Approaches for Hip Replacement
Does it matter?

Paul A Davey
St Peter’s Hospital
Chertsey
1930s

- Watson Jones
1940s

- Smith Petersen
- Judet
1950s

- Gibson
- McFarland/Osborne
1950s

- Austin Moore
- Charnley
1960s

- McKee & Watson Farrar
- Used Watson Jones anterolateral approach
1970s/80s

• “Modification years”

• Merryweather

• Hardinge
Current Approaches

- Anterior
- Lateral
- Posterior
Watson Jones Approach

- Incision

- Approach

- Limited exposure of femoral neck
Transtrochanteric Approach 1

- Position of patient
- Approach
Transtrochanteric Approach 2

- Reattachment
- Non-union
Hardinge Approach

- Incision
- Approach
- Closure
- Modifications
Posterior Approach 1

- Incision
- Approach
Posterior Approach 2

- Sciatic nerve

- Short external rotators
Does it matter?
Exposure

• The technique of surgical access must always be the servant of prosthetic design and its insertion system

• Massive scar tissue must contribute to post operative stability

Osborne 86
Trochanteric osteotomy

- Excellent exposure

- Less soft tissue disruption

- Non-union rate 7 - 33%

- Dislocation rate 2.5x greater  
  Fackler 76
Nerve Injury

• Lateral approach significantly more likely to give abductor weakness

• Less than 20% had EMG changes even if they had weakness

Baker & Bitounis 89
Nerve Injury

- 23% of patients using Hardinge approach had superior gluteal nerve damage on EMGs

- 75% of this group had persisting deficit at 9 months and all had positive Trendelenberg test

Ramesh et al 96
Nerve Injury

- 42 patients had no clinical signs of nerve injury despite approach used

- 5 patients had abnormal EMGs

- None involved sciatic nerve

Weale et al 96
Heterotopic Ossification

- Seen in up to 80% THRs

- No statistically significant difference between anterior and posterior approaches

- No statistically significant difference in range of motion
Patient Satisfaction

• Transtrochanteric group least satisfied

• Anterior and posterior approaches had no significant difference

Morrey et al 83
Sepsis

- Incidence less than 1% primary THRss
- Long operative procedure may incriminate trochanteric osteotomy
- Unlikely to be due to approach alone
Dislocation

• 5.8% posterior approach

• 2.3% anterolateral

  Woo & Morrey 82

• 2.4% posterior approach

  Fackler & Poss 80
Reasons for Dislocation

- Component position
- Failure to repair SERs
- Cement interposition
- Impingement
- Neurological deficit
- Abductor insufficiency
- Unable to blame the approach?
Shall we blame the Surgeon?

- Dislocation rates only higher through the posterior approach post hemiarthroplasty if inexperienced surgeons performed the procedure

Unwin et al 94
Does it matter?