aseptic loosening. Other reasons for failure are septic loosening, recurrent dislocation, malposition, periprosthetic fractures, and mechanical failure of the implant. In most cases failure leads to bone stock loss and revision surgery in cases with extensive bone loss is demanding. In general the outcome of a revision of a failed hip implant is less successful in those hips with greatest bone stock loss[(2)].

On the acetabular side, the loosening process can result in a cavitary bone defect but in the more serious cases segmental wall defects also develop in combination with a cavitary bone deficiency. Traumatic acetabular defect and dysplastic acetabulum are common causes of acetabular defect. Many acetabular reconstruction techniques have been described both with cemented and non cemented cups[(3)].

The most challenging aspect of acetabular revision or primary acetabular defect is managing the bone stock loss and creating a stable reconstruction with long term durability[(4)]. Reports show that restoring of the normal biomechanical