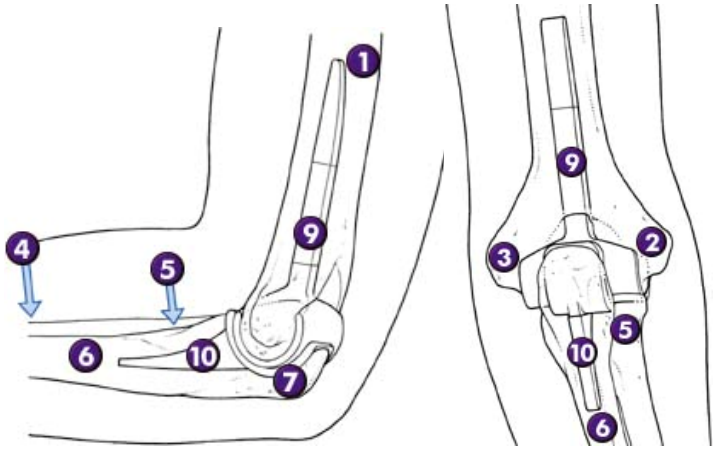
ORTHOPAEDIC PHYSIOTHERAPY DEPARTMENT

TOTAL ELBOW REPLACEMENT



KEY: 1 Humerus **2** Lateral epicondyle **3** Medial epicondyle **4** Radius **5** Radial head 6 Ulna **7** Olecranon **9** Humeral component **10** Ulnar component

Purpose
To replace the articular surfaces of the elbow joint with prosthetic implants.

Case Profile
Patients with pain from degenerative changes of the elbow joint, mostly inflammatory arthropathy.

Implants
Humeral component - Metal.
Ulnar component - Metal backed polyethylene.

Incision
Mid posterior with radial curve.

Approach
Localisation and protection of the ulnar nerve.

Reflection of the triceps tendon through an inverted V incision.
Removal of the radial head.

Procedure
The humerus is prepared for the prosthesis with the formation of a rectangular slot and reaming of the shaft. Cement is not usually used for the humeral component fixation.
The ulnar is reamed for the correct size of component which is often cemented because of the quality of the bone.
After checking the stability and range of motion of the prosthetic components the triceps is repaired.

Possible associated procedures
Synovectomy.
Removal of osteophytes.

Main possible complications
Neurovascular.
Humeral or ulna fracture.
Dislocation of components.
Infection.
Loosening of the components.

THERAPIST

In patient

- Back slab or static resting splint made and fitted anterior to the elbow joint by Occupational Therapist and patient instructed in correct use.
- Teach shoulder, wrist and hand exercises.
- Occupational therapy assessment to identify potential problems and ensure adequate carer support.

1-2 weeks

- No resisted elbow extension for 12 weeks.
- Patients must avoid varus/valgus strain.
- Active assisted flexion exercises progress to active as pain allows.
- Passive/gravity assisted elbow extension.
- Progress active elbow extension exercises.*
- Functional rehabilitation and monitoring of splint continues with Occupational Therapist.
- Pronation and supination exercises through active range of extension/flexion.

6 weeks

- Pronation and supination exercises with the elbow in extension.
- Check muscle control through full range of movement flexion/pronation/supination.
- Ensure antigravity control triceps.
- Continue functional rehabilitation if indicated.

12 weeks

- Check triceps control through full range of movement.

MILESTONES	
Week 6	50% of pre-operative level of passive range of motion gained.
Week 10	Passive range of motion at least the pre- operative level
Week 16	Active range of motion at least the pre- operative level

* If wound healing established.