



## Welcome to the 2019 Autumn Edition of Orthosports News:

In this issue Dr Andreas Loeffler presents an article on choosing a prosthesis and the important role of the National Joint Replacement Registry.

Dr Kwan Yeoh discusses lacerations around the hand and the potential implications to the nerves and tendons of this area.

In the key examination points on page 3, Dr Doron Sher looks at Elbow examination, and investigations.

As the RACGP triennium draws to a close in 2019, please see the upcoming dates for the Category 1 – GP 40 point modules on page 4.

– *The Team at Orthosports*



**AOA**  
AUSTRALIAN  
ORTHOPAEDIC  
ASSOCIATION

## WHO ARE WE?

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

## ORTHOSPORTS LOCATIONS

- > Concord 02 9744 2666
- > Hurstville 02 9580 6066
- > Penrith 02 4721 7799
- > Randwick 02 9399 5333
- > Bella Vista 02 9744 2666

Or visit our website

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

## Beware the benign finger laceration!

**L**acerations around the hand, especially of the digits, can be tricky to treat in a primary care scenario. Patients may present with a small, seemingly innocuous laceration expecting a couple of sutures, a tetanus toxoid booster, and perhaps some antibiotics.

However, we must remember that there are important structures lying within a few millimetres of the skin surface in the hand. The commonly injured structures include digital nerves, flexor tendons, extensor tendons and joint capsules.

In particular, lacerations due to shattered glass can be deceiving. When glass breaks into small pieces, each individual glass fragment travels in an unpredictable direction. It may go much deeper or further away from the skin entry site than realised.

A small laceration in the palm of the hand while holding a shattering wine glass may actually correspond to a laceration to the flexor tendon up to 30mm away when the fingers are fully extended, due to the glide of the tendons in the hand.

While a careful examination of the function of the hand is important in managing lacerations, this only tells part of the story. For example,

ensuring that a tendon still powers the digit may fail to recognise a partial laceration – the tendon may fail at a later date due to further tearing at the lacerated site. Decreased sensation on one side of a digit may be due to swelling associated with the trauma or may indicate a laceration to the digital nerve – it may be impossible to tell the difference.

Ultimately, a full clinical examination requires the laceration to be fully examined. This includes being able to see right to the bottom of the laceration. If the laceration is any more than skin deep, then this can only be achieved under arterial tourniquet control and by increasing the size of the laceration under local anaesthetic infiltration or digital ring block. A plain x-ray will be useful in determining whether there is any foreign material remaining in the wound, such as metal shards or glass fragments.

Treatment of the laceration depends on the location, depth and other clinical findings. If the laceration is not entirely through skin, then it can be washed and dressed. However, if the laceration is through the entire thickness of the skin, then all deeper structures need to be properly examined under tourniquet control



### Line of laceration in middle finger.

*This short laceration was due to a wine glass shattering in the patient's hand and was left to heal despite numbness in the fingertip. The patient had increasing hypersensitivity pain directly under the now-healed wound. Important structures that may be injured by a laceration in this location include the radial digital nerve or artery, the FDS or FDP flexor tendons, and the PIP joint capsule (leading to a septic arthritis). Because the wound is so short, it requires extending in order to properly examine these structures under tourniquet and local ring block.*

and local anaesthesia. This procedure is really only possible in a dedicated procedure room or an operating theatre, with proper lighting and magnification, so it is best to send immediately to a hand surgeon or hospital emergency department for assessment and definitive treatment.

Dr Kwan Yeoh



# How do surgeons choose prostheses?

*Orthopaedic surgeons use prostheses based on familiarity, ease of implantation, durability and price. There are approximately 50 types of knee replacements and in excess of 100 combinations of hip replacements on the Australian market. How do we know which implants work best in our patients?*

**T**he Australian National Joint Replacement Registry (NJRR) provides an independent assessment of all prostheses used in this country. Every hip, knee, shoulder, ankle, and other replacement is recorded at the time of surgery. Hospitals collect demographic data on patients, on pathology, details of the prosthetic components, and the surgical approach. Revision is the single outcome measure, whether for loosening, wear, fracture, infection, dislocation or any other reason.

The Registry started collecting information 17 years ago and now has a database of more than 1.2 Million joint replacements, most of which are hips, knees and shoulders. The Registry identifies prostheses, which have a higher than expected revision rate. Conversely the Registry also lists those prostheses, which are performing better than others. This enables us surgeons to choose the best implant for each patient.

The Registry also provides individual surgeons with outcome data. Each surgeon has access to a summary of all cases done. The Surgeon Portal is a valuable tool, allowing us to track patients and prostheses and ensure best long-term results. Orthosports surgeons are all members of the Australian Orthopaedic Association, which initiated and owns the Registry.

Since its inception the Registry has cost an estimated \$30Million. The Registry has identified the best performing prostheses and has changed the practice of many surgeons. We now implant more cemented components in elderly patients. We use larger femoral heads, which have been shown to improve stability in hip replacements. We use highly crosslinked polyethylene, which lasts longer in

hip and knee replacements. Ceramic on ceramic bearings are a good choice for young patients. Choosing implants wisely has reduced the revision rates nationally, with a monetary saving of some \$600Million, let alone the savings in pain and suffering of our patients.



The NJRR publishes an annual report, with detailed statistics as well as a layman's summary. The Registry is independent and has become most important in guiding surgeons in the choice of prostheses for individual patients. Orthosports' surgeons make evidence based decisions when advising specific implants for your patients.

The annual Registry report is a public document. Search for AOANJRR Reports.

*Dr Andreas Loeffler*



## KEY EXAMINATION POINTS



### Elbow Examination

Examination of the elbow can seem daunting because of the complexity of the joint. The history provides the diagnosis most of the time with the examination simply confirming what you already know.

Elbow complaints are broadly classified into acute or chronic injuries and the history and examination will differ greatly in these circumstances.

The most common repetitive injuries are lateral and medial epicondylitis (tennis and golfers elbow). Posterior Interosseous Nerve (PIN) entrapment and radiocapitellar joint degeneration can also present with pain in a similar area laterally. Arthritis is less common in the elbow than in the weight bearing joints but is a cause of locking, catching, loss of motion and pain.

Acute injuries include fractures, dislocations or tendon avulsions. The most common of these are radial head fractures and distal biceps tears. Undisplaced radial head fractures can be treated in a sling because the annular ligament holds the radial head in place. Biceps and triceps tears should almost always be repaired surgically, ideally within 3 weeks of the injury.

Less commonly the elbow is dislocated, such as from a fall on an outstretched hand. The mechanism of injury in these situations is very helpful when trying to decide on treatment and a detailed history of the injury should always be taken.

Olecranon bursitis usually presents with no history of trauma and is usually a painless swelling (with no infection) which is a nuisance only. Aspirating the bursa increases the likelihood of it becoming infected and should not be done routinely. Immobilising the elbow will help



Elbow extension (from left): forearm supination, forearms in neutral, and forearm pronation.

the bursa settle more rapidly. When infected it may require treatment with antibiotics and splinting and occasionally an operative washout and intravenous antibiotics.

Pathology at the elbow can also present with symptoms distally, such as ulnar nerve compression causing numbness in the ulnar 2 fingers.

Always ask which is the patient's dominant hand, what work they do and what sports they play. Repetitive work or recreation activities can lead to overuse injuries at the elbow. Problems in the neck can also present with arm pain which can be mistakenly attributed to the elbow.

- A) Ask the patient to stand with their arms by their sides. Look at the arms and elbow from the front and the back.
- B) Ask the patient to fully straighten and then fully bend the elbows. Check pronation and supination to assess the proximal and distal radio-ulnar joints and always compare this to the unaffected side.
- C) Look for joint swelling
- D) Palpate all prominences
  - 1) Medial epicondyle
  - 2) Ulnar nerve
  - 3) Olecranon
  - 4) Lateral epicondyle
  - 5) Radial head
- E) Feel the various muscles and tendons for tenderness or tears
  - 1) Triceps

- 2) biceps
- 3) Wrist flexors
- 4) Wrist extensors:  
"the mobile wad of three"

- F) Check muscle power in the hand and elbow and compare it to the unaffected side.
- G) The resisted extension test is very accurate for diagnosing lateral epicondylitis. Ask the patient to straighten their elbow, wrist and fingers and press down on the long finger while they try to keep it straight. Pain at the lateral epicondyle confirms the diagnosis of tennis elbow.

### INVESTIGATIONS

Always start with plain Xrays of the elbow. An AP, Lateral and Oblique are the 3 minimum views. If these are normal and you suspect a loose body or fracture then a CT scan should be the next test ordered. MRI scanning can be used to look for ligament injuries, muscle tears and arthritis but these are usually obvious clinically. Ultrasound has limited usefulness but can be used to localise a nerve or look for a cyst. Bone scan can show fractures, arthritis or CRPS as well as epicondylitis.

Many elbow conditions will respond well to physiotherapy but early referral is best for muscle and tendon tears, fractures and dislocations.

Dr Doron Sher

## Orthopaedic Surgeons and their Interests

### CONCORD

47-49 Burwood Road Concord NSW 2137  
Tel: 02 9744 2666

Dr Todd Gothelf	Foot & Ankle, Shoulder
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

### HURSTVILLE

Waratah Private 29-31 Dora Street Hurstville NSW 2220  
Tel: 02 9580 6066

Dr Jerome Goldberg	Shoulder
Dr Todd Gothelf	Foot & Ankle, Shoulder
Dr Andreas Loeffler	Spine, Trauma, Hip and Knee
Dr John Negrine	Foot & Ankle (Adult)
Dr Rodney Pattinson	Paediatrics and General Orthopaedics
Dr Ivan Popoff	Shoulder, Knee and Elbow
Dr Allen Turnbull	Hip and Knee
Dr Kwan Yeoh	Hand, Upper Limb and General Orthopaedics

### PENRITH

Suite 5B, 119-121 Lethbridge Street Penrith NSW 2750  
Tel: 02 4721 7799

Dr Todd Gothelf	Foot & Ankle, Shoulder
Dr Kwan Yeoh	Hand, Upper Limb and General Orthopaedics

### RANDWICK

160 Belmore Road Randwick NSW 2031  
Tel: 02 9399 5333

Dr Jerome Goldberg	Shoulder
Dr Todd Gothelf	Foot & Ankle, Shoulder
Dr Andreas Loeffler	Spine, Trauma, Hip and Knee
Dr John Negrine	Foot & Ankle (Adult)
Dr Rodney Pattinson	Paediatrics and General Orthopaedics
Dr Ivan Popoff	Shoulder, Knee and Elbow
Dr Doron Sher	Knee, Shoulder and Elbow

### BELLA VISTA

Suite 116, Building B, 20 Lexington Drive  
Bella Vista NSW 2153 Tel: 9744 2666

Dr Kwan Yeoh	Hand, Upper Limb and General Orthopaedics
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### Sport & Exercise Medicine Physicians

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



### ORTHOSPORTS IS AN RACGP ACCREDITED ACTIVITY PROVIDER

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

##### Foot & Ankle – Injuries & Conditions

Randwick: Wednesday, 19th June  
Concord: Wednesday, 26th June  
Penrith: Tuesday, 27th August

##### Management of Knee Arthritis

Concord: Wednesday, 29th May

##### Shoulder Pain & Injury Management

Randwick: Tuesday, 7th May

#### SOME COMMENTS RECEIVED FROM GPS:

*"An excellent meeting. It was among the best I have ever attended."*

*"I was very impressed by both the online and face to face components and found it very useful in updating my knowledge."*

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