

# *A I O T* *Newsletter*

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*Merry  
Christmas*

*Merry Christmas & Happy New Year  
from the AIOT Executive*

*We look forward to seeing you all in  
2013 and wish you a happy & safe  
festive season.*

# Welcome

Mr. Terry James  
AIOT President



Hi to all our AIOT Members,

I would like to take this opportunity to wish all AIOT members a safe and joyous Merry Xmas and a prosperous New Year.

I would like to thank the Executive of our Association for their support over the 2012 period. As we move forward into 2013 we have much to look forward to.

Education weekend's are already planned for both Cairns in July and Melbourne in February as well as others that are in the planning stage. We are also working on new strategies for Education. All of these will see our association grow into the future with our members professional skills and knowledge reaching new goals.

Special thanks to John Kinealy (Newsletter Editor) and Jenny Dalton (Treasurer) for all the work they have performed in 2012.

It would be remiss of me not mention that we are about to lose our Secretary Judith Hunter, Judith is returning to the old Dart to live. On behalf of the AIOT Executive and its members I would like to personally thank Judith for her support as Secretary and wish her the best of luck for the future.

Merry Christmas to you all and I look forward seeing you in 2013.

Yours in casting,  
Terry James

---

Mr. John Kinealy  
Newsletter Editor

As the 2012 year comes to an end, like me I am sure you are asking where has it gone? As 2013 approaches I have stepped down as the Newsletter Editor. I have been doing this on and off for just over 20 years. Its been great fun producing the newsletter, but it is time to step down. I am taking on a new role which you will read about in the not too distant future.

It is with great pleasure that I announce the new Newsletter Editor is, Mr. Errol Bourne. Errol is from Burnie Tasmania and will do a fantastic job. I urge you to support Errol and contribute articles so that all members can benefit and learn from each other. This will in turn create a newsletter that sparks interest.

A once famous President said "Don't ask what your country can do for you?" "Ask what you can do for your country?" Just substitute the word association for country, and remember its your association. Be proud, be involved and be prepared to play just a small part. It does make a difference.

I would like to congratulate our Treasurer Ms. Jenny Dalton and Mr. Jesse Kalachoff our Queensland State Liaison Officer from Townsville on their successful passing of the Certificate IV in Cast Technology. Well done guys.

Please note the change of Venue for our up-coming Educational Weekend to be held in Cairns July 2013. Its on the flyer in this newsletter.

Thank you to all of our regular sponsors who have supported the association by placing adverts in our newsletter. Without their support our members would miss out on much needed educational days and weekends. Please remember to take the time to thank them.  
Merry Christmas.

## How to contact us...

### President

Mr Terry James  
Bundaberg Hospital  
Bourbong Street  
Bundaberg Qld 4670  
terry\_james@health.qld.gov.au  
mobile: 0417 156 050

### Vice-President

Mr. Greg Gysin  
Townsville Hospital  
100 Angus Smith Drive  
Douglas, Townsville  
Qld 4814  
greg\_gysin@health.qld.gov.au  
Mobile: 0400 225 709

### Secretary

Ms. Kerry Jones  
Specialist Clinics Tobruk Building  
Heidelberg Repatriation Hospital  
300 Waterdale Road Heidelberg West  
Vic 3081  
kerry.jones@austin.org.au  
Mobile:

### Treasurer

Ms. Jenny Dalton  
Specialist Clinics Tobruk Building  
Heidelberg Repatriation Hospital  
300 Waterdale Road Heidelberg West  
Vic 3081  
jennifer.dalton@austin.org.au  
Mobile: 0425 746 191

### Web Site Editor

Mr. Ross Wein  
Hospital  
Bourbong Street  
Bundaberg Qld 4670  
ross\_wein@health.qld.gov.au  
Mobile:

### Newsletter Editor

Mr. John Kinealy - Western Hospital  
Gordon Street Footscray  
Vic 3011  
john.kinealy@wh.org.au  
0425 752 775

### AIOT Website

www.aiot.com.au

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# Do You know the answer to these questions?



John Kinealy  
*Answers in the next issue*

## Fractures of the distal radius

1. What is the mechanism of injury that results in a Colles' fracture?
2. How many components are there to a Colles' fracture?
3. Why is a Colles' fracture positioned in slight palmar flexion and ulnar deviation?
4. Why is it important that the cast does not block full MCP flexion?
5. Should the forearm be placed in supination or pronation when treating a Colles' fracture?
6. A fracture of the radial styloid enters which fossa?
7. How does a Smiths' fracture differ from a Colles' fracture?
8. Which two carpal bones articulate with the radius?
9. How many types are there in the Frykman classification?
10. What is the difference between a type I and a type II?

## Casts or splints of the distal radius

1. Describe the difference between a Colles' and a Smiths' cast.
2. A well shaped cast over the dorsal and volar aspects prevents what movement?
3. When assisting, the holder should or should not hold all of the patients fingers?
4. What are the benefits of a Charnley splint over a full cast when treating an acute injury?
5. What are the negatives of a Charnley splint?
6. Do you believe a volar splint is appropriate to treat a Colles' type injury?
7. Can a fibreglass full below elbow cast be used to treat an acute Colles' fracture?
8. What are the positives and negatives of such treatment?
9. What types of casts/splints can be used to treat a Colles' type fracture?
10. If a splint is used what are the benefits of applying the padding to the limb first?



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# Lisfranc

## *fracture- dislocation*

### **Introduction**

The Lisfranc fracture-dislocation is an injury of the midfoot and typically involves a fracture and dislocation of the first and second metatarsals and the cuneiform and an associated displacement of the lateral four metatarsal bones from the tarsal bones (the Lisfranc joint). This represents a disruption of the intermetatarsal ligament that stabilises the joint between the 1st and 2nd metatarsals (predictably named the Lisfranc ligament). (<http://www.surgeons.org.uk/history-of-surgeons/jacques-lisfranc-de-st-martin.html>)

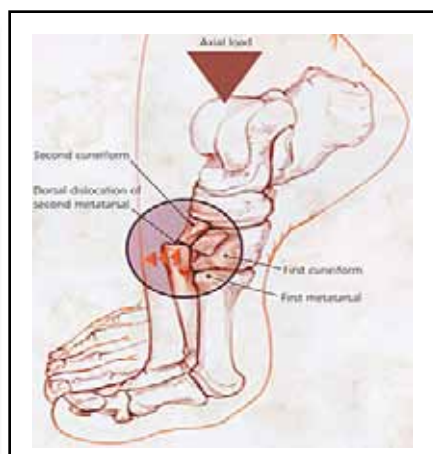
***“The Lisfranc joint actually refers to a number of joints.”***

The Lisfranc joint actually refers to a number of joints which are formed by the junction of the metatarsals and the cuneiforms, and by the junction of the metatarsals and the cuboid bone. A Lisfranc injury indicates an injury to the normal alignment of the cuneiforms and the MT joints with the loss of their normal spatial relationships (The Centre for Orthopaedics & Sports Medicine).

Mechanisms of injury are varied, and include direct crush injury, or an indirect load onto a plantar flexed foot. Tarsometatarsal dislocation may also occur in the diabetic neuropathic joint (Charcot's). ([http://radiopaedia.org/articles/lisfranc\\_injury](http://radiopaedia.org/articles/lisfranc_injury)). The mechanism of injury for most athletes is axial loading on a hyperplantarflexed midfoot. (<http://emedicine.medscape.com/article/1236228-overview#a0112>).



<http://www.northcoastfootcareblog.com>



[www.aafp.org](http://www.aafp.org)



### **Historical Overview**

*Lisfranc is named after the 18th and 19th century surgeon and gynecologist, Jacques Lisfranc de St. Martin (Who Named It? November 2011). He is arguably best known for his description of his self-titled injury, which involves a fracture within the forefoot (as outlined). This was first described by him during his time as a military surgeon in Napoleon's army around 1813 and occurred when riders fell from their horses with their feet caught in their stirrups. This twisting, high-impact injury can also be found with athletes partaking in contact sports such as rugby and American football and with gymnasts, ballet dancers and track and field athletes.*

<http://www.surgeons.org.uk/history-of-surgeons/jacques-lisfranc-de-st-martin.html>.

## The Normal Foot



## Associated Injuries & Complications

- Longitudinal Stress fractures.
- Fracture of the second M.T.
- Cuboid fracture -results from a compression of cuboid between the calcaneous and the 4th and 5th M.T.
- Navicular compression fracture.
- Rupture of the posterior tibial tendon.
- Compartment Syndrome (CS) – CS can occur in the foot as in other parts of the body. CS in the foot are associated with CS of the 'deep posterior compartment which contains Tibialis posterior, Flexor Digitorum Longus (FDL) and Flexor Hallucis Longus (FHL), (structures involved in the plantar flexion of the foot and toes and the inversion of the foot).
- 2 major arteries, Peroneal artery and Posterior Tibial arteries are present in this compartment.

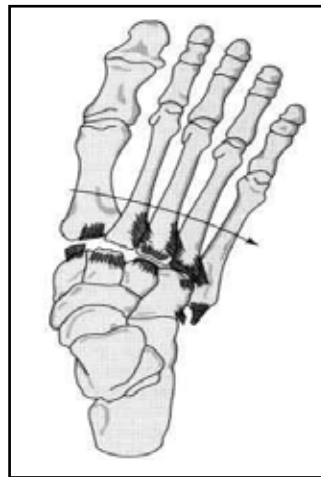
## Classification of Lisfranc Injuries

**Homo-lateral:** Involving displacement (in the same direction) of all five metatarsals.

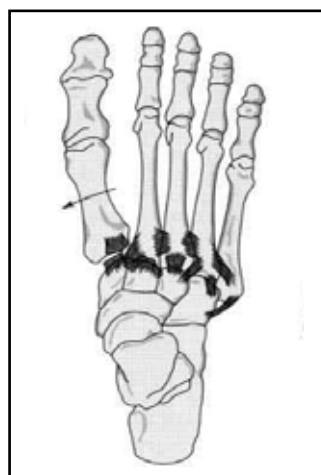
**Isolated:** One or two MT are displaced from the others.

**Divergent:** MT are displaced in sagittal and coronal planes – these fractures can extend to intercuneiform and the navicular (Wheless' Textbook of Orthopaedics). They are considered to be partial or complete fracture-dislocations. There are three types, see illustration on next page.

### Homo-Lateral



### Isolated



Wheless Textbook of Orthopaedics.



**Divergent**

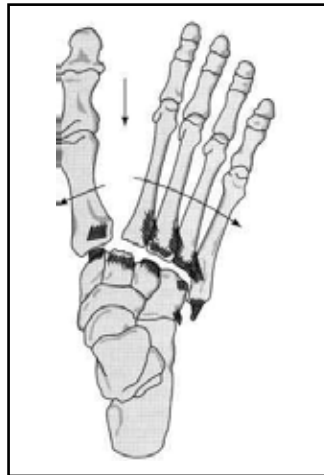


Figure A,B,C illustrate the classification of Lisfranc injuries. It is described by the author using various 'divergent' types.

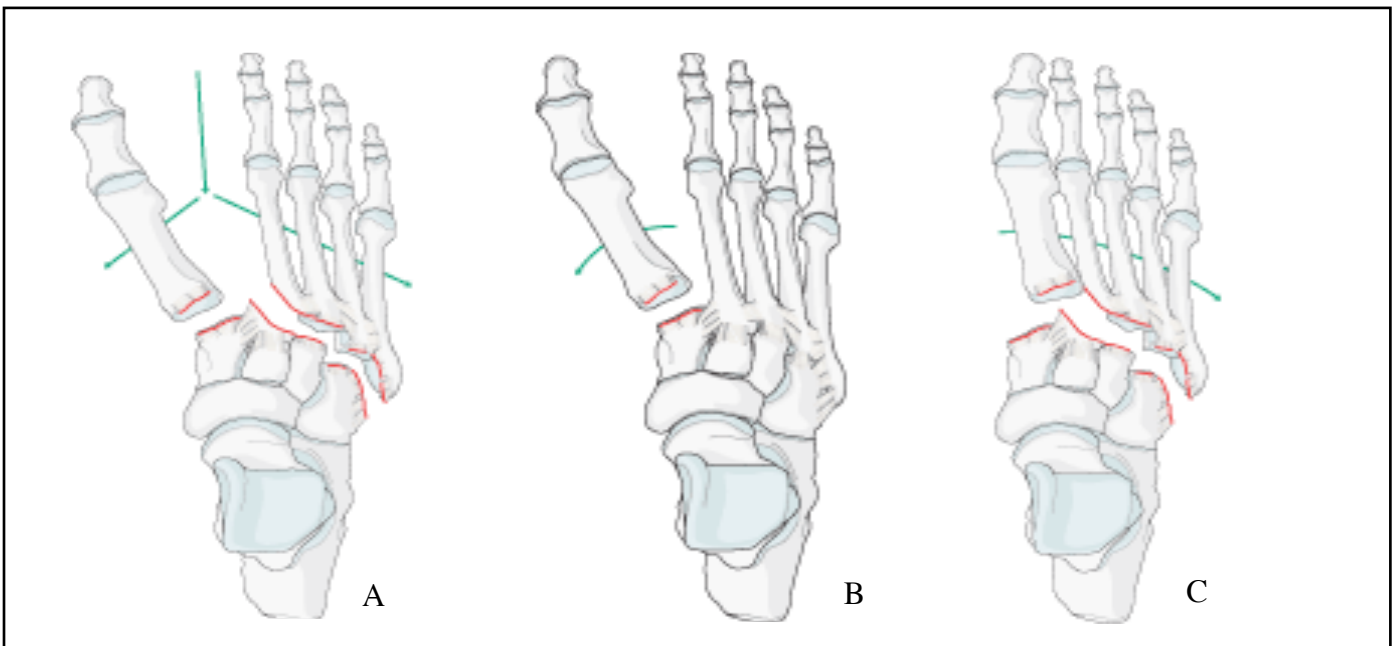
Figure (a) Divergent (complete);

(b) Medial divergent (incomplete)

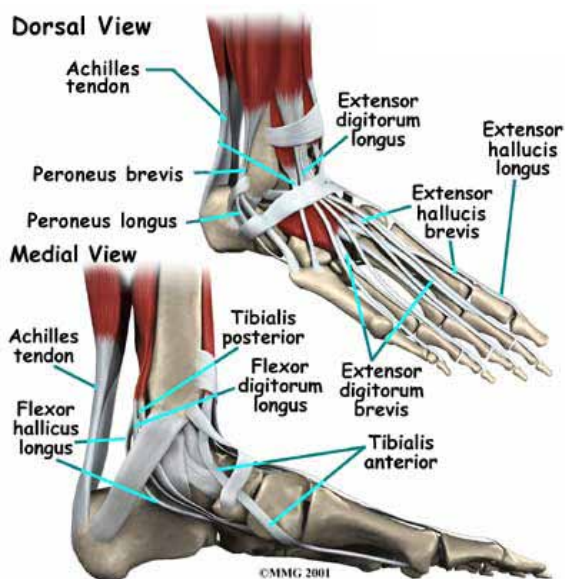
(c) Complete lateral divergent.

[http://www2.aofoundation.org/wps/portal/!ut/p/c/0/04\\_SB-8K8xLLM9MSSzPy8xBz9CP0os3hng7BARydDRwN39yB-TAyMvLwOLUA93I4MQE](http://www2.aofoundation.org/wps/portal/!ut/p/c/0/04_SB-8K8xLLM9MSSzPy8xBz9CP0os3hng7BARydDRwN39yB-TAyMvLwOLUA93I4MQE)

**Classification of Divergent fractures**

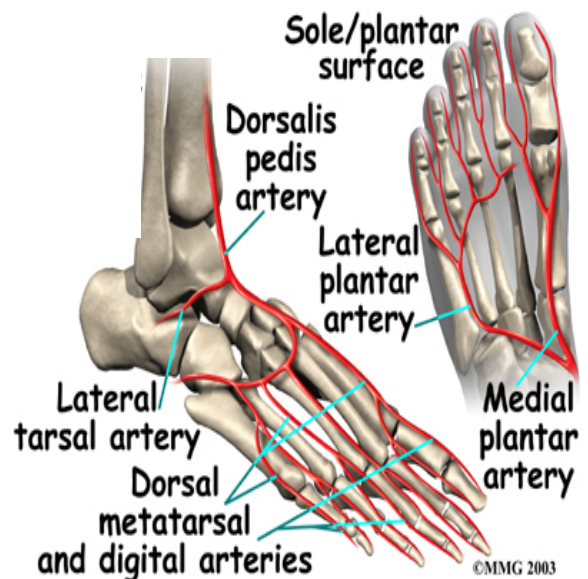


**Tendons of the Foot**



<http://tendonitisfoot.org>

**Arteries of the Foot**



<http://citysquarephysiotherapy.patientsites.com/Injuries-Conditions/Ankle/Ankle-Anatomy/a-47/article.html>

## Symptoms

The top of the foot may be swollen and painful. If injury is severe the patient may not be able to put any weight on the foot. Lisfranc injuries are often mistaken for sprains and are difficult to see on x-ray. As such, a CT or MRI would be necessary to confirm the diagnosis (American Academy of Orthopaedic surgeons AAOS).

Undiagnosed Lisfranc injuries can have serious complications such as joint degeneration and compartment syndrome (ibid).

Image Source Page: <http://www.podiatrytoday.com/article/1040>

**“Lisfranc injuries are often mistaken for sprains and are difficult to see on x-ray.”**



<http://www.podiatrytoday.com/article/1040>

## Treatment

Treatment depends on the severity of the injury. Minimally displaced fractures are likely to be treated in a backslab in the first week or two, this allows for any increase in swelling (swelling of the extremities are common due their bony makeup). Thereafter the patient is treated in a NWB cast for approximately 6 weeks. Fractures that are significantly displaced, arguably 2mm inter-metatarsal separation, would require internal fixation with pins or screws.



References:

(a) [http://1.bp.blogspot.com/\\_FHFQmaetgs/Sw1BPlozX5I/AAAAAAAAAHs/SJOQUmSFnig/s1600/PICT2868.JPG](http://1.bp.blogspot.com/_FHFQmaetgs/Sw1BPlozX5I/AAAAAAAAAHs/SJOQUmSFnig/s1600/PICT2868.JPG)

(b) [www.msdlatinamerica.com/ebooks/RockwoodGreensFracturesinAdults/sid1498494.html](http://www.msdlatinamerica.com/ebooks/RockwoodGreensFracturesinAdults/sid1498494.html)

(c) <http://orthoinfo.aaos.org/topic.cfm?topic=A00162>

## Prognosis

- Susceptibility to late mid foot collapse
- Metatarsalgia
- Post traumatic arthritis and planovalgus\* deformity are common and may occur in up to 50% of patients (Wheeless Textbook of Orthopaedics).

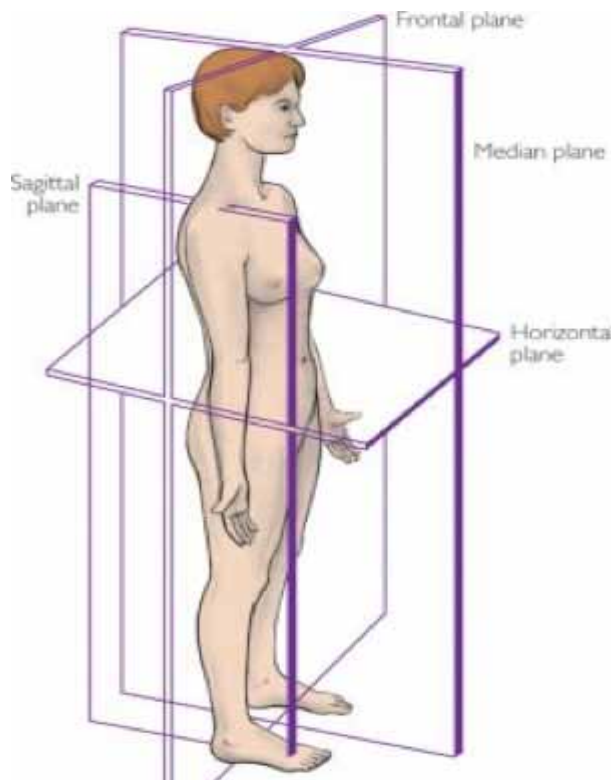
## Casting/Splinting



subsidies, usually 1-2 weeks. At this time the splint can be changed to a non weight bearing circumferential, below knee cast. Some physicians believe immobilization in a cast should be 3 months however this period has been disputed by others in the field (ibid). Again, following a period in a circumferential cast, the patient may be fitted in a Camboot with a moulded arch support to minimize the likelihood of mid foot collapse and planovalgus\*.

Treatment options include operative or non-operative treatment. If the dislocation is less than 2 mm, the fracture may be conservatively managed with a well moulded cast for 6 weeks. After approximately 4-6 weeks the patient is usually placed in a Camboot with a moulded arch support, as they progressively begin to weight bear.

The majority of Lisfranc injuries however tend to be displaced and unstable therefore require surgery followed by a period in a full cast. Immediately post-operatively the patient would be placed in a below knee, back slab until swelling



<http://medical-dictionary.thefreedictionary.com/sagittal+plane>

## Glossary

**Planovalgus:** A condition in which the longitudinal arch of the foot is flattened and turned outward. <http://medical-dictionary.thefreedictionary.com/planovalgus>.

**Sagittal Plane:** the anteroposterior (longitudinal) plane, or the section parallel to the median plane of the body.

**Coronal:** A vertical plane at right angles to a sagittal plane, dividing the body into anterior and posterior portions. Also called frontal plane.

**Divergent:** Tending to be different and to move apart in different directions.

**Neuropathy:** Neuropathy is a collection of disorders that occurs when nerves of the peripheral nervous system (the part of the nervous system outside of the brain and spinal cord) are damaged. The condition is generally referred to as peripheral neuropathy, and it is most commonly due to damage to nerve axons. Neuropathy usually causes pain and numbness in the hands and feet. It can result from traumatic injuries, infections, metabolic disorders, and exposure to toxins. One of the most common causes of neuropathy is diabetes. Neuropathy can affect nerves that control muscle movement (motor nerves) and those that detect sensations such as coldness or pain (sensory nerves). In some cases - autonomic neuropathy - it can affect internal organs, such as the heart, blood vessels, bladder, or intestines.

<http://www.medicalnewstoday.com/articles/147963.php>

### About the author;

*Ms. Marcela Posteraro is an Orthopaedic Technologist at Western Hospital Melbourne Victoria. Marcela has worked at Western hospital since 2009. Her role requires her to work across three campuses, servicing all wards and departments. The role requires skills in all facets of cast and splint application utilizing materials such as POP, fibreglass, polyester, thermoplastics, off the shelf and custom made bracing.*

# *Cairns AIOT Educational Weekend*

*27th- 28th July 2013  
Cairns Hospital*

*Any further information contact Nicola Nehmelmann or John Kinealy.*

*Email; [nicola\\_nehmelmann@health.qld.gov.au](mailto:nicola_nehmelmann@health.qld.gov.au) - [john.kinealy@wh.org.au](mailto:john.kinealy@wh.org.au)*

*Please note a change in  
the Venue from the  
previous flyer*

*Book your flights and accommodation ASAP to avoid missing out. Cairns can be busy around that time of year.*

# Facts about Cairns

## 1. World's most visible natural structure

The Great Barrier Reef is known as the only natural structure that is visible from outer space. Measuring 2300km in length, it is one of the natural wonders of the world.

## 2. World's most dangerous bird

The giant, flightless cassowary is the world's most dangerous bird. If disturbed, these endangered rainforest residents are capable of inflicting fatal injuries to dogs and children. The cassowary also holds the title of Australia's heaviest bird, and the world's third tallest after the ostrich and emu. In Australia, cassowaries can only be found in the Wet Tropics of Far North Queensland.

## 3. Australia's wettest town

There's no doubt that Far North Queensland is home to Australia's wettest town – but just which town is it? Rivalry rages between two neighbouring towns, Tully and Babinda, both of which have laid claim to the nation's rainfall.

## 4. Australia's largest moth

The hercules moth, or *coscinocera hercules*, is the largest species of moth in Australia. It is found only in Tropical North Queensland. Males are slightly smaller than females, which can have a wingspan of 25cm.

## 5. World's longest fern

The king fern, or *angiopteris evecta*, produces possibly the longest fern fronds in the world (up to 7m in length). Excellent examples of the king fern can be seen on the 1km Lake Eacham Waterfall Walk, on the Atherton Tableland west of Cairns.

## 6. World's longest lava tubes

The ancient Undara lava tubes in Undara National Park, west of Cairns, are estimated to be 190,000 years old and are the world's longest at 160km long and 20m wide.

## 7. World's smallest cathedral

The Quetta Memorial Cathedral, on Thursday Island in the Torres Strait, north of Cairns and Cape York, is the smallest cathedral in the world. It was built in 1893 in memory of the Quetta shipwreck in 1890.

## 8. Queensland's highest mountain

If you're up for a challenge, take a hike on Mount Bartle Frere, south of Cairns. Bartle Frere is the highest mountain in Queensland. Its elevation is 1622m. Its immediate neighbour Mount Bellenden Ker is the second highest at 1593m.

## 9. World's longest mail run in a single day

The flying postman's route, from Cairns to Cape York – the northernmost tip of Australia – spans 1450km over nine hours with 10 stops. Visitors to Cape York can travel by air or tour by four-wheel-drive.

**10. Australia's largest single drop waterfall.** The spectacular Wallaman Falls, south of Cairns, is Australia's largest single drop waterfall. The main drop is 268m, and is preceded by 70m of drops. The falls are on the United Nations' World Heritage site registry, preceded by 70m of drops. The falls are on the United Nations' World Heritage site registry.

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





Photos from the Western Orthopaedic Educational day...

# Orthopaedics From The West

*The day began with our Orthopaedic Director Mr. Phong Tran's presentation on Ankle fractures. Phong's sense of humour and laid back delivery was well received by the delegates. Question time resulted in numerous questions related to this common location of fractures.*

*Orthopaedic Registrar Dr. Pandalis Demetriou followed with his very interesting presentation of Scaphoid fractures. Pandelis then answered questions from the group on this very interesting topic.*

*Scientist Ms. Kellie Hamilton's presentation on the harvesting of bone tissue was a change from the usual fracture related presentation. It certainly opened our eyes to what is done with not only bone but organ donation.*

*Mr. Rod Cooper stepped in for Orthopaedic Surgeon Mr. Raghavan Unni who unfortunately couldn't make it. Rod is an Orthotist who works for Australian Orthotic Technologies and demonstrated the correct way to fit 'Off The Shelf Braces'. Thank you Rod for doing an outstanding job at such short notice and the group really appreciated Rod's expertise and friendly going nature.*

*Once lunch concluded the afternoon session began with the group breaking up into three, unfortunately I had to leave so I missed the practical sessions. Mr. Robert Vragovski presented synthetic casting. Ms. Judith Hunter presented POP slabs and Mr. Ken Lewin presented POP full casts. Each session lasted approximately 45 minutes. The feedback was very good with the majority rating the day to be excellent, except for the time allowed for the practical component. We will take this constructive criticism on board and our February educational day will have only one hour of presentations and the rest of the time will be allocated to practical hands on casting sessions.*

*I need to say a big thank you to our numerous sponsors. Many thanks to Robert Vragovski, Judith Hunter and Ken Lewin for running the practical sessions. Catering was all organised by Joyce and Jenny. The food was magnificent. A big thank you to my Co Victorian Liaison Officer Ms Jenny Dalton. Jenny worked relentlessly to make this day a success and a success it was. Congratulations Jenny and of course I can't forget Robert who also made this day a great success.*

*Thank you  
John Kinealy*



*“The AIOT educational day was very well received with delegates coming from not only the Melbourne region but Adelaide and Canberra as well. A great day was had by all.”*

# The Left Handed Caster

Kate Miller

My name is Kate and yes I am left handed!! I have recently joined the Orthopaedic fracture clinic at Austin Health Specialist Clinics in Victoria. Being left handed I have found it difficult when cutting synthetic casts eg: right arms. My mentors say training a left hander has been quite an experience.

My preferred side for cast application is the right side. Removing casts, particularly legs I find myself having to lean over the bed. This can be awkward. I am now fortunate enough to own my very own left handed scissors and yes they are mine, all mine!

## Some Interesting Facts about Left Hander's

- August 13<sup>th</sup> is International Left Hander's Day – Bet you didn't know we had one did you
- Sources say we may die as many as 9 years sooner than a Right hander



- The Boston Strangler and Osama Bin Laden were left handed

- We are great Multitaskers

- They are more likely to be dyslexic or stutter



- We are more prone to schizophrenia. So yes that might be one to lock in the memory bank

## Famous Left Hander's

- Bart Simpson
- Jimi Hendrix
- Brad Pitt
- Angelina Jolie
- Benjamin Franklin
- Neil Armstrong the first man on the moon – yep we were there before you righties!

So next time you are plastering put those scissors in your left hand and have a go. Or do as I have been doing with the girls at work. Practise writing your name, address and phone number with your left hand – just in case you should have stroke.

## *New AIOT Secretary*

Kerry Jones

Hello my name is Kerry Jones and I have worked at Austin Health for the last 4 years. I am a Nurse Outpatients Department and predominantly work in the general fracture and plastics clinic's. I also work in both the nurse led plastics and fracture clinics. I have currently just completed the Certificate IV in Casting and am waiting for results. I recently been appointed to the role of Secretary of the AIOT. I will work very closely and have the assistance of Jenny Dalton. Both Jenny and I look forward to the challenge of helping to lift the awareness of the association.







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20104	Long Leg	42"/107 cm
20105	Foot/Ankle	11"/28 cm
20106	Wide Short Leg	23"/59 cm
20107	Wide Short Arm	22"/56 cm

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20203	Small Leg	11"/28 cm
20204	Medium Leg	18"/46 cm
20205	Large Leg	31"/79 cm



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Patent #4,639,945

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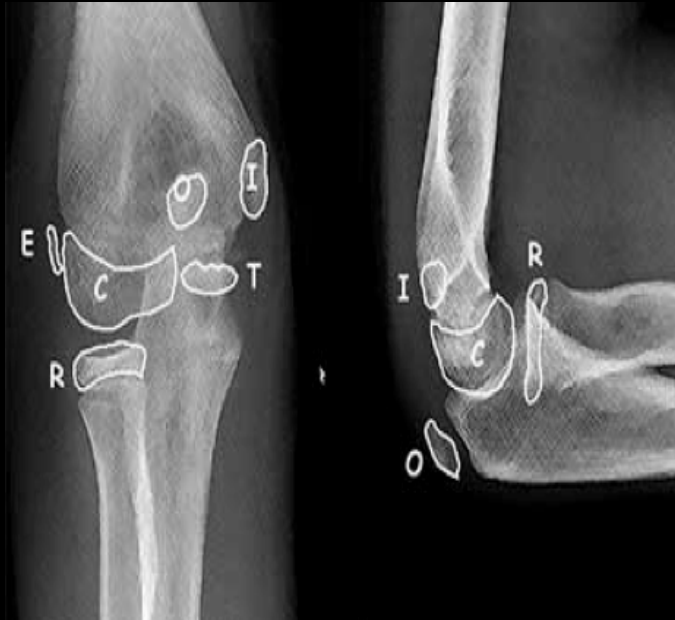
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## *Answers to the questions in the last newsletter*

# *Elbow Fractures in Children*

John Kinealy

### *Ossification centres*



Elbow fractures in children can be difficult to detect because of the ossification centres and the timing of their appearance.

There is an order in which they present. The mnemonic to remember them is;

### **C.R.I.T.O.E.**

**Age 1 Capitulum**

**Age 3 Radial Head**

**Age 5 Internal (Medial) Condyle**

**Age 7 Trochlea**

**Age 9 Olecranon**

**Age 11 External (Lateral) Condyle**

### *The positive fat pad sign*



Injury to the elbow can cause a haemarthrosis of the elbow, this can elevate the fat pads of the elbow (the dark shadows over the anterior and posterior distal humerus.)

What relevance does this have when the fat pads are visible on an x-ray even though a fracture cannot be detected on x-ray?

*Even though the fracture cannot be seen, when both fat pads are elevated or distended this is considered a positive sign and a fracture is present. This is called an Occult fracture. Most surgeons/physicians would treat this a fracture even though it is not visible.*

What does it mean if only the anterior fat pad is distended?

*Displacement of the anterior fat pad can occur due to a minimal joint effusion and is less specific or there is less likelihood of a fracture.*

Images and references from:  
Elbow - Fractures in Children  
Updated version by Robin Smithuis  
Radiology department, Rijnland Hospital Leiderdorp, the Netherlands.  
[www.radiologyassistant.com](http://www.radiologyassistant.com)

# Quiz answers

1. Tendons connects muscles to bones?
2. Ligaments join bones together?
3. How many bones are there in the body? 206
4. What bone structure protects the brain? The Skull or Cranium
5. The skeleton is divided in to two parts, what are they? 1. Axial — 2. Appendicular
6. The ends of a long bone is made up of spongy or Cancellous bone.
7. The middle of a long bone is made up of hard or Cortical bone.
8. The Axial skeleton comprises 3 sections. 1. The Vertebral Column 3. The Thoracic Region
9. List the 5 types of bones. 1. Long 2. Short 3. Flat 4. Irregular 5. Sesamoid
10. What type of bones have the greatest amount of red blood cells? Flat Bones
11. What is a sesamoid bone? A bone that is within a tendon
12. What is the largest sesamoid bone? The Patella
13. How many types of joints are there? Six
14. Name three of them. 1. Gliding 2. Pivot 3. Hinge
15. How many types of cartilage are there? Three. Hyaline, Elastic, Fibrocartilage
16. How many types of muscles are there? Three
17. What are they? Cardiac, Smooth, Skeletal
18. Where is hyaline cartilage found? Hyaline cartilage is found at the ends of long bones on the articular surface. It is also found at the epiphyseal cartilage in growing bones.
19. Where is the only place where a saddle joint is found? The MCPj of the thumb or 1st M.C.
20. Is the radial head a pivot or hinge joint? Hinge joint
21. A Salter Harris IV fracture of the distal tibia in an adolescent, is also called what? Triplaner
22. What two muscles displace midshaft metacarpal fractures? 1. Interosseous 2. Lumbricals
23. If the distal fragment of a humeral fracture is angulating medially, what other name is this called? Varus
24. A Chauffeurs fracture, is an intra-articular fracture of the distal radius. What is the name of the fossa that the fracture line extends into? Scaphoid Lunate Fossa
25. What mechanism/s result in a Torus fracture? Compression, Bending
26. 95% of supracondylar humeral fractures displace which way? Posterior
27. Monteggia fractures are positioned in supination, pronation, or mid-pronation? Supination
28. A Smiths' type 3 fracture is also called a Bartons' fracture
30. Is the head of the Ulna at the wrist or the elbow? Wrist
31. What is the Frykman classification? Distal Radial Fracture Classification, 8 types
32. What is a Maisonneuve fracture? Spiral fracture of proximal third fibul and medial malleolus with disruption to the interosseous membrane, ankle syndesmosis and deltoid ligaments
33. How many types of hip spica's are there? Three. One or single. One and a half, Double
34. A slab that is placed on the dorsum of the foot is placed on the anterior or posterior? Anterior
35. Lacerations of EPL tendon should be positioned in extension or flexion? Extension

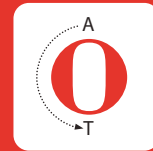


*A very Merry Christmas from the Townsville boys. ho ho ho !!!!*

## Answers to the last issues Crossword

1	E	R	I		10	R	E		11	K		M		14	O	R	S	I	O	N	
R		I		18	N		T		K		19	O	M	E		T				G	
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D		39	L	O	N	E		40	R	E	P			S		R		41	D	I	
Y		U		K			42	C		43	44	S	T	45	R		N		N		
46	47	L		48		O		49	A	P		50	T	E	P		51		A		
52	A	N	A	S	53	O	54	O	55	I	S		E			A		56	I	L	
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65	E	66	U	R	V	A	T	U	67		68	I	R	T	Y				69		
A		H		Y		D		70	O	P				E			71	72		T	
73	C	R	E	S	T		74	R	E	O		75	76	77	E	R	O	S	I	T	Y
T		S		78	U	R		R		79	V	E		I					B		L
U		80	81	W			82	83		N		84	O	P		I				O	
85	86		87	E	88	89	N	E	90	A	T	E		91	R	S		A		I	
92	A	R		93	I	N	K		A			94	P			95	L	E	D		

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 Tel: 03 8761 6408 Fax: 03 9761 6067  
 Email: sales@aotech.com.au  
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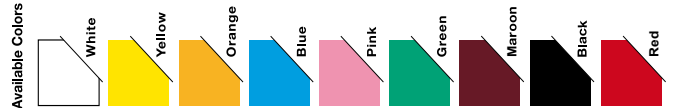
Life Without Limitations®



# PrimeForm™ Casting Materials

## PrimeForm™ Fibreglass

Fibreglass Casting Bandage

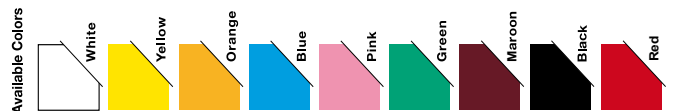


PrimeForm Fibreglass is a synthetic casting bandage impregnated with a water-activated polyurethane resin. The knitted fibreglass substrate & resin formula provides for multidirectional stretch as well as a smooth surface and strong end lamination.

- Multi directional stretch
- Lightweight & durable
- Smooth finish
- Cost effective
- Strong end lamination

## PrimeForm™ Polyester

Polyester Casting Bandage

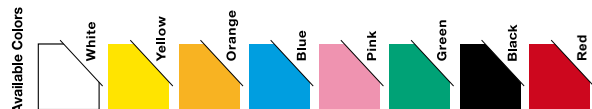


PrimeForm Polyester is a knitted polyester casting bandage impregnated with a water-activated polyurethane resin. The polyester substrate provides excellent conformability, soft cast edges, strong end lamination and excellent functional strength in weight bearing situations.

- Excellent conformability
- Soft edges
- Cost effective
- Air permeable & X-ray translucent
- Strong end lamination

## PrimeForm™ Soft

Semi-Rigid Casting Bandage



PrimeForm Soft is a fibreglass casting bandage impregnated with specially formulated water-activated polyurethane resin that allows the bandage to remain semi-rigid & flexible. It is ideal for use in the management of soft tissue injuries, for selected orthopaedic casting applications and in paediatric settings.

- Permits controlled movement
- Smooth & soft finish
- Application flexibility
- Cost effective
- Range of colours



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**We look forward to  
seeing you all safe  
and well in 2013**