



SCHOUDERPROTHESEN BIJ COMPLEXE FRACTUREN

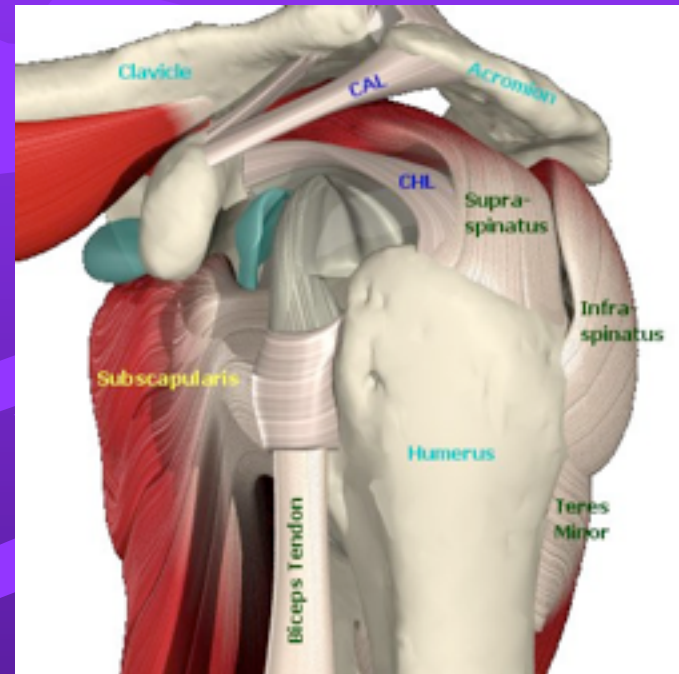
Dr. G. Nelen

Dr. R. Jacobs

H. Hartziekenhuis

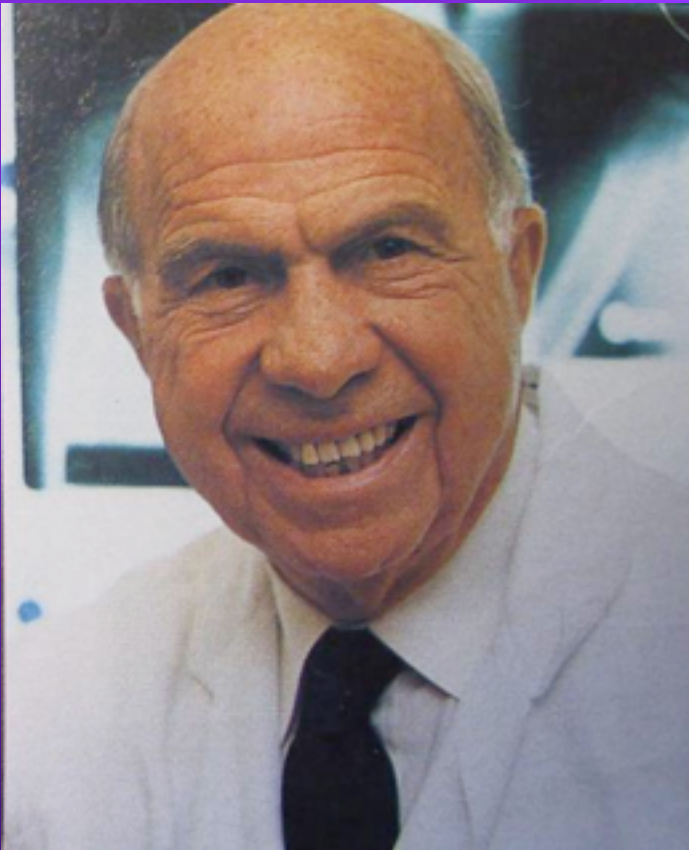
Lier

ANATOMIE










- Humeruskop
- Humerusnek
 - Collum anatomicum
 - Collum chirurgicum
- Tuberculum maius : supraspinatus, infraspinatus, teres minor
- Tuberculum minus : subscapularis
- Sulcus intertubercularis : lange bicepspees

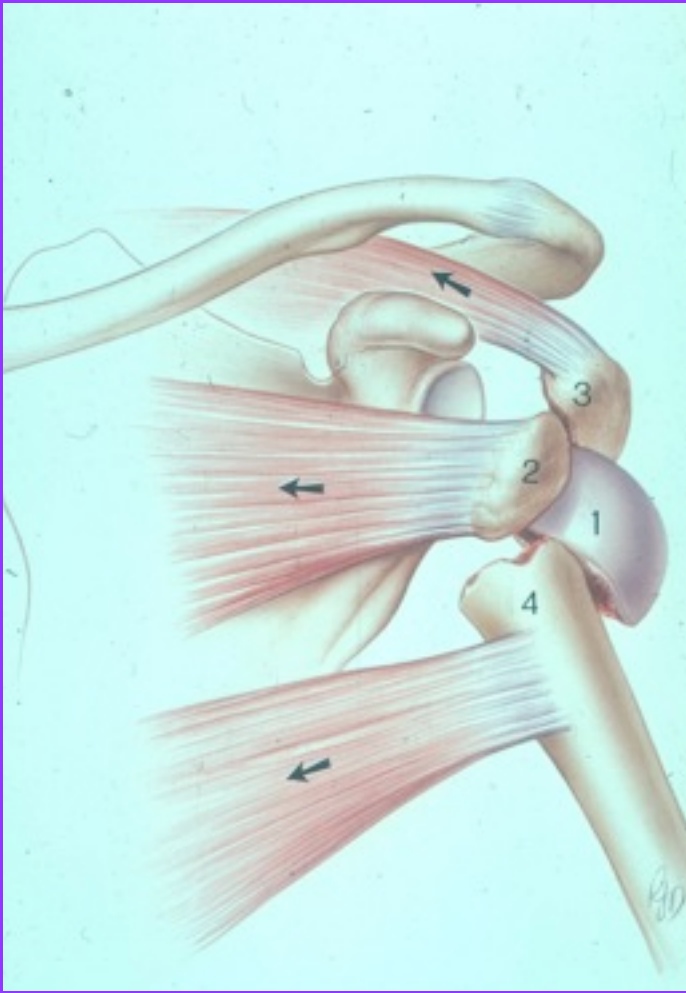
CLASSIFICATIE



Dr. Charles Neer

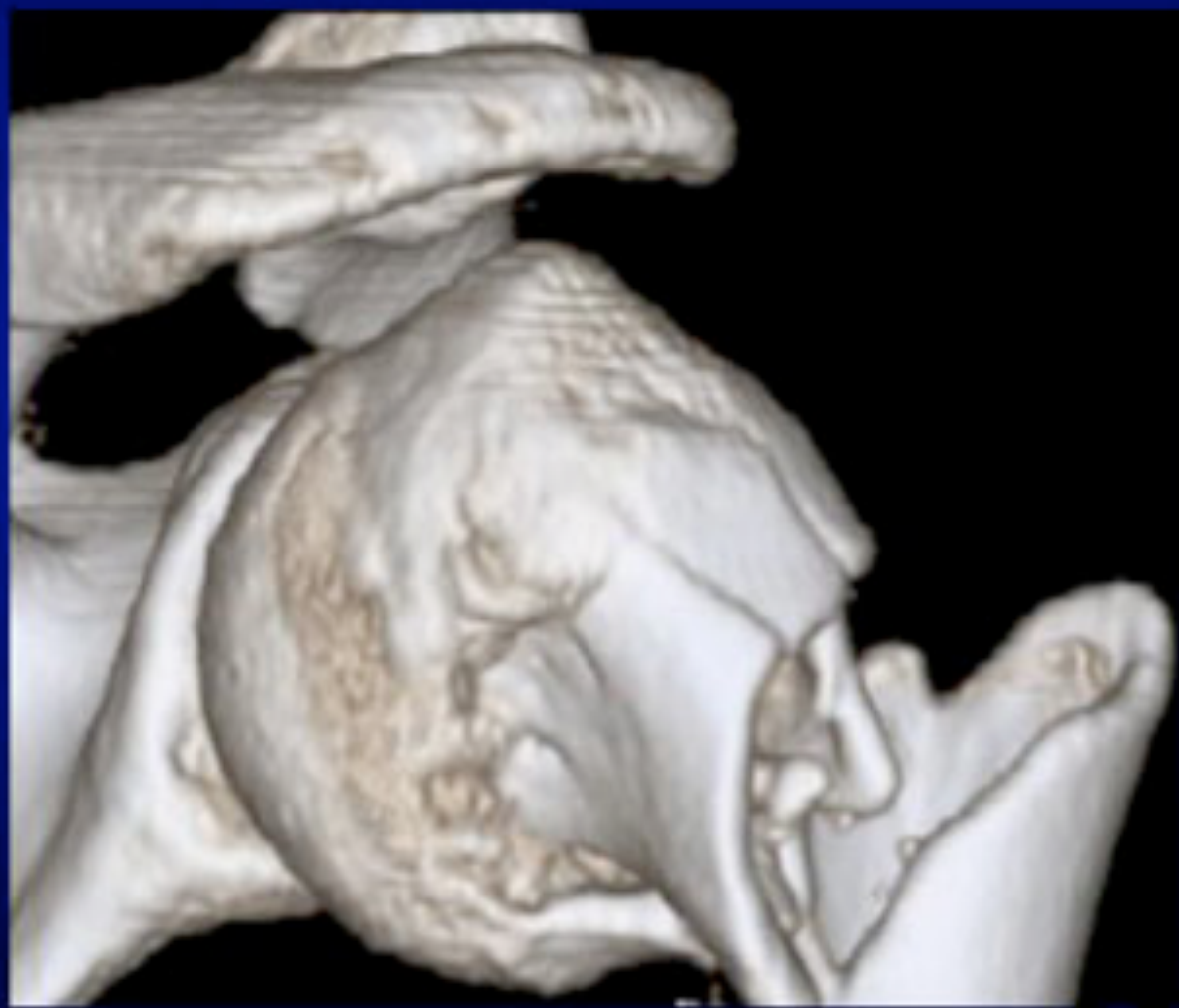
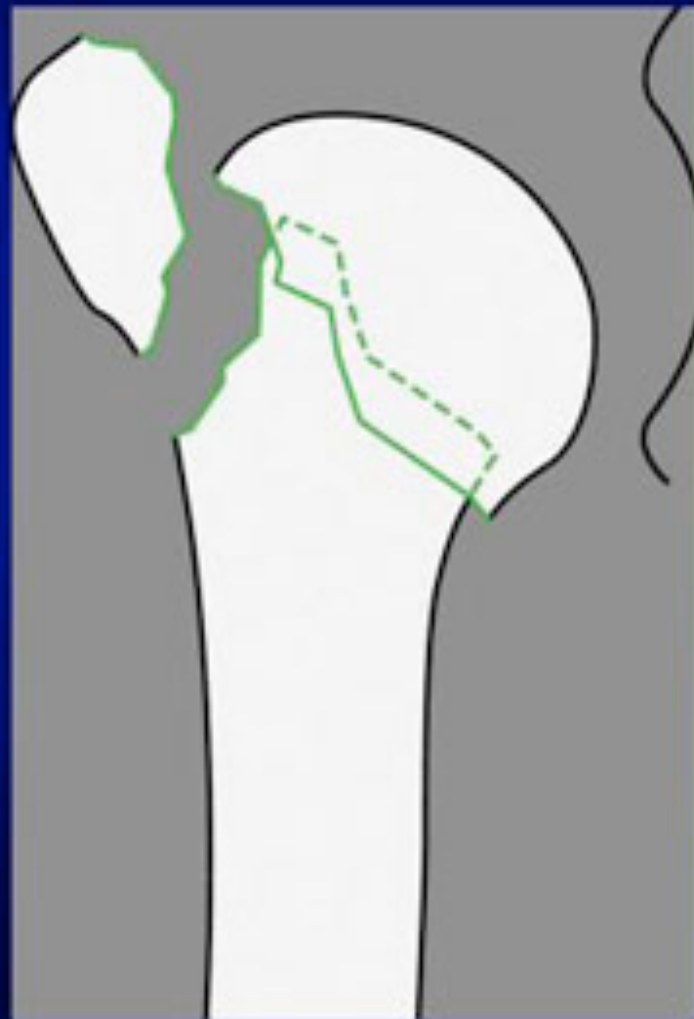
<u>Displaced Fractures</u>			
	2-part	3-part	4-part
Anatomic Neck			
Surgical Neck			
Greater Tuberosity			
Lesser Tuberosity			

CLASSIFICATIE

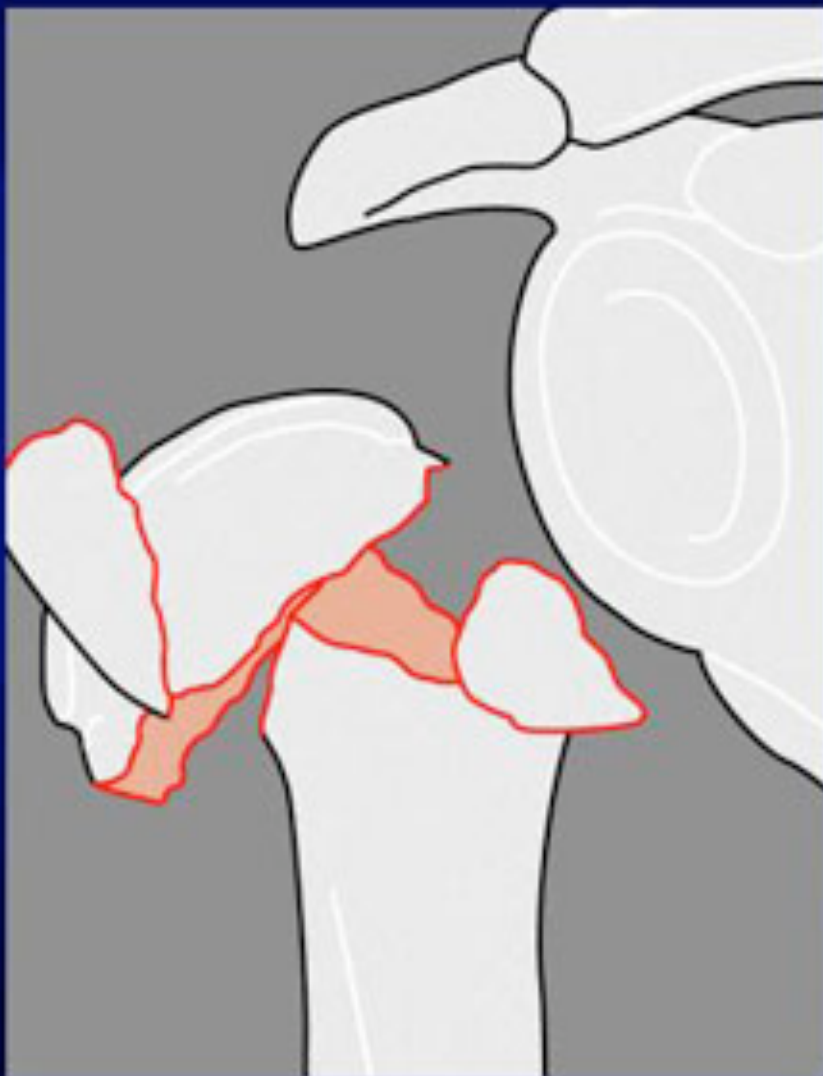


- Verplaatsing > 1 cm
- Angulatie > 45°

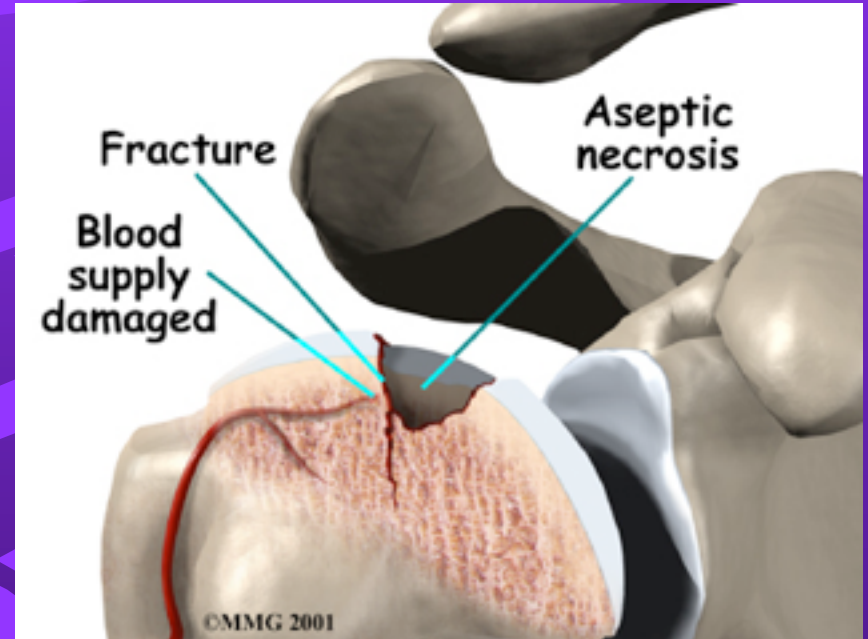
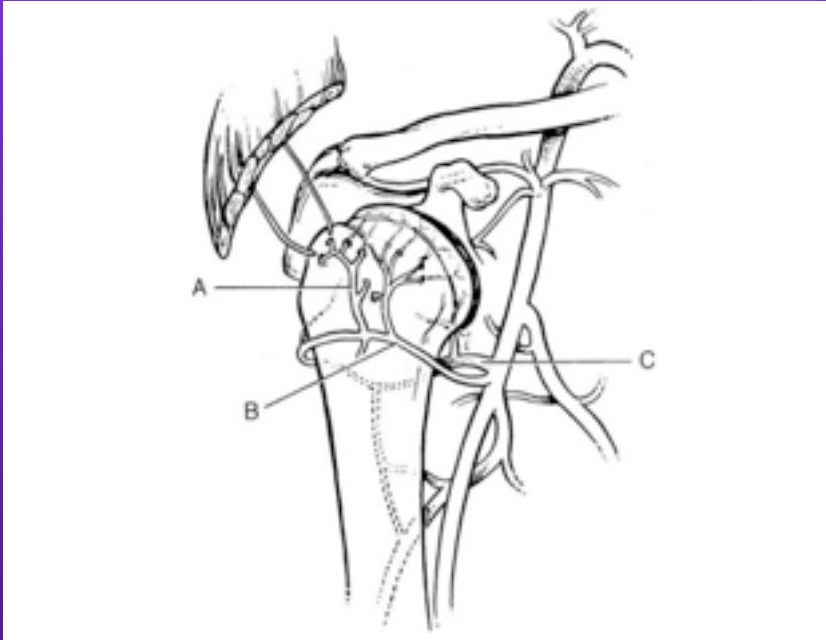
Simple Fractures: 2+3 Parts



Complex Fractures: 4 + more Parts

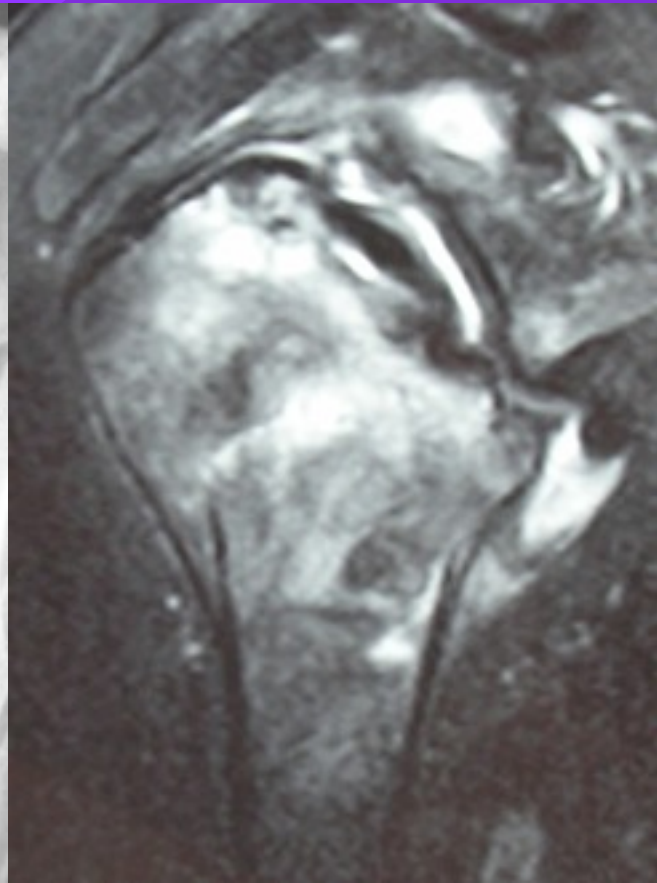
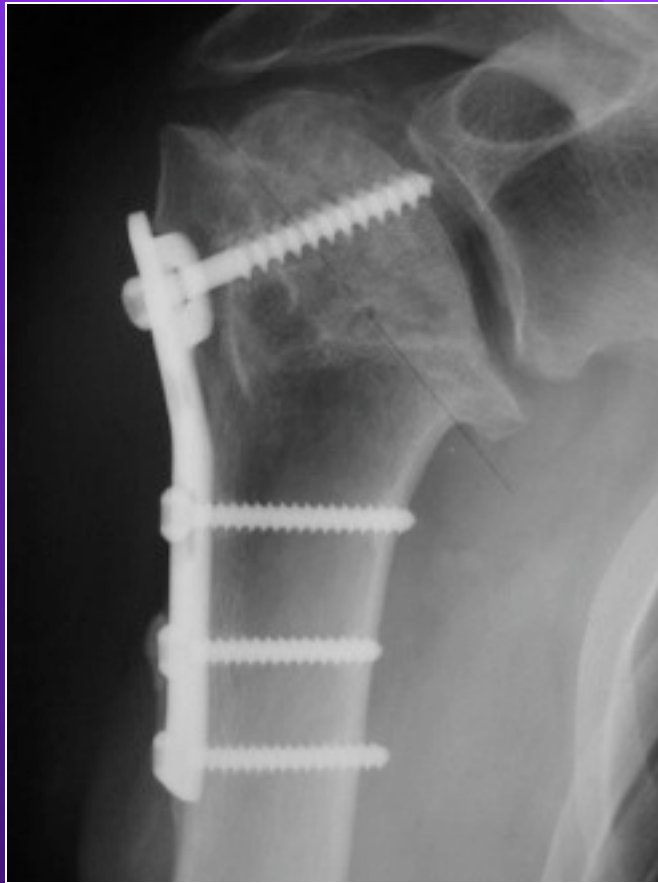


AVASCULAIRE NECROSE

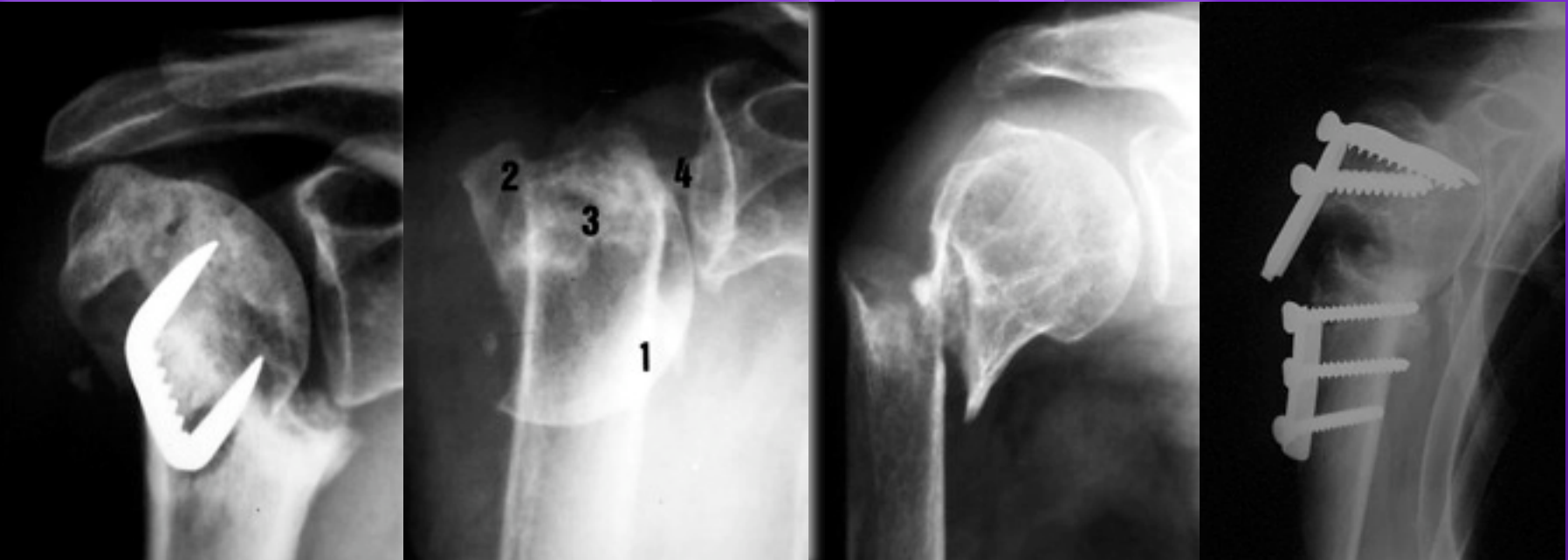


- (A) Anterolaterale tak
- (B) Art. Circumflexa anterior
- (C) Art. Circumflexa posterior

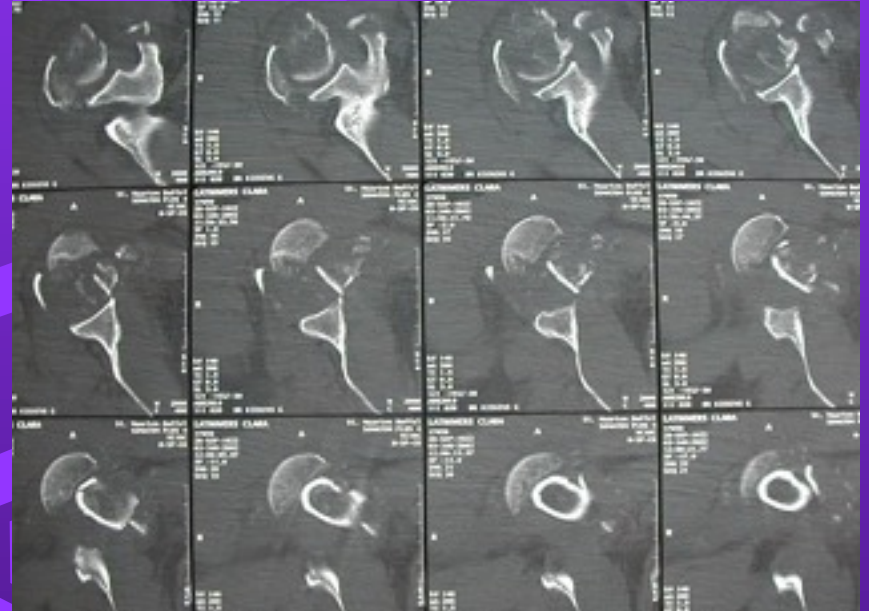
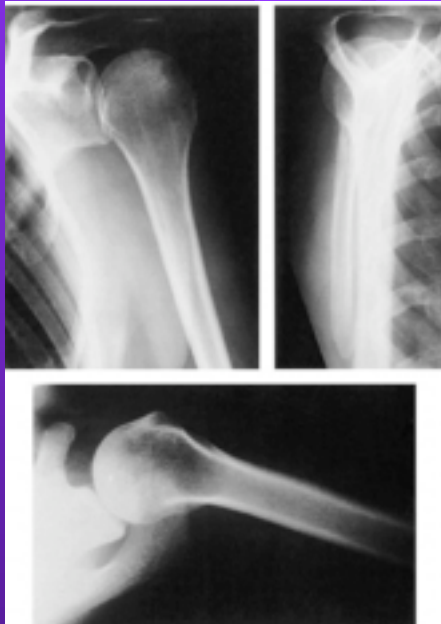
AVASCULAIRE NECROSE



NONUNION - MALUNION



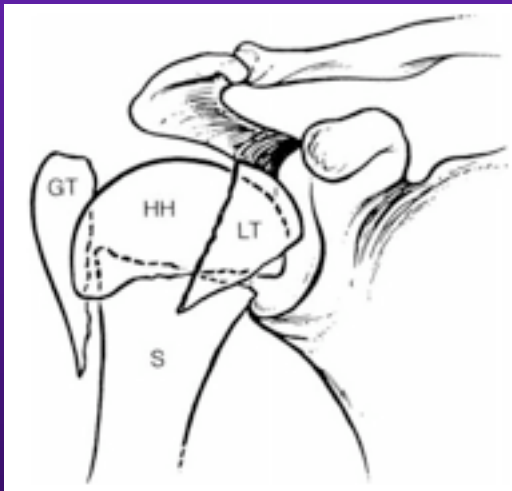
RADIOGRAFIE



- Face en profiel in scapulair vlak
- Axillaire opname ; angulatie
- CT scan meest waardevol
 - Articulair oppervlak
 - Comminutie
 - tuberkelmassieven

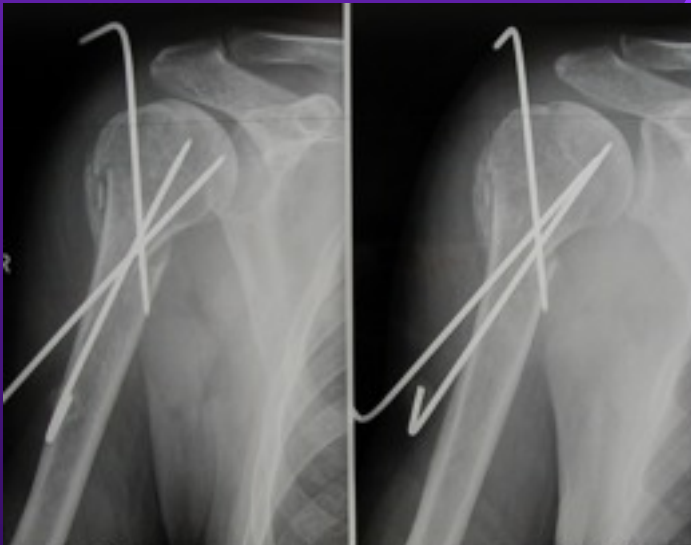
BEHANDELING

- Conservatief
 - Belangrijke comorbiditeit
 - Valgus geïmpacteerde fractuur
 - Draagdoek
 - Snelle pendulumoefeningen



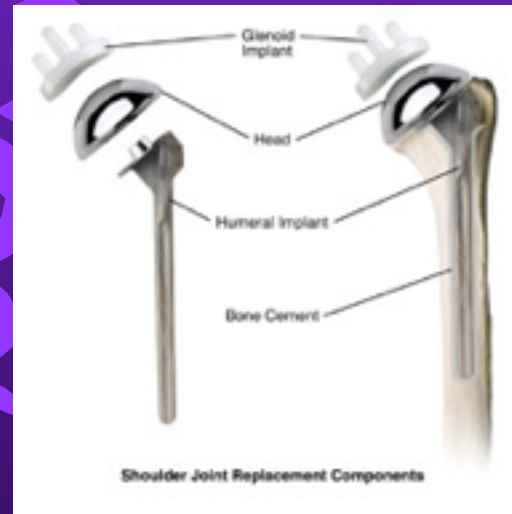
BEHANDELING

- Chirurgie
 - Osteosynthese
 - Percutane pinning
 - Suturen
 - Plaat en schroeven - locked plates
 - IM nagel
 - **Primaire Schouderprothese**




SCHOUDERPROTHESE

- Stem
- Kop
- Monobloc vs modulair
- Vinnen
- Coating vs polished
- Resurfacing
- Constrained (reversed)



SCHOUDERPROTHESE

**GLOBAL™ FX
FRACTURE SHOULDER
SYSTEM**



**The First
Specialised
Modular Fracture
Prosthesis**



*My philosophy is: "as near normal
anatomy as possible". The average
humeral head has normally a 44mm
radius of curve and the cuff is
repaired and rehabilitated around
it.*

Chris Neer



COFIELD
TOTAL SHOULDER SYSTEM

Making it Possible Impact On
Shoulder Replacement



Smith & Nephew



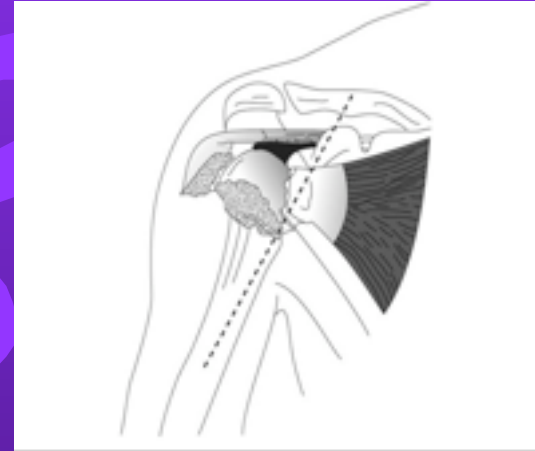
TESS

■ **TOTAL EVOLUTIVE SHOULDER SYSTEM**



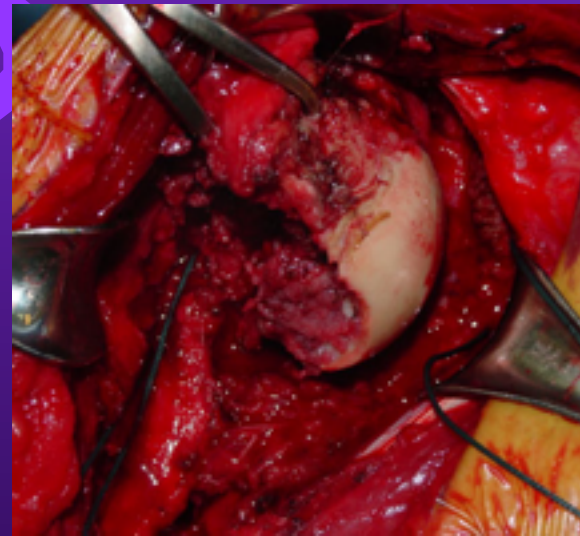
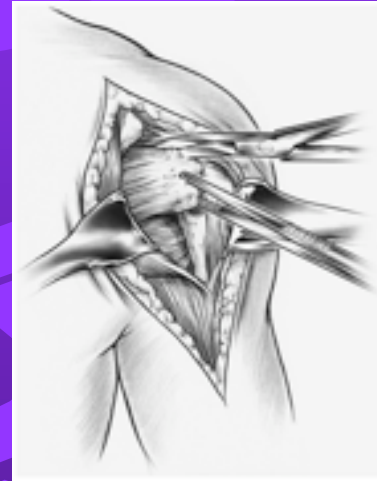
CHIRURGISCHE TECHNIK

Deltopectorale approach
Sparen v. Cephalica



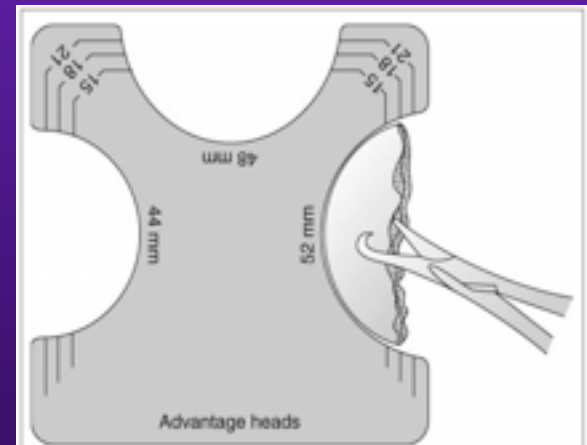
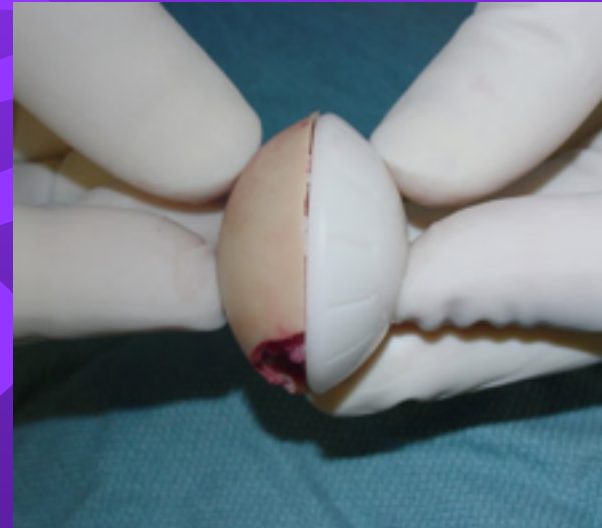
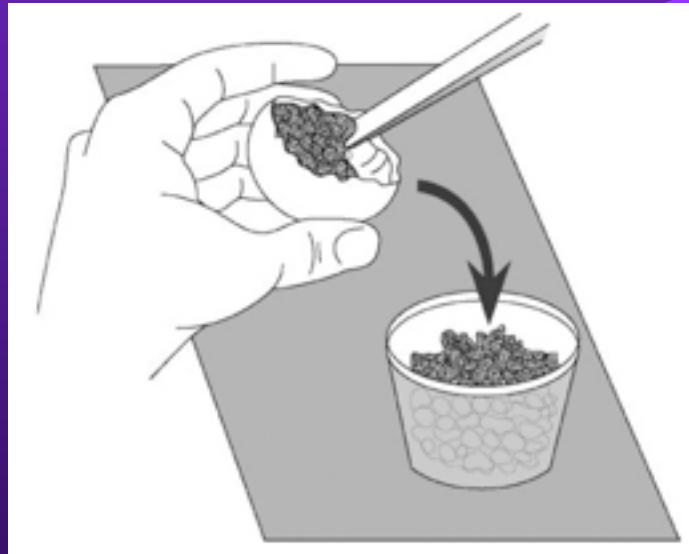
CHIRURGISCHE TECHNIEK

- Identificatie en mobilisatie van Tub. Minus en Maius
- Resectie humeruskop
- Inspectie glenoïed en rotator cuff



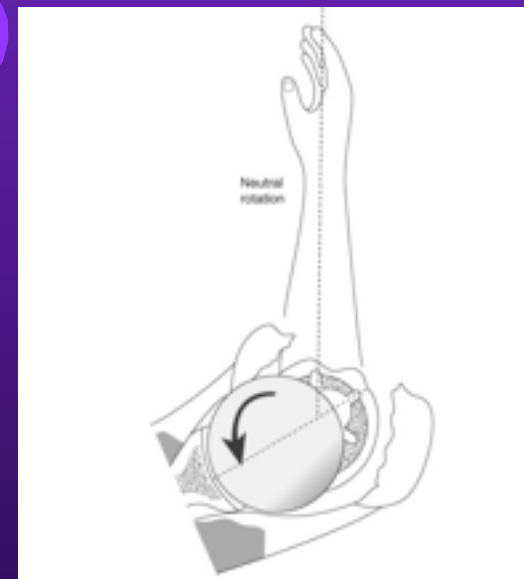
CHIRURGISCHE TECHNIEK

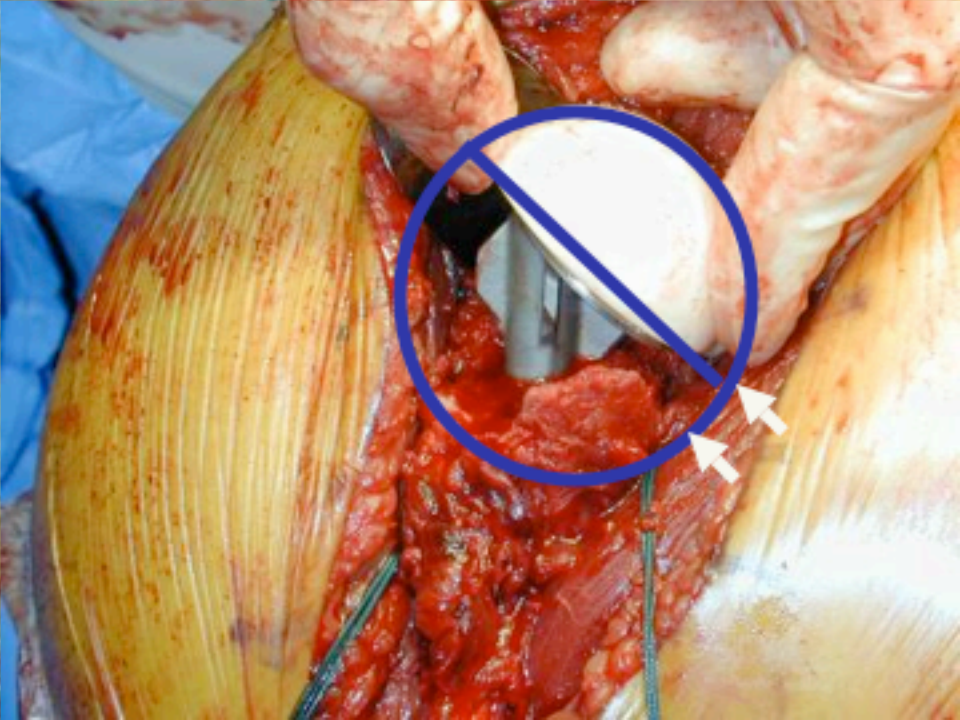
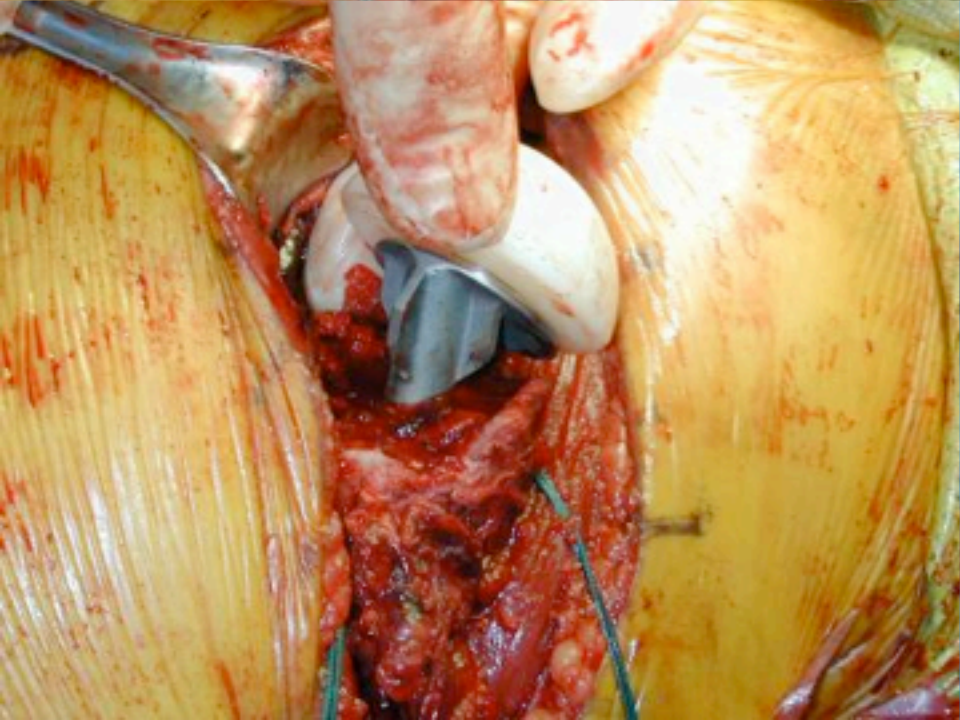
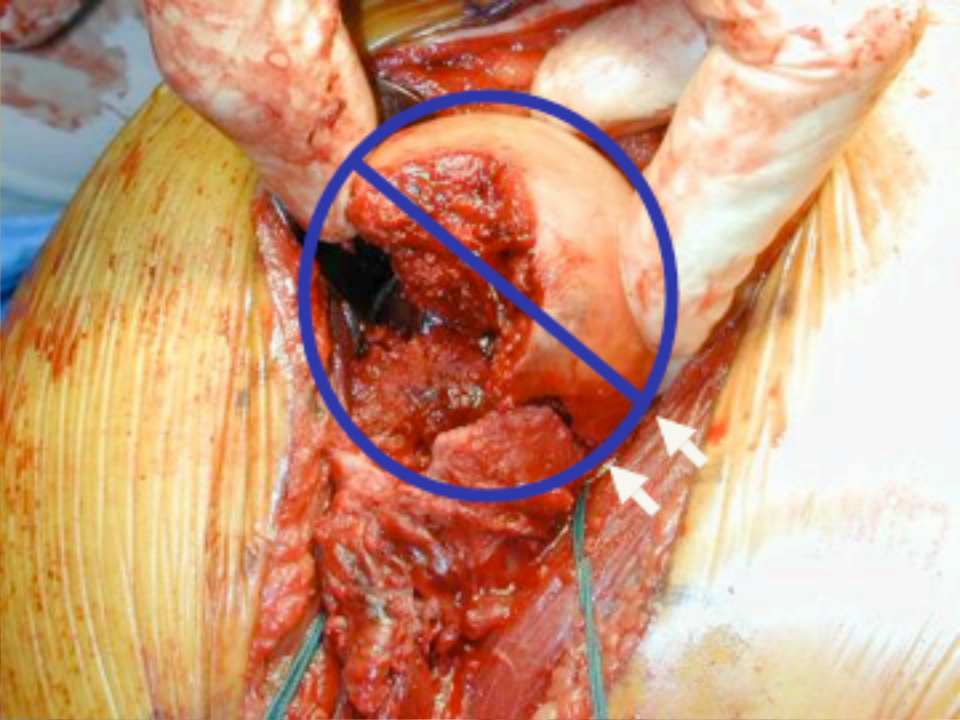
- Bepaal juiste diameter en hoogte van de kop (cave “overstuffing”!!)
- Prepareren botgreffen



CHIRURGISCHE TECHNIEK

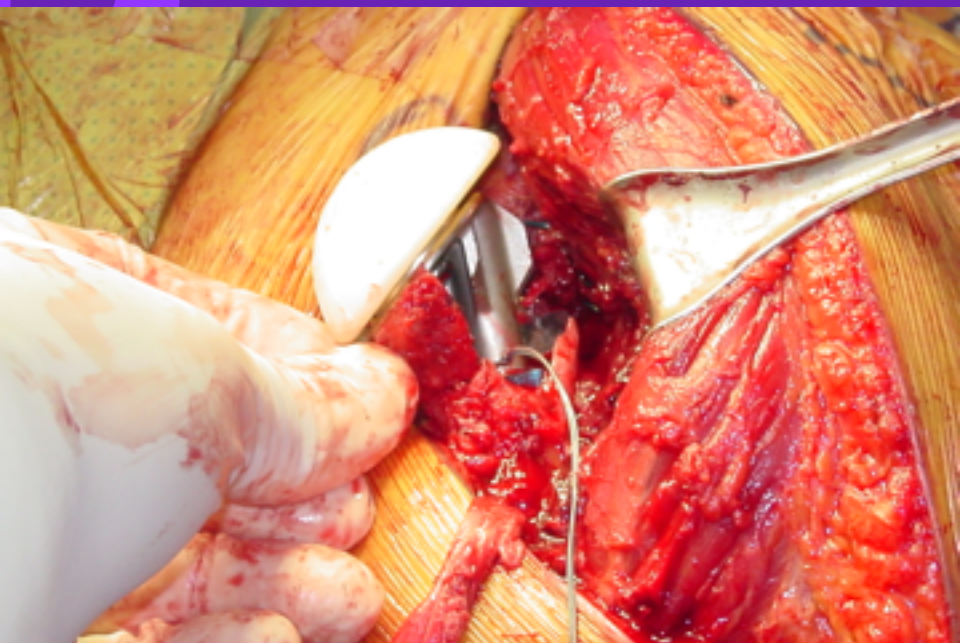
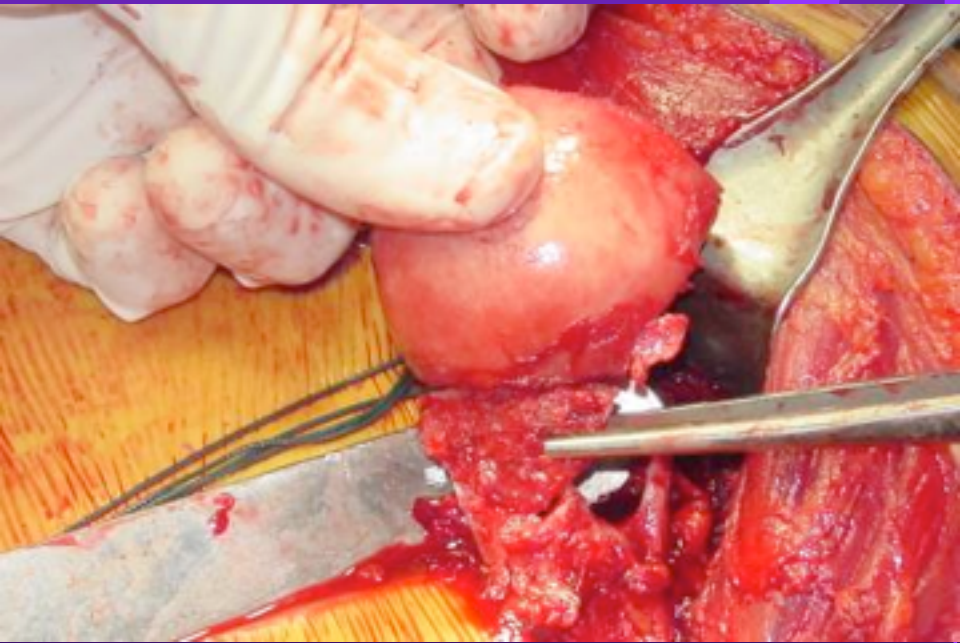
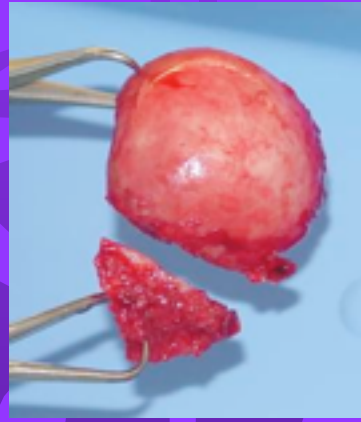
- Bepalen HOOGTE
- Juiste RETROVERSIE

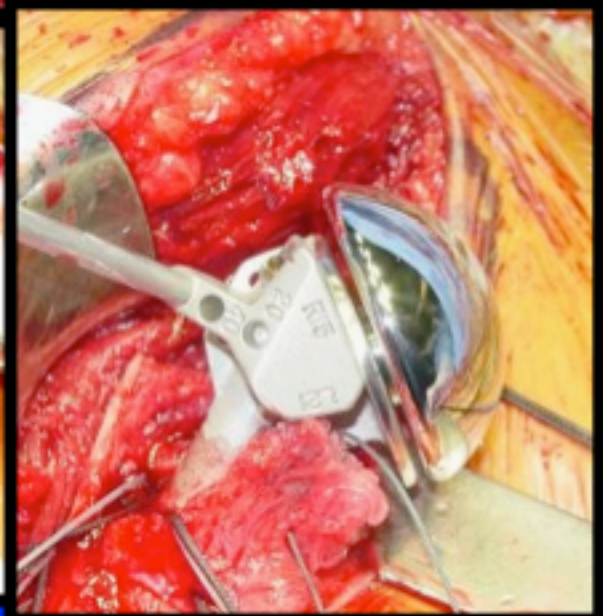
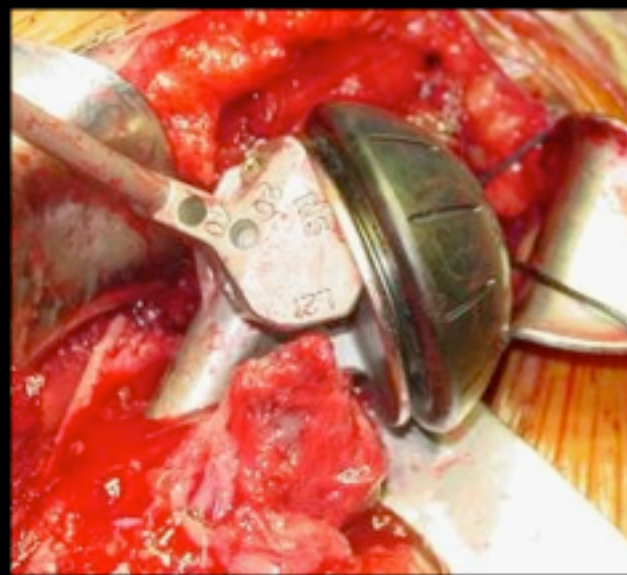
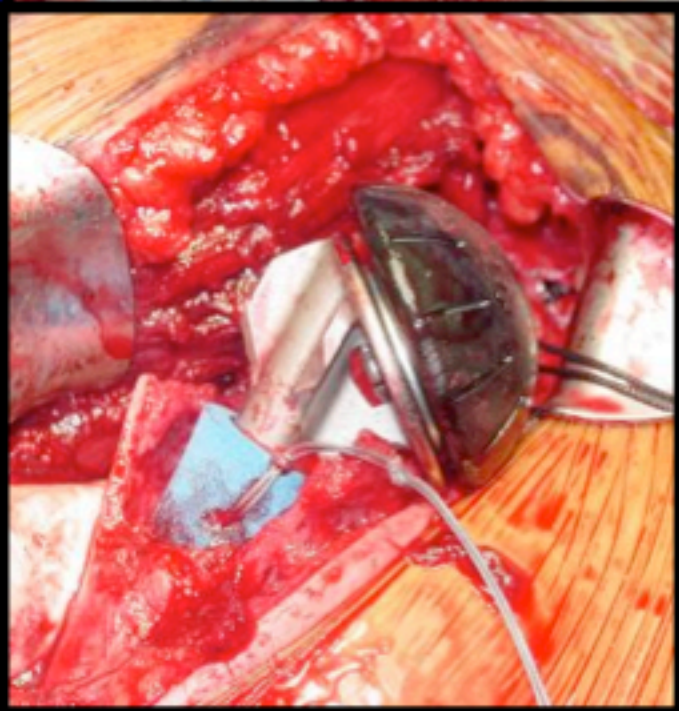
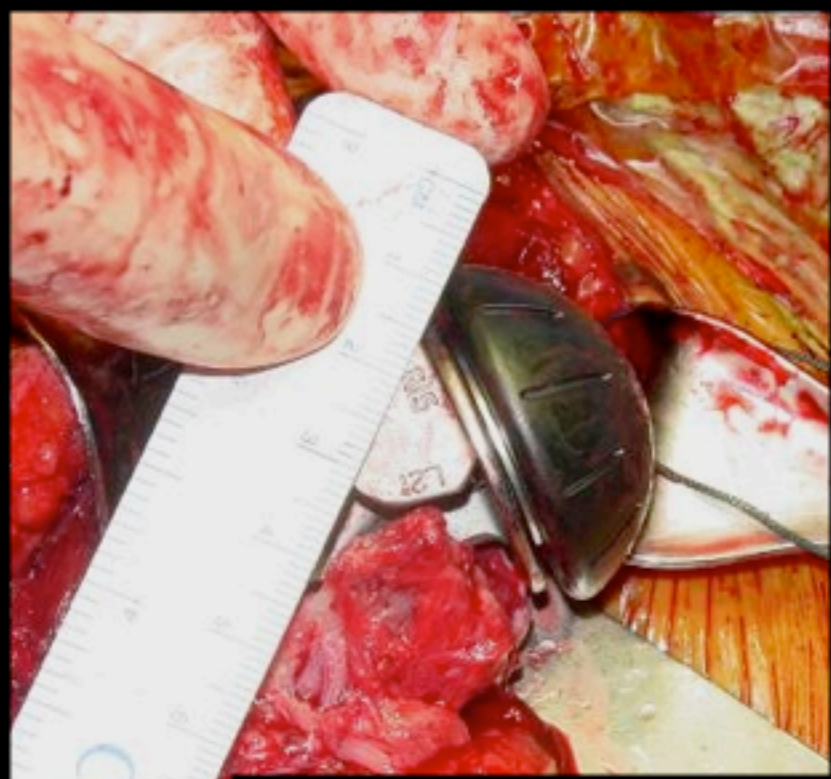
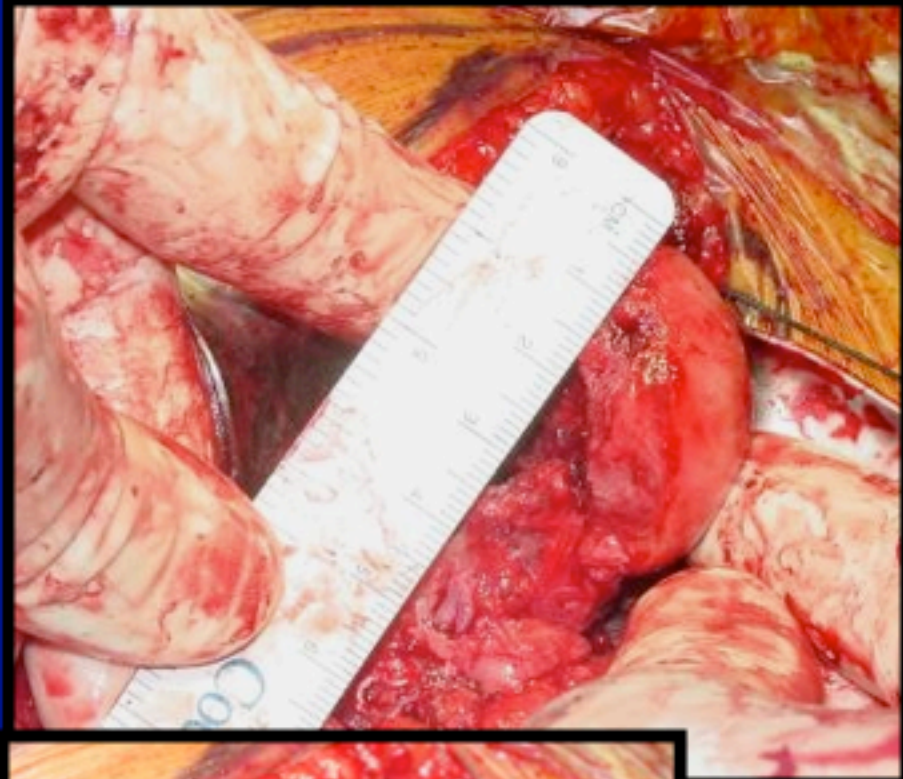




CHIRURGISCHE TECHNIEK

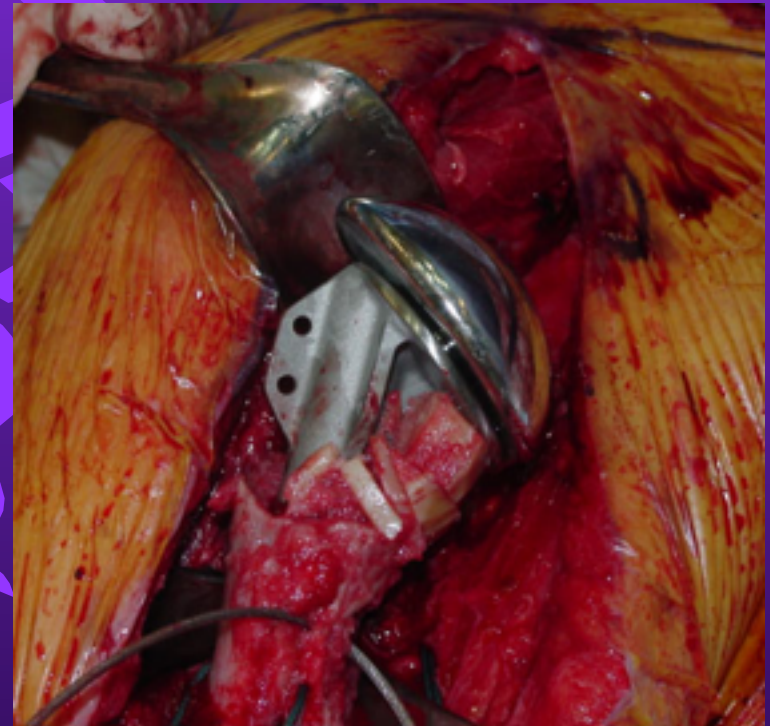
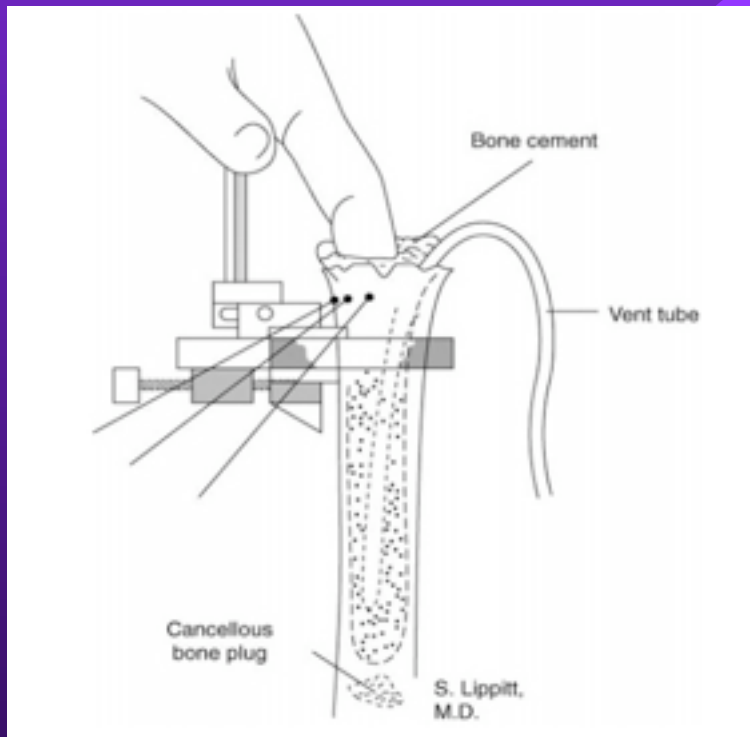
Calcar reconstructie



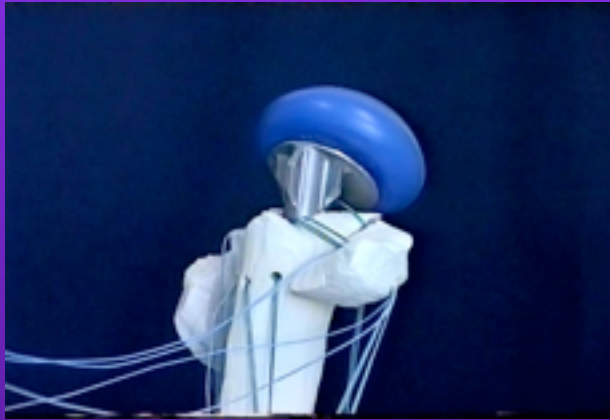


CHIRURGISCHE TECHNIEK

- Distale (stem) fixatie : botcement
- proximale fixatie : cancellouse botgreffen

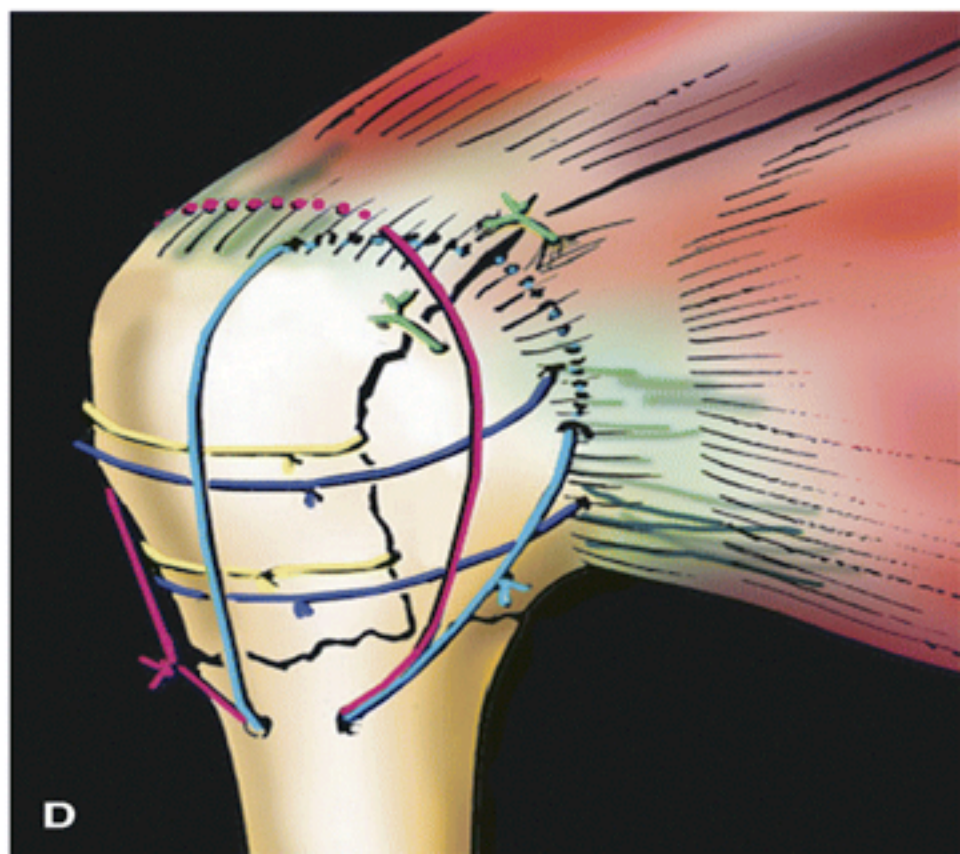
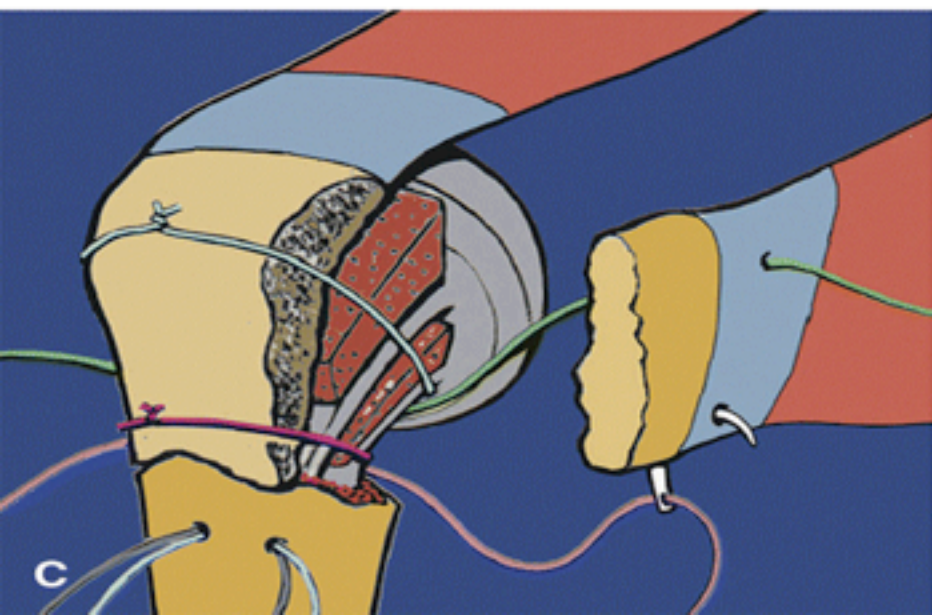
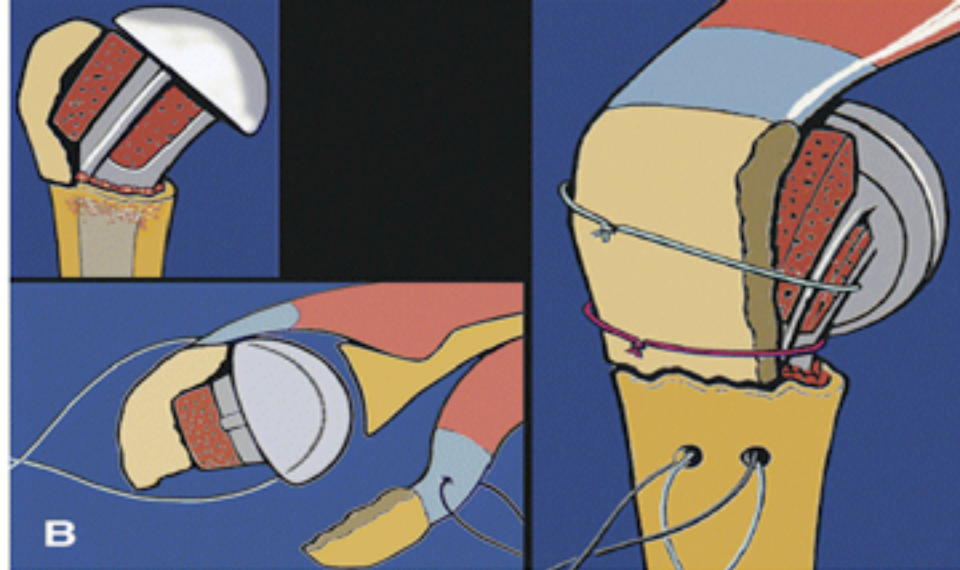
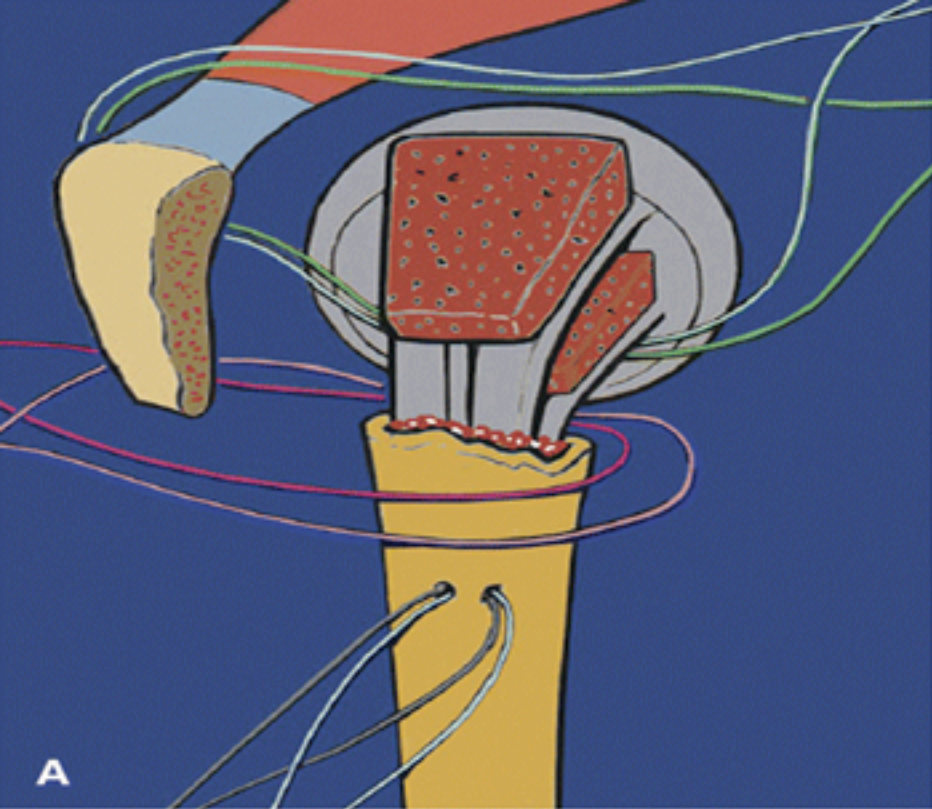


CHIRURGISCHE TECHNIEK

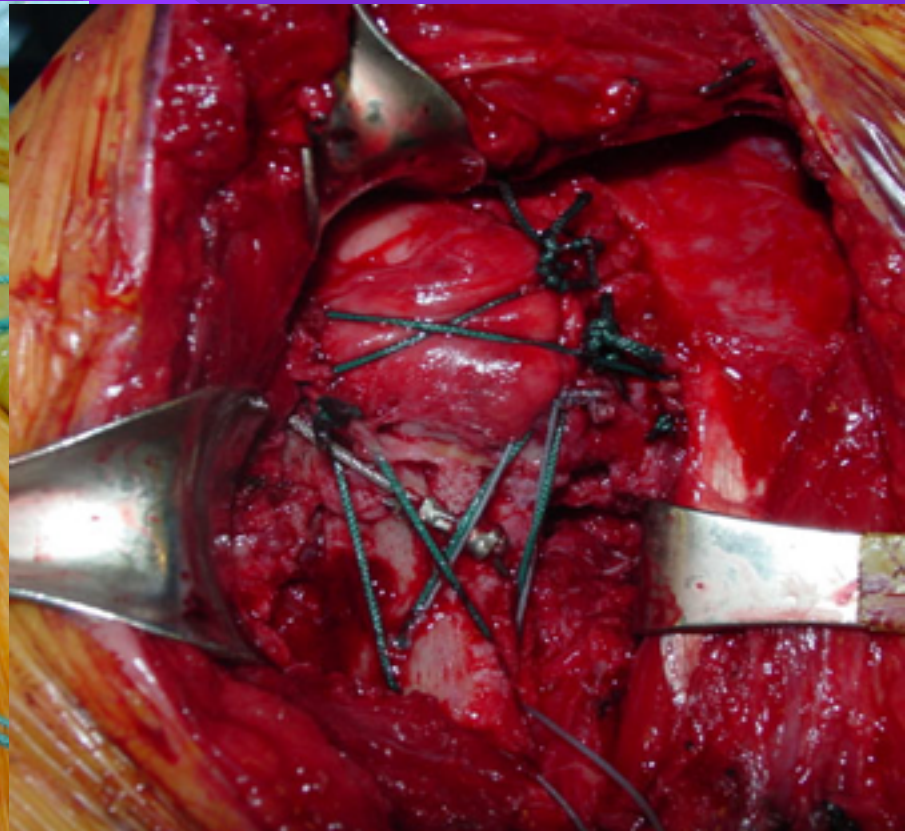
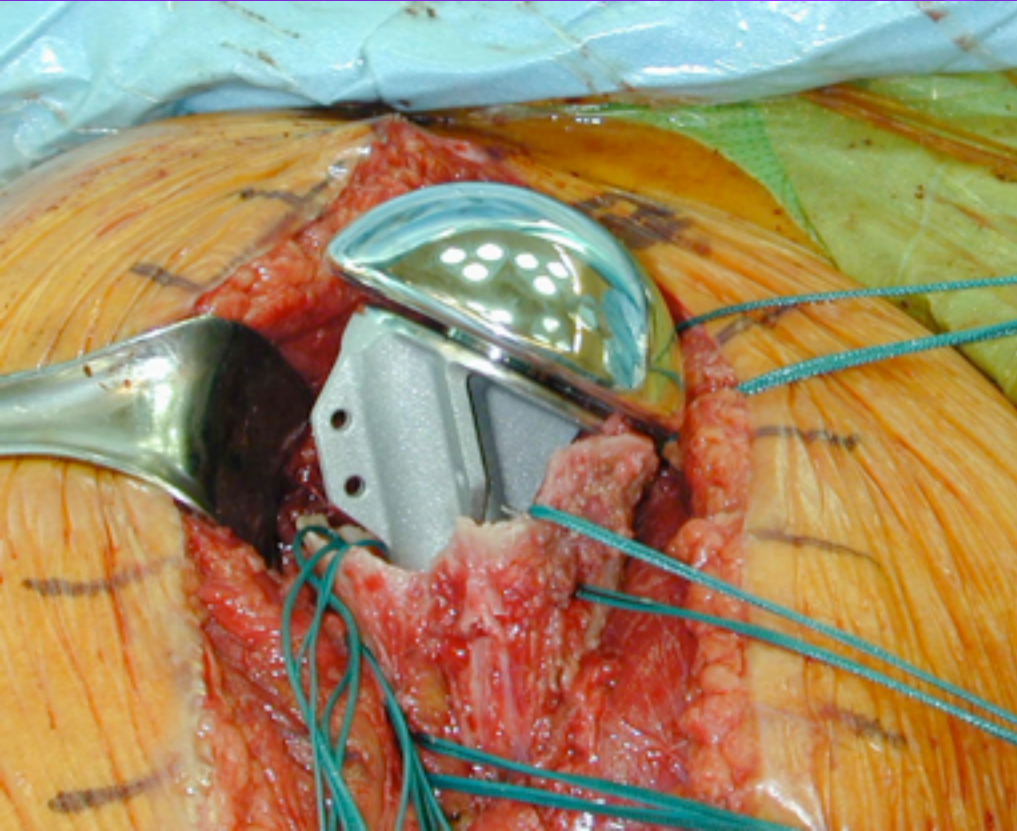


TUBERKELFIXATIE = KRITISCH

- Dikke niet resorbeerbare suturedraden
- Individueel aan schaft door boorkanalen
- Door vinnen van prothese
- Aan elkaar rond proximaal deel prothese



CHIRURGISCHE TECHNIK



REVALIDATIE

- Vanaf dag 1 pendeloefeningen
- Passieve elevatie, bij voorkeur liggend
- Passieve exorotatie tot 40°
- Na 6 weken actief geassisteerde oefeningen
- Zuiver actief en weerstands oefeningen bij consolidatie tuberkels

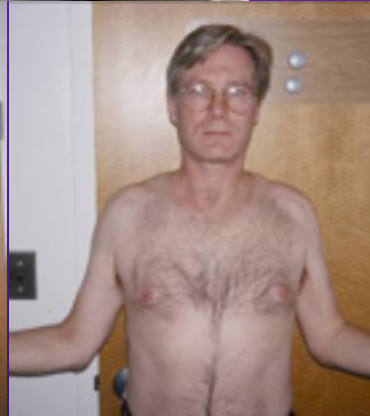
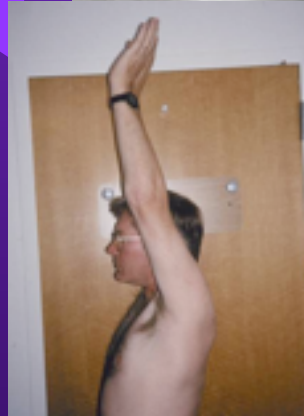
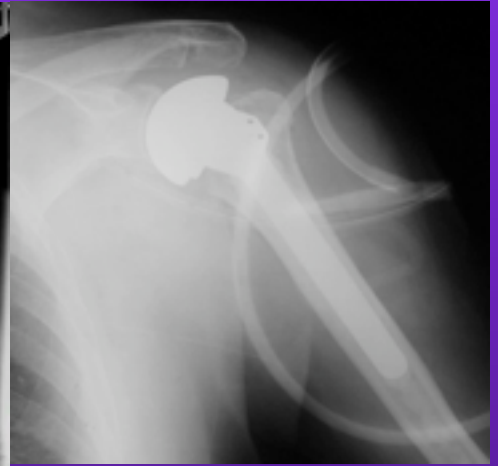
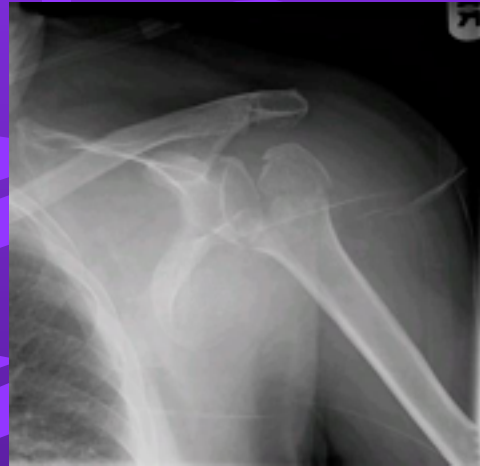


RESULTATEN

- Sterk afhankelijk van union tuberkels
- Pijnvrij
- Mobiliteit niet normaal
- 50 - 80% ROM
- Functioneel onafhankelijk voor dagelijkse activiteiten



RESULTATEN



RESULTATEN

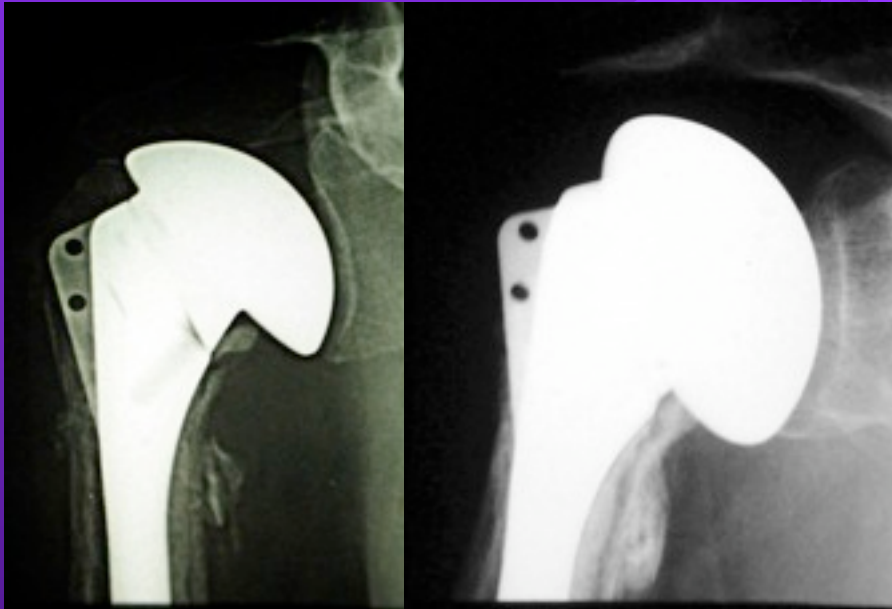


COMPLICATIES

- Resorptie tuberkels
- Malunion
- Nonunion
- Periprothetische fracturen
- N. Axillaris en plexusletsels
- Infectie (zeldzaam)



COMPLICATIES

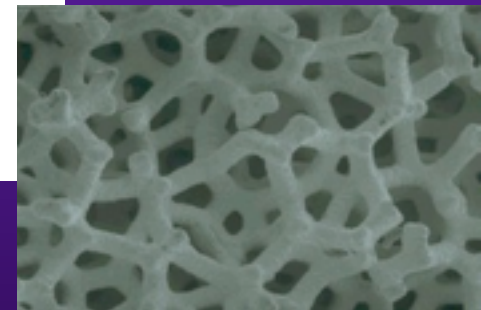


- Persisterende non-union (30%)
- Tub. Maius resorptie / migratie (25%)

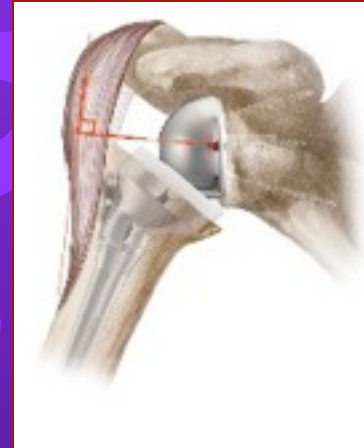


NIEUWE TRENDS

- Coating hydroxyapatiet
- “Trabeculair” metaal
- “Reversed” prothese



REVERSED PROTHESE



- Designed voor rotatorcuff arthropathie
- Meer en meer bij fracturen
- Resultaat minder afhankelijk van tuberkelheling
- Betere klinisch resultaten op korte termijn
- Snellere actieve mobilisatie mogelijk

MAAR.....

- Meer en ernstigere complicaties
- Meer infecties
- Constrained \Rightarrow long-term survival?????
- Tuberkelheiling vereist voor actieve uitwendige rotatie
- Resultaten minder goed dan bij rotatorcuff arthropathie



CONCLUSIE

- Resultaten bevredigend maar niet optimaal
- Sterk afhankelijk van tuberkelheeling
- Hemiprothese vs reversed: individueel te bepalen voor patient en ervaring chirurg
- Revalidatie erg belangrijk



DANK II