A Coonrad-Morrey Total Elbow Replacement

What does this involve?
This involves removing the arthritic elbow joint and replacing it with something less painful. Several types of replacement are available but the one used in Brighton is the Coonrad-Morrey design.

Some improvements in the range of movement of the elbow after replacing this joint are likely but a normal range of motion is almost never achieved.

The results of elbow replacement are not as reliable as those of hip and knee replacements with 5 year survival rates of 72-84% reported. That means that by 5 years after the original operation up to 28% of patients will have required revision surgery.

Following recovery from elbow replacement surgery lifting with the elbow should always be limited to less than 10 lbs of weight.

What is surgery needed?
This operation is most frequently performed in patients with arthritis. Sometimes joint replacement is considered following severe fractures. Severe pain is the main reason for surgery. Most surgeons would encourage you to try painkillers, activity modification and steroid injections into the painful joint before recommending surgery. The majority of patients with elbow arthritis manage their symptoms in this way without ever needing an operation.

Lesser operations, such as a joint arthrolysis or radial head excision may be more appropriate for you and have fewer risks associated.

Which operation is the right one for me?
This depends on your symptoms and which parts of the elbow are affected by the arthritis. Your surgeon will discuss your individual case with you.

What are the main risks of this operation?

Swelling, Stiffness and Scar pain
This is a big operation and the arm and hand will be swollen after the surgery. This can be reduced by keeping the arm elevated and moving the free joints as soon as possible. In most people the general swelling reduces dramatically in the two weeks after the operation.

Local swelling around the surgical site can persist for several months. Local swelling can be helped by massaging the tissues and this may also improve any irritability in the surgical scar.

The elbow will be stiff initially and this will require hard work and exercises to regain good movement.

Occasionally patients are troubled by more swelling and stiffness than average. In this case Complex Regional Pain Syndrome (CRPS) is sometimes the cause (see relevant information sheet in ‘Conditions we Treat’). Severe CRPS occurs in less than 1% of cases.

Nerve Damage
The ulna nerve is most at risk with this surgery. It is placed very close to the elbow and must be found and carefully held out of the way in each case. Up to 40% of patients may experience some ulna nerve symptoms after this surgery but the vast majority settle in the following 6-8 weeks leaving only 1-2% with permanent symptoms. In this case there will be numbness in the little and ring fingers of the hand with ‘clawing’ of those two digits and wasting and weakness of the small muscles within the hand leaving the hand weakened and less dextrous.

Loosening of the replacement
This occurs in up to 15% of patients by 10 years after the surgery. If the replacement becomes very loose further surgery may be required.
Fracture around the replacement
This can occur at the time of surgery or more commonly years later. Rates are reported in between 5-29% of patients. Treatment depends on where the fracture occurs in relation to the replacement and whether or not the replacement is also loose at the time of the fracture. More surgery will nearly always be required.

Fracture of the replacement or wear of the bushing
The humeral component has been reported as breaking in 0.6% of patients by 8 years and the ulnar component in 1.2% of patients by 4.5 years. The bushing between the ulnar and humeral component wears enough to require exchanging in 1%-6% of patients by 8 years.

Failure of Tendon Repair
The triceps tendon on the back of the elbow has to be taken off in most cases to perform this surgery and repaired at the end. Failure of this repair occurs in 2-8% of patients and usually requires further surgery.

Post Operative Course
Total Elbow Replacement

Day 1
- A dressing and padded bandage is applied after the operation. Sometimes a plaster is incorporated to keep the elbow out straight if there are any concerns regarding the wound.
- A small drain (plastic tube) is left in the joint to allow any excess blood to come out into an attached container.
- Keep the dressings clean and dry.
- Keep the arm elevated in a sling or on pillows to reduce swelling.
- Start moving the finger and wrist joints immediately to prevent stiffness.
- Take painkillers before the anaesthetic wears off and as necessary thereafter.

Day 2
- The drain is removed and the outer dressings changed.
- You will be discharged home once your pain is under control.
- Continue to keep the arm elevated and exercise the fingers and wrist. If you have not been placed into a plaster you may start to gently move the elbow as pain and the bandage allow.

2 Weeks
- Within the first 2 weeks you will be seen in clinic for a wound check and removal of the stitches. The details will be made on the day of surgery.
- X-rays will be taken.
- Exercises will be demonstrated and physiotherapy will be arranged if necessary.

6 Weeks
- Further review in clinic.
- Exercises to continue, gradually increasing range of motion and strengthening.

3 Months, 6 Months, 1 Year
- Further clinic reviews with x-rays.
- Improvements in range of motion and strength can occur up to 1 year after this surgery.

Plaster Cast Information

Contact your surgical centre at any stage if:
- Your fingers become blue, swollen or numb and tingling with a plaster cast in place.
- You see any discharge, wetness or detect any unpleasant smells from around your cast.
- The cast becomes cracked, soft, loose or uncomfortable.

Outside normal working hours you may need to attend your local Accident and Emergency Department for help with these issues.

Driving
You may drive when you feel confident to control the car, even in an emergency.
For this surgery it is usually six weeks before you should consider driving again.
You should discuss it with your insurer if you are considering driving with a splint in place.

Time off Work
This will vary depending on the nature of your job and the exact nature of your surgery.
Sick notes can be provided on the day of your operation, at your clinic visits and by your own GP.

These notes are intended as a guide and some of the details may vary depending on your individual circumstance and at the discretion of your surgeon.