

# 2005: Asia's First Delta Reversed Shoulder Joint Replacement

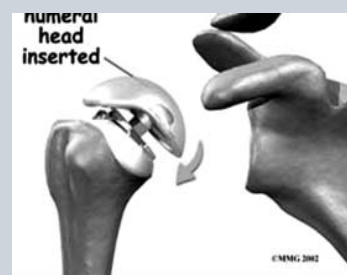
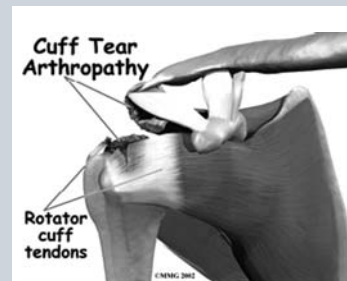
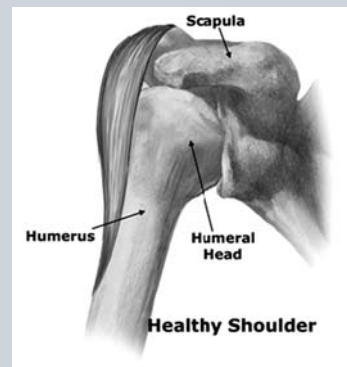
by National University Hospital

Shoulder Surgeons from the Department of Orthopaedic Surgery, National University Hospital have successfully carried out a new type of total shoulder joint replacement (Delta Reversed Shoulder Replacement) for the first time in Singapore and South East Asia. It is used to treat patients with shoulder arthritis associated with massive rotator cuff tears (Cuff Tear Arthropathy).

The shoulder joint is a "ball and socket" joint, with the shoulder blade bone (scapula) shaped like a flat saucer-shaped socket, and the arm bone (humerus) shaped like a ball at its top end. The Rotator Cuff muscles are a very important group of muscles surrounding the shoulder joint, and are critically important in allowing us to raise our arms above the level of our shoulders.

However, some people may choose not to have surgery, or may have an increasingly large tear that only becomes symptomatic late. At this stage arthritis has often set in into the shoulder joint cartilage itself. This results in two problems; the first is an inability to raise the arm due to the massively torn rotator cuff, the second is constant aching pain due to the arthritis and loss of cartilage. This condition is then known as Cuff Tear Arthropathy.

Because massive rotator cuff tears are often not repairable, surgeons have only been able to treat the pain of arthritis with shoulder joint replacement; that is, replacing the worn out head and socket with an artificial metal joint. Patients treated this way have a shoulder that no longer hurts, but still cannot raise their arms above their shoulders. This limitation can be so severe that many patients are not even able to get their hands to their faces.



A relatively new type of total shoulder joint replacement was developed specifically for Cuff Tear Arthropathy in France by Dr P Grammont in the late 1980s. The design of this artificial joint is unique, because the ball is now transferred to the shoulder blade side (scapula) of the joint, and the top of the arm bone (humerus) is converted into the cup - hence the name - Reversed Shoulder Replacement. It is commonly referred to by its commercial name - the Delta Shoulder Replacement. The reversed design allows the damaged cartilage to be replaced by an artificial joint, while at the same time restoring the ability to lift the arm over the level of the shoulders.

To date at least 2 scientific studies have documented good results in patients with Cuff Tear Arthropathy, with a significant reduction in pain as well as an ability to raise the arm to well above shoulder level. While it has been used commonly in Europe since 1987, the Delta Shoulder Replacement only received FDA approval in the USA in 2003. Since that time, over 20,000 patients have been treated with a Delta shoulder internationally.

