

Extensor mechanism dysfunction



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2 patterns / before Primary TKA

• Mechanical disruption



• Muscular weakness

Mechanical disruption

✓Tendon Rupture

✓Repair

✓1 or 2 stage surgery?



✓Chronic = Contra indication to TKA?

✓Arthrodesis

✓Reconstruction allograft / tumor

Halpzapfel Operative Orthop traumatol 2012

✓Allograft / DJD

Fiquet Rev Chir Orthop 2017



Muscular insufficiency and TKA

• Pre op

• Early pre op

• Late post op

• Pain

• Impaired function

• Falls



Quadriceps weakness

✓Quad strength correlated with

- ✓Subjective satisfaction *Furu J Orthop Sci 2016*
- ✓Minimized joint load *Vahtrik Knee 2014*
- ✓Weakness patient / OA



Pre-habilitation TKA ?

Preop rehab

- Brown Physioth Theory Pract 2010*
- Tungtrongjit J Med Assoc Tha 2012*
- Gil Arc Phys Med Rehab 2013*
- Rodgers J Arthroplasty 1998*
- Ackerman Aust J Physiother 2004*
- MacKay Am Academy Of Phys Rehab 2012*



• Exept for elderly

Swank J Strength Cond Res 2011

• Education

• Group *Hiyama J Orthop Sports Phys Ther 2016*



Miniagressive surgerv

• No tourniquet

Cho KSSTA 2014

Guler KSSTA 2016



• Subvastus approach



Early postop

• Avoid block



• Light compression

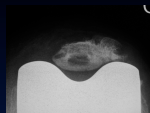
• Isometric contraction

• Co-cotrraction (prone position first)

• Immediate neuromuscular electrostimulation

Delayed Post op Weakness

- Check tracking of FP



- Check neuro muscular reflex

Importance of Attenuating Quadriceps Activation Deficits after TKA

Thomas & Stevens-Lapsley *Exerc sport Sci Rev* 2012

- Bracing in extension



Take home messages

- Preop status!
- Mini aggressive surgery
 - Ekloo approach
- Very early rehab work
 - Co-contractions

