



Welcome to our Winter edition of Orthosports News

Winter is the time when Alpine Injuries present themselves – Dr Doron Sher covers the most common types of alpine injuries. Dr Kwan Yeoh takes a look at Mallet Finger and “Imaging of the knee” is covered by Dr Sher in our Key Examination Points Section.

Many GPs have attended our Category 1 Education Modules; there are 4 remaining dates for our 2014 RACGP approved modules. See page 4 for details.

We hope you enjoy this issue – The Team at Orthosports

Alpine Injuries

Skiing and snowboarding are exhilarating sports. They are physically demanding and require co-ordination, strength, fitness and lots of specialized equipment. More people ski than snowboard and snowboarders are generally younger than skiers. Skiing and snowboarding injuries are very common but fortunately the risk of an injury to any individual is quite low. The two sports have different injury patterns with snowboarders tending to injure their upper limbs and skiers tending to injure their lower limbs.

The most common injury for all snowboarders is a wrist injury (sprain or fracture) and for skiers is an anterior cruciate ligament (ACL) injury.

Skiers tend to injure their ACL, MCL or LCL in the knee, fracture their tibia or injure their thumb collateral ligament (skier's thumb). Snowboarders suffer wrist injuries, shoulder soft tissue injuries, ankle injuries, concussions, clavicle fractures and elbow fractures.

Most injuries in snowboarding occur as a result of jumping and losing control. Beginner snowboarders tend to fall at relatively low speed and injure their wrist (falling forward) or clavicle (falling backwards). Experienced snowboarders travel faster, jump higher and tend to jump on hard obstacles such as terrain parks. This group does not fall as often when travelling at low speed but does experience higher energy injuries. They typically have quite severe



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

Or visit our website
www.orthosports.com.au

elbow injuries and more comminuted clavicle fractures. Shoulder dislocation is also very common. Snowboarders do not usually injure their legs when both feet are attached to the board but injuries to the knee are not uncommon getting on and off lifts when only one foot is bound to the board (more common in beginners). If they do injure their knee, it is almost always in a terrain park landing from a big jump.

While skiers do fall and dislocate their shoulders or fracture their clavicles, the most common injury seen is to the knee. The length of the ski provides a long lever arm to twist the knee and if the binding does not release, as it should, then one of the ligaments of the knee can be injured.

Snow conditions are also important because the worse the quality of the snow, the more likely you are to get injured. This includes hitting rocks, slipping on patches of ice or hitting trees.

Appropriate equipment is critical to being safe, such as the use of helmets, which has allowed a massive decrease in the rate of head injuries. In terrain parks elbow and knee-pads are recommended. Wearing a wrist guard has been shown to make it less likely that you will fracture your wrist.

SUMMARY:

- Make sure you undertake pre-season conditioning and consider sport specific fitness training.
- All skiers and snowboarders should wear approved helmets.
- Snowboarders should wear wrist guards designed specifically for snowboarding.
- Ski bindings should be tested by a professional and skiers should learn to self-test and adjust bindings as well.

We hope you enjoy your ski season safely.

Dr Doron Sher

Dr Sher has been a lecturer for the ski patrol association for many years and as a skier himself has a keen interest in the treatment of alpine knee and shoulder injuries.

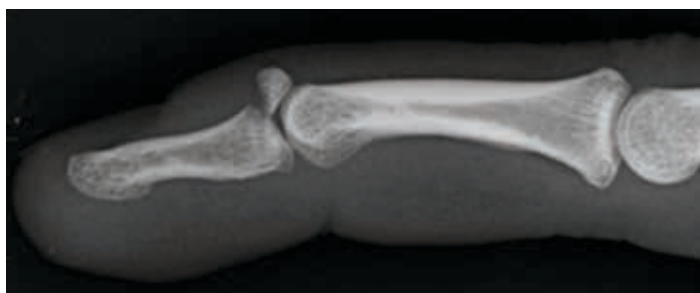
Mallet finger

Mallet finger is a common finger injury, along with sprains, fractures, dislocations and tendon injuries.

WHAT IS A MALLET FINGER?

A mallet finger is an injury to the extensor mechanism at the level of the DIP joint of a finger. It usually occurs when the DIP joint is pushed into sudden forceful flexion, but may also occur from much more minor trauma, such as the finger getting caught in a sock. The injury may involve a rupture of the finger's extensor tendon, an avulsion of the tendon from its insertion into the distal phalanx, or an avulsion fracture of the distal phalanx itself where the tendon inserts (a "bony mallet" injury).

The patient will be unable to actively extend the DIP joint. There will be varying degrees of tenderness at the DIP joint, particularly on the dorsal surface.



HOW IS THIS INJURY ASSESSED?

If a closed mallet injury occurs during a football match, the finger can be buddy taped and the player can continue the game, being treated after full time.

Initial examination should look for marked deformity which may indicate a dislocation of the joint. The patient's active flexion and extension at the joint should be tested to determine which tendon mechanisms have failed. The proximal interphalangeal (PIP) and metacarpophalangeal (MCP) joints should also be fully tested.

All patients should have a plain X-ray of the DIP joint, looking at both AP and lateral views. Ensure that a true lateral X-ray of the joint is obtained, with both condyles of the middle phalanx superimposed. Accepting a less than perfect X-ray could mean missing a joint subluxation. Look for a fracture at the joint, and ensure that the joint is not subluxed or dislocated. The chance of joint subluxation is increased when there is an intraarticular fracture involving greater than 30% of the joint surface.

HOW IS IT TREATED?

When diagnosed early, treatment of this injury depends upon whether a fracture or dislocation exists. For a simple soft tissue mallet finger injury, the aim of treatment is to appose the two ends of the ruptured extensor tendon by keeping the DIP joint fully extended until the tendon



has healed. This is done by using a splint which is placed across the DIP joint in full extension. Your physiotherapist or hand therapist may either choose a splint "off the shelf" or make a custom splint for your patient. While in the splint, the remaining joints for the finger should be moved to prevent stiffness. The splint should stay on full time for a minimum of 8 weeks, at which time the patient should be assessed clinically. If full active DIP extension can be obtained, then a weaning process over the next 4 weeks should be instituted. During this weaning process, should the finger start to develop a recurrent mallet deformity, then full-time splinting should be started again for a further 3 weeks.

Immediate referral to a hand surgeon should be made if there is subluxation or dislocation of the joint, if there is a displaced or large fracture, if there is an open skin injury, or if the patient is unable to tolerate a finger splint. A joint which is not properly reduced requires operative reduction and fixation. Large or displaced fractures may require surgical intervention, or may just need careful weekly radiological follow-up to ensure that surgery is not required at any stage. Open fractures require a surgical debridement and wash out. Patients who are unable to tolerate a splint may require temporary internal fixation of the joint in extension in lieu of an external splint.

Dr Kwan Yeoh



A sub-group of Orthosports, The Sydney Shoulder Clinic is a specialist shoulder service providing clinical care in physiotherapy, sport & exercise medicine and orthopaedic surgery.

www.sydneyshoulderclinic.com.au

KEY EXAMINATION POINTS



Imaging of the knee

Always start with plain xrays of the knee. Often this is the only test that is required. If the xrays do not show any pathology and the diagnosis is still in doubt then other more specialized tests such as a MRI can be considered.

There are four essential views to obtain:

- Weight Bearing AP (anteroposterior view)
- Lateral
- Notch view (Rosenberg view/flexion PA xray)
- Patella (Skyline or merchant view)

This can be abbreviated to:
WB AP, Lat, Notch, Pat views

The xrays must be weight bearing (with the patient standing on the leg) because this is the functional position of the joint and some deformities, which are present with weight bearing, may correct back to neutral when the patient is lying down.

Unless the distal femur and proximal tibia are shown on the xray you will not appreciate the general alignment of the limb and certain diagnoses will be missed. Sometimes arthritis is only seen with the knee bent and the diagnosis of Osteochondritis Dissecans is often made on the notch view only.

Unfortunately these days MRI scans are being used as the first investigation for a painful knee. It is very common for the MRI to report a meniscal tear and chondral damage. When weight bearing xrays are obtained they then show arthritis, which is actually what the patient needs treatment for. Arthroscopy is



Normal AP labelled anatomy

only useful to treat arthritic knees when non surgical management including NSAIDs, injections and physiotherapy have failed.

MRI scans are very useful to diagnose meniscal tears and chondral injuries in patients with relatively normal looking xrays. Look out for how to read MRI scans of knees in our next newsletter.

Dr Doron Sher



Normal AP



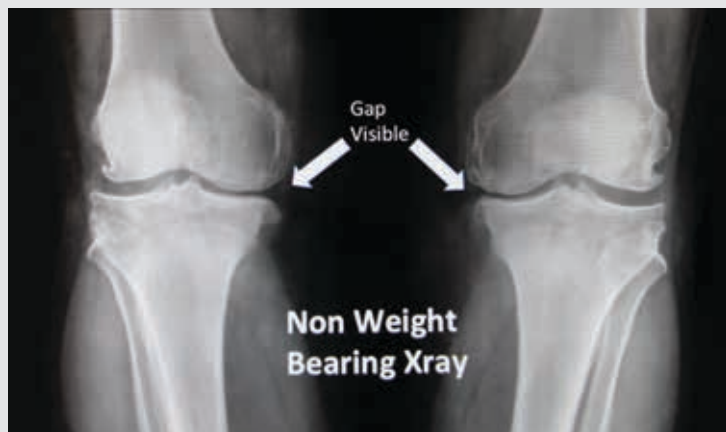
Normal lateral



Normal skyline patella



Normal notch



Orthopaedic Surgeons and their Interests

CONCORD

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

Dr Todd Gothelf	Foot & Ankle, Shoulder
Dr George Konidaris	Foot & Ankle, Hip and Knee
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 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

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Dr Kwan Yeoh	Hand, Upper Limb and General Orthopaedics

RANDWICK

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Dr George Konidaris	Foot & Ankle, Hip and Knee
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

Sport & Exercise Medicine Physicians

Dr Paul Annett	Hurstville
Dr John Best	Randwick
Dr Mel Cusi	Concord Hurstville Randwick

ORTHOSPORTS – RACGP ACCREDITED ACTIVITY PROVIDER:

Our Category 1 modules are designed to offer flexibility and educational hands on learning.

- 3 hours of convenient online learning and
- 3 hours of workshop time (6.30pm-9.30pm)

CATEGORY 1 MODULES (40 CPD POINTS) – 2014 WORKSHOP DATES

Shoulder Pain & Injury Management 40 Category 1 CPD points

Randwick: Tuesday, 19th August, 2014
Concord: Tuesday, 26th August, 2014

Management of Knee Arthritis 40 Category 1 CPD points

Concord: Wednesday, 3rd September, 2014
Randwick: Thursday, 11th September, 2014



To register or for more
information please email
education@orthosports.com.au

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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