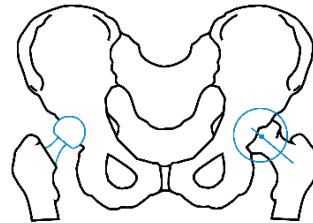


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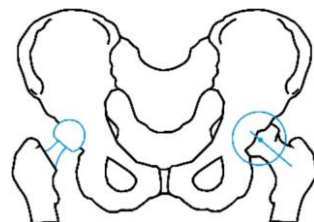


Basic Task Specific Checklist for Anterior Approach Total Hip Arthroplasty*

Review radiographs, patient position, and surgical template/plan	
Palpate anatomical landmarks for incision	
Skin incision and exposure	
Develop space between TFL belly and overlying fascia	
Retract TFL/G. Minimus (laterally) and Sartorius/Rectus Femoris (medially) to expose anterior capsule	
Identify and coagulate/tie circumflex vessels	
Clear pericapsular tissue and expose intertrochanteric line	
Perform capsulotomy or capsulectomy	
Place intracapsular retractors	

Release pubofemoral ligament	
Reposition leg for femoral osteotomy (Neutral-IR), protecting TFL	
Perform femoral neck osteotomy	
Remove femoral head atraumatically	
Reposition leg for acetabular preparation (Neutral-ER)	
Expose acetabulum with retractors, protecting TFL	
Excise labrum	
Select and position reamer	
Ream sequentially at appropriate orientation	
Insert acetabular implant and liner	
Reposition leg for broaching (Max ER, Add, Ext)	
Expose femur with retractors, protecting TFL	
Mobilise and elevate femur with stepwise superior capsular releases	
Identify canal with hook/canal finder/box chisel	
Broach sequentially	
Insert femoral trials, reduce hip and check stability and range of motion	
Insert femoral implant and head	
Reduce hip, check stability and range of motion	
Irrigate wound and perform layered closure	

*TFL =tensor fasciae latae, G. minimus = gluteus minimus, ER = external rotation, Max = maximum, Add = Adduction, and Ext = extension. Prompts should be given only after a specific request for assistance. One prompt is given for each request. No information in addition to the text above should be provided to the participant. Refer to the AA-THA Cognitive Training Tool for a detailed analysis of this procedure and the THRiVR study protocol (ISRCTN13074978) for full details.



Question Bank of Multiple Choice Questions for AA-THA

Question Text	Answer	Choice 2	Choice 3	Choice 4
The skin is incised in relation to which underlying muscle?	Tensor Fascia Lata (TFL)	Rectus femoris	Sartorius	Gluteus medius
The anterior approach to the hip uses which internervous plane?	The femoral nerve/superior gluteal nerve plane	The inferior gluteal nerve/superior gluteal nerve plane	The femoral nerve/inferior gluteal nerve plane	No true internervous plane
Which blood vessels should be coagulated in the layer of fascia superficial to the capsule?	Ascending branches of the lateral femoral circumflex artery	Trochanteric anastomosis	Cruciate anastomosis	Ascending branches of the medial femoral circumflex artery
What landmark is the distal extent of the deep dissection?	Superior border of vastus intermedius	Lesser trochanter	Medial border of Rectus Femoris	Iliocapsularis muscle
What position should the femur be in prior to femoral neck osteotomy?	In a neutral foot position with traction released	90° of external rotation	Maximal external rotation	Extension
Which of these patient-specific anatomies can cause challenges in extracting the femoral head?	Short, varus neck and anterior acetabular osteophytes	Valgus neck and a dysplastic acetabulum	Wide pelvic brim	Overhanging greater trochanter

Which of these is not a strategy to ease extraction of the femoral head in challenging cases?	Release more inferomedial capsule to increase external rotation of the femur	Remove osteophytes overhanging from the acetabular rim	Release the reflected head of Rectus Femoris from acetabular rim	Perform a double neck osteotomy a.k.a. napkin-ring cut
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Question Text	Answer	Choice 2	Choice 3	Choice 4
Which hip capsular ligament inserts into the medial aspect of the femoral neck, and may be released to improve external rotation?	Pubofemoral ligament	Ischiofemoral ligament	Iliofemoral ligament	Ligamentum teres
Which neurovascular structure is at risk from the medial acetabular retractor?	Femoral nerve	Lateral Cutaneous Femoral Nerve	Sciatic Nerve	Obturator Nerve
Which of these is not a strategy to improve acetabular cup visualization?	Superior capsular release	Traction of the femur	Slight external rotation of the femur	Additional retractors at the TAL and inferolaterally
Which of these statements regarding the acetabular cup is false?	Surgeons learning the anterior approach (AA) tend to position the cup in insufficient anteversion	Surgeons learning the AA tend to position the cup in excessive anteversion	An uncemented cup should usually be 1mm smaller in diameter than the reamed cavity for press-fit	For uncemented cups, consider line-to-line reaming (equal cup and reamed cavity diameter) in patients with hard, sclerotic bone
Inappropriate acetabular implant placement can cause anterior impingement with which structure?	Iliopsoas tendon	Sartorius	Rectus Femoris	Iliofemoral ligament

Question Text	Answer	Choice 2	Choice 3	Choice 4
What position should the femur be placed in for femoral broaching?	Maximal external rotation, then hyperextension and adduction	Maximal internal rotation, then hyperextension and adduction	Neutral rotation, traction and hyperextension	Flexion and internal rotation
Which of these muscles should never be released during capsular release to improve exposure?	Obturator Externus	Obturator Internus	Piriformis	Reflected Head of Rectus Femoris
Which of these patient-specific factors typically does NOT push the Broach into varus malpositioning?	Long, valgus femoral neck	Large body habitus	Short, varus femoral neck and wide iliac crest	Limited external rotation
Three of these options are strategies to correct for varus broaching in challenging patients. Which is not recommended?	Increase traction on the femur	Use a double-offset broach handle to clear the abdomen and iliac crest	Release superior capsule at the Greater Trochanter till you see fat	Release Piriformis and/or Obturator Internus
Press-fit of the femoral stem must be obtained at the time of surgery to encourage bony ingrowth and prevent micromotion. Select the incorrect statement:	Dorr Type C femurs are most appropriate for cementless fixation	Dorr Type A femurs have a thick cortex and narrow canal	The implant must fill the proximal canal and place enough hoop stress on the rim of cortical bone to prevent micromotion	Both axial and torsional stability are required for initial stem fixation
When reviewing the intra-operative x-ray, you note that the operated hip is short by at least 5mm but the offset is equivalent to the other normal hip. What is the next step?	Increase femoral stem implant size, carefully re-implant so it is well fixed and sitting more proud, and retriail with longer modular neck lengths as appropriate	Use the longest neck length available	Change to a dual-mobility acetabular component	Change to a lipped polyethylene liner

Femoral shaft perforation, due to varus broaching, aggressive impaction, or an oversized femoral component is most appropriately managed by:	Conversion to a longer stem ± cerclage cabling	Conversion to a cemented stem	Conservative management, with protected weight bearing	Conversion to a lateral approach, plate fixation and cerclage wiring
What position is most unstable in the acute setting after direct anterior approach hip arthroplasty?	Extension and external rotation	Extension and internal rotation	Flexion and internal rotation	Abduction