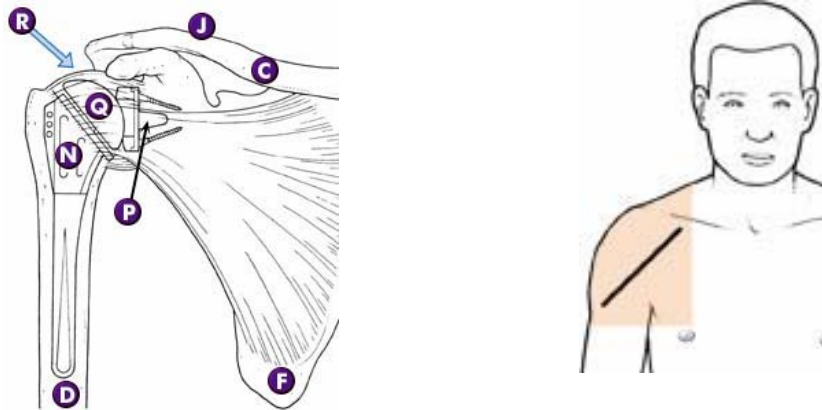


## TOTAL SHOULDER REPLACEMENT (TSR)



### KEY

C Clavicle D Humeral shaft F Scapula N Humeral component P Glenoid component Q Humeral head component R Rotator cuff

**Patient to be seen within 2 weeks of discharge from the Orthopaedic Unit at Macclesfield District General Hospital**

### OPERATION

#### Purpose

To replace the articular surfaces of the humeral head and glenoid with prosthetic implants

#### Case profile

All patients with pain from degenerative changes of the gleno-humeral joint

#### Implants

Humeral component - Metal shaft with a selection of different head sizes.

Glenoid component - Polyethylene.

#### Incision

Deltopectoral incision.

#### Approach

Detach subscapularis from lesser tuberosity

The osteotomies are repaired with sutures after insertion of the components.

Division of the coraco-acromial ligament improves the access.

Extensive soft tissue release especially to regain external rotation.



#### Procedure

The rotator cuff interval is opened between subscapularis and supraspinatus to access the joint.

The humeral articular surface is excised preserving the insertion of the attached rotator cuff into the greater tuberosity.

The bony glenoid is reamed flat and the glenoid prosthesis held in position with cement.

Humeral shaft components are usually inserted without the use of cement after appropriate reaming.

A humeral head component is selected according to the size which provides the correct soft tissue tension and is then impacted into the reverse morse taper of the humeral shaft. The lesser tuberosity is re-attached with sutures to the humeral lesser tuberosity.

**Possible associated procedures**

Acromioplasty.  
Rotator cuff repair

**Main possible complications**

Neurovascular.  
Humeral shaft or glenoid fracture.  
Dissociation of implant components.

**THERAPIST**

**In patient**

- Patient instructed to wear polysling constantly for 2-3 weeks (dependent on post-operative instructions) – only to be removed for exercises and washing and dressing.
- Exercise programme begins post op:
  - i. Gentle pendular exercises
  - ii. External rotation exercises with a stick – limited to neutral
  - iii. Elbow wrist and hand exercises

**2-3 weeks**

- Wean off polysling.
- Commence passive movements by therapist
- Commence active-assisted shoulder movements
- Correct any abnormal movement pattern.
- Proprioceptive re-education (pain free)
- Scapula stabilising exercises (pain free)
- External rotation exercises – limited to 30°

**3-4 weeks**

- Isometric rotator cuff rehabilitation \*
- External rotation exercises – limited to 60°

**6 weeks**

- Progress active exercises through the full range of motion.
- Rotator cuff rehabilitation – resisted exercises with theraband
- Progress scapular stabiliser programme.
- Ensure scapula dynamic control through full ROM.
- Deltoid strengthening throughout full active range of motion
- Full external rotation

**12 weeks**

- Emphasise correct movement pattern in ADLs

<b>MILESTONES</b>	
<b>Week 3</b>	50% of Pre-operative level of active ROM maintained
<b>Week 6</b>	Passive ROM at least the pre-operative level
<b>Week 12</b>	Active ROM at least the pre-operative level

## Functional Activities

<b>Driving</b>	After 4 weeks
<b>Swimming</b>	Breaststroke 6 weeks Freestyle 3 months
<b>Golf</b>	3 months
<b>Lifting</b>	Light lifting (cup of tea) 3 weeks Heavy lifting 6 months
<b>Return to work</b>	Sedentary 6 weeks Manual – guided by surgeon

\* Isometric contraction < 30% maximum voluntary contraction.

\*\* Exercise limits are governed by both pain and pre-operative ROM. Communication with the surgeon is essential to confirm pre-op ROM and so avoid compromise of the prosthesis and exacerbation of pain.

**Improvement continues for 18 months to 2 years and patients should continue exercising until their maximum potential has been reached**