



## Welcome to the Spring Edition of Orthosports news:

In this issue Dr Doron Sher presents an article on Shoulder arthritis and outlines management and available treatment options.

Dr John Negrine takes a detailed look at the management of Achilles tendon disorders in the ageing athlete on page 2.

Please see page 3 for up to date information on subacromial cortisone injections. Don't miss the final 2018 workshop dates for the GP - 40 point - Category 1 modules, listed on page 4.

We hope you find this edition enjoyable and informative.

- The Team at Orthosports



## WHO ARE WE?

Orthosports is a professional association of Orthopaedic Surgeons based in Sydney.

## ORTHOSPORTS LOCATIONS

- > Concord 02 9744 2666
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Or visit our website

[www.orthosports.com.au](http://www.orthosports.com.au)

# Shoulder Arthritis

*Shoulder arthritis is less common than hip and knee arthritis*

because the shoulder is a non load bearing joint. The incidence of shoulder arthritis increases with the patient's age and since our society is getting older we are starting to see more shoulder arthritis than we did previously. The patients typically experience pain and gradually lose motion in their shoulder. The pain is often dull at rest and sharp with activity. They have a global loss of motion of their shoulder but often their rotator cuff power is well maintained.

Initial imaging should always be a set of plain xrays. Ultrasound will miss the diagnosis of arthritis in the shoulder and CT and MRI scanning are generally done for surgical planning rather than to establish the diagnosis.

## TREATMENT

As with all other forms of arthritis treatment starts with paracetamol, non steroidal anti-inflammatory drugs and sparing use of narcotic analgesics.

Physiotherapy exercises can be used to improve scapula mechanics but most patients find that their pain is worse (rather than better) after doing some physiotherapy.

Corticosteroid injections often work very well to relieve pain but their effects can be short lived ranging from days to weeks. There is no evidence to suggest that injection of PRP or stem cells is of any use.

Arthroscopic debridement can offer short term pain relief to some patients. If it works it can allow the patient to return to sport or work which they were not managing to do. In my experience about 50% of patients are still happy after 2 years.

**Hemiarthroplasty** (humeral replacement only) has very good short term results and allows higher lifting limits for the patient because we are not worried about gradually levering their glenoid component free. Longer term results are quite mixed with some patients doing very well and others wearing away their glenoid, making revision surgery very challenging.

*Currently I am using a very promising prosthesis with a pyrocarbon articulation rather than having metal against cartilage. The early results from this prosthesis are extremely encouraging.*

**Total Shoulder replacement** is the 'gold standard' for treatment in terms of pain relief and restoration



Xray of the new pyrocarbon hemiarthroplasty

of motion for shoulder arthritis. The rotator cuff must be intact to keep the prosthesis stable after the operation and the patient has a permanent lifting limit of 2-5kg to protect the glenoid component of the prosthesis.

## Reverse Total Shoulder Replacement

is used when the rotator cuff is not intact. This provides excellent pain relief but is not as good at restoring range of motion or strength as a standard total shoulder replacement. It has provided an excellent treatment option for what used to be a very difficult to treat condition. It is also an excellent option for the older patient because there is almost no 'down time' or rehabilitation required after the surgery.

**Shoulder Fusion** is a last resort in young patients and is rarely used nowadays.

The results of treatment of glenohumeral arthritis are now excellent and surgery is a very good option when non-surgical management has failed.

Dr Doron Sher

# Achilles tendon disorders – The ageing athlete

*We in foot and ankle practice are seeing a veritable explosion in the incidence of Achilles tendon disorders.*

**W**hilst these conditions are certainly more common in sports people (*Mafulli states that the incidence of Achilles tendon injuries in runners is ten times that in age matched controls*) they are by no means confined to athletes, indeed in a study of 58 patients one third did not participate in any vigorous sporting activity at all.

Patients are running faster, longer and until they are older (Figure 1).



Figure 1: The ageing athlete City to Surf 2018

With life expectancy now in excess of 80 in this country, as Bernard Salt (demographer) put it, “the medical profession has gifted this generation 20 years of active life.” In this 20 years, patients expect to maintain full activity. It is indeed a boom time for my joint replacement colleagues! (100,000 hip and knee replacements performed annually in Australia).

Achilles tendon problems are basically overuse or rupture. They occur at the midsubstance (where most ruptures occur) or at

the insertion. Keep in mind that seronegative arthropathy can also cause Achilles symptoms.

Terms can be confusing so that we prefer to refer to the majority of patients as suffering “tendinopathy” or “tendinosis” rather than “tendonitis” which implies an inflammation (as mostly the condition is not inflammatory based on biopsies of patients with chronic Achilles symptoms).

## CLINICAL PRESENTATION:

The most consistent symptom complained of is pain. Typically start up (first thing in the morning or after resting for a period and then getting up). Many runners feel that when the tendon warms up the pain improves only to return when they cool down. In more serious cases patients are unable to walk because of pain. On examination observe swelling of the tendon (Figure 2) or its insertion (Figure 3). Crepitus around the tendon occurs with paratenon conditions.

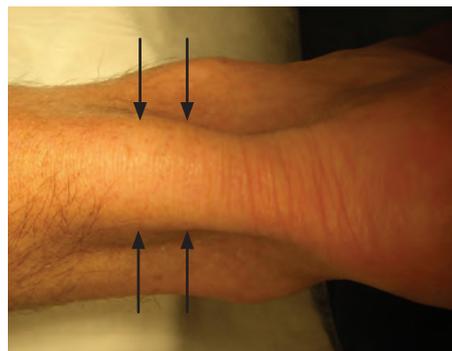


Figure 2: Marked thickening of the Achilles tendon in mid substance tendinosis

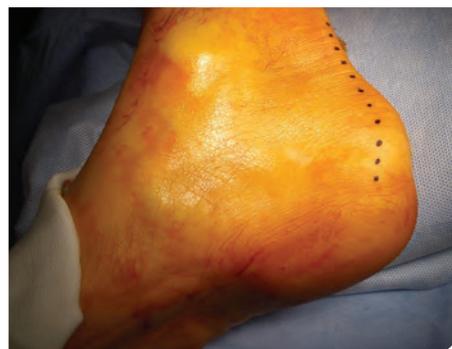


Figure 3: Insertional Tendinopathy

## INVESTIGATIONS:

The diagnosis is usually obvious from the history and clinical examination though investigations will yield additional information. Plain x-rays show the Achilles insertion and the presence or absence of intratendinous calcification (although many calcifications are present in asymptomatic patients). Ultrasound can demonstrate intra tendinous areas of degeneration and will show the width of the tendon. MRI will demonstrate bone and more importantly soft tissue and can help to differentiate a mechanical from an inflammatory cause. It will most reliably predict the findings at surgery.

## TREATMENT:

As with many musculoskeletal conditions we initially treat patients non-surgically though in the case of Achilles tendinopathy we know that a proportion of patients will fail non-surgical treatments based on long term follow up studies.

Treatments for tendinopathies are wide ranging, and include but are not limited to orthotic devices, physiotherapy eccentric loading, laser treatment, ultrasound, extracorporeal shock wave therapy, NSAIDs, peritendinous corticosteroid injections, platelet rich plasma injections, whole blood injections, stem cell injections, bone marrow injections, autologous tenocyte injections, high volume saline injection, sclerosant injection and surgery. Naturally when so many different treatments are available no single treatment will help all patients.

In an attempt to make sense of these newer injectable remedies George Holmes et.al published a review of 9 randomised controlled trials. The study included 312 achilles tendons. The interventions of interest included platelet-rich plasma (n = 54),

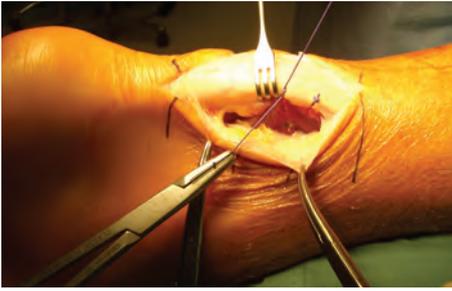


Figure 4: showing the FHL muscle being repaired onto the anterior edge of the Achilles tendon

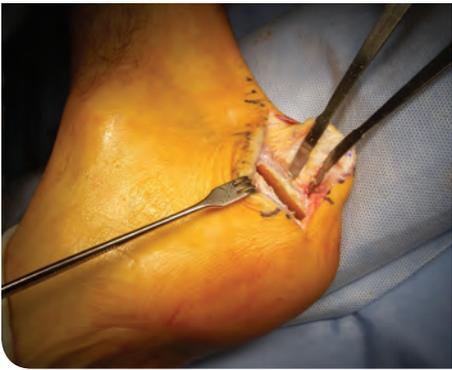


Figure 5: Removal of bone at surgery

autologous blood injection (n = 40), sclerosing agents (n = 72), protease inhibitors (n = 26), hemodialysate (n = 60), corticosteroids (n = 52), and prolotherapy (n = 20). Only 1 study met the criteria for a high-quality randomized controlled trial. All of the studies were designated as having a low quality of evidence. While some studies showed statistically significant effects of the treatment modalities, often studies revealed that certain injectables were no better than a placebo. Conclusion: More work needed.

### WHAT DO I DO?

#### Mid substance tendinosis:

- Rest in a walking boot, heavy load eccentric strengthening, never steroid injections.

- Surgically: I attach the flexor hallucis muscle to the anterior surface of the Achilles tendon to give it vascularity and assist in the healing (Figure 4).

#### Insertional tendinopathy (often calcific):

- Rest in a walking boot, shock wave lithotripsy, never steroid injections.
- Surgically: take down the Achilles insertion, remove the calcium and the dorsal 5mm of the calcaneus and re-attach the tendon. 6 weeks in plaster non-weightbearing and 4 weeks in a walking boot (Figure 5).
- Long recovery so reserved for patients that fail non-surgical remedies.

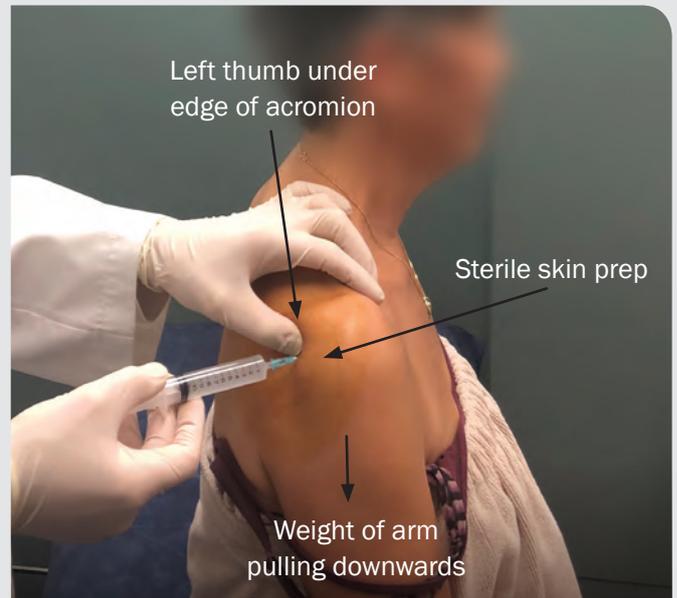
Dr John Negrine

## Injection Techniques

**S**ubacromial cortisone injections may be used to treat impingement, rotator cuff tears and calcific tendonitis and are sometimes used to help confirm a particular diagnosis in the shoulder. The aim is to inject the cortisone into the “bursal” area as shown in this image.

We suggest using a 10ml syringe with a 23 gauge needle attached. The volume of fluid injected is very important and we use 2 ampoules of Celestone Chronodose combined with 8 mls of 1% Xylocaine. A lower dose of corticosteroid is recommended for diabetics and they must be warned to monitor their blood sugar levels for up to 72 hours. Strict aseptic techniques should be used.

The aim of the injection is to place it under the acromion and above the rotator cuff, into the bursal area. This is a fairly large area and to make it easier to access, it is best to have the patient sitting upright, so the weight of the arm opens the subacromial space even wider. The bursa is a bit like a balloon so it does not matter whether it is injected from the front, the side or the back. As long as enough fluid is used, the



injection will be effective. It is up to each doctor to use the approach with which they feel most comfortable. Once the needle is in position push the plunger of the syringe. The fluid should enter the subacromial space with ease. If there is any resistance stop, reposition the needle and inject again.

Dr Doron Sher

# Orthopaedic Surgeons and their Interests

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Dr David Lieu	Knee, Shoulder and Elbow
Dr John Negrine	Foot & Ankle (Adult)
Dr Rodney Pattinson	Paediatrics and General Orthopaedics
Dr Doron Sher	Knee, Shoulder and Elbow
Dr Kwan Yeoh	Hand, Upper Limb and General Orthopaedics

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Dr John Negrine	Foot & Ankle (Adult)
Dr Rodney Pattinson	Paediatrics and General Orthopaedics
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## Sport & Exercise Medicine Physicians

Dr Paul Annett	Hurstville
Dr John Best	Randwick
Dr Paul Mason	Concord   Randwick



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#### CATEGORY 1 MODULES (40 CPD POINTS)

##### Knee Sports Injuries, Imaging & the Swollen Knee

Randwick: Thursday, 27th September  
Concord: Wednesday, 17th October

##### Knee Management of Knee Arthritis

Hurstville: Wednesday, 24th October

##### Foot & Ankle Injuries

2019 Dates to be confirmed

##### Shoulder Pain & Injury

2019 Dates to be confirmed

To register your interest or for more information please email [education@orthosports.com.au](mailto:education@orthosports.com.au)

### LATEST ORTHOPAEDIC UPDATES 2018

**Sunday, 17th November, 2018**  
**University of NSW – 8am to 12.30pm**

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