Dr John Negrine

www.orthosports.com.au

47-49 Burwood Road, Concord

29-31 Dora Street, Hurstville

160 Belmore Road, Randwick

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Midfoot miscellany and lateral ligament repair

John P. Negrine F.R.A.C.S.

Latest Orthopaedic Updates

Saturday 2nd November 2013

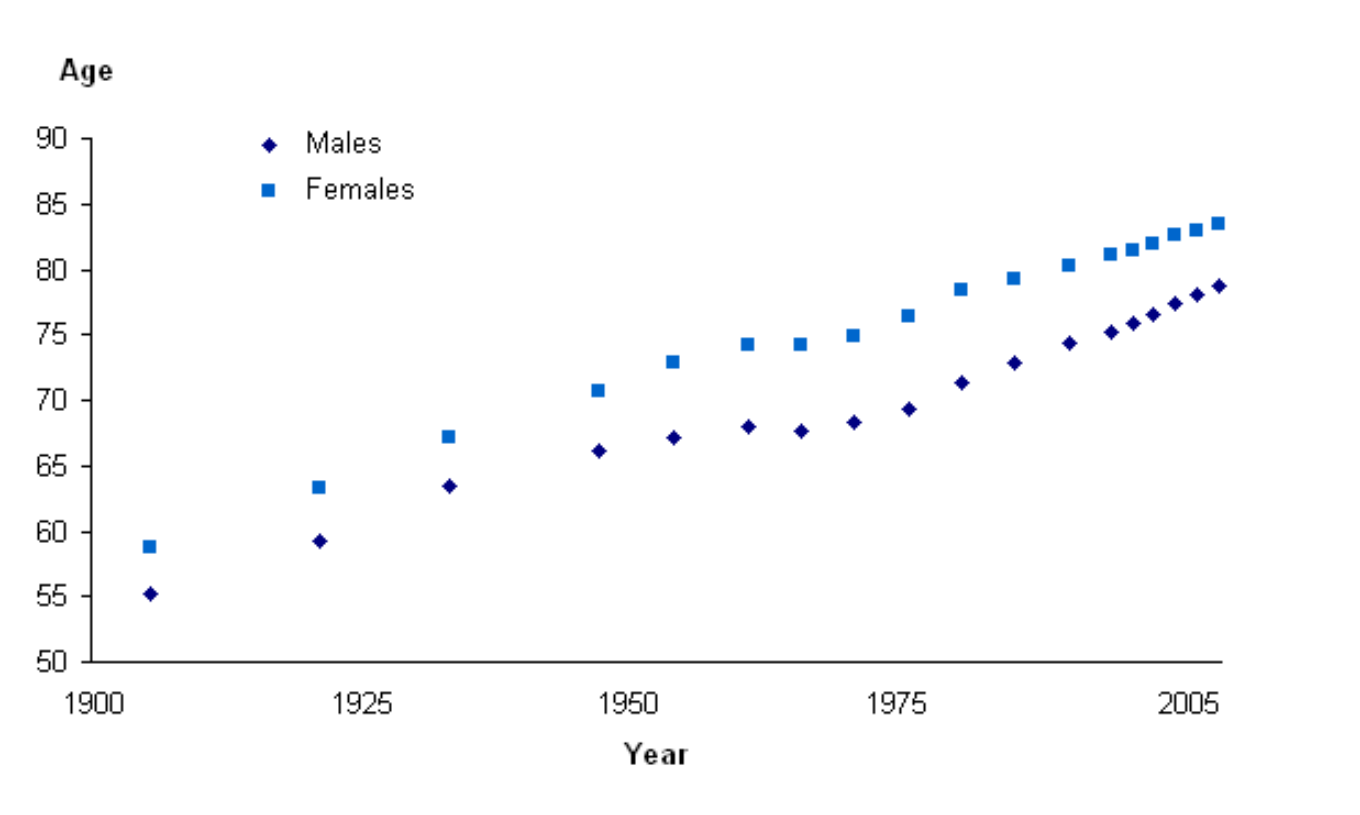
The changing demographic

Never start your talk with a graph

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Life expectancy in Australia



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery


JUNE 27
JUNE 27

Changing demographic

- Modern medicine has “gifted” people 20 years
- People expect to be active, play tennis, golf and party!

Dr John Negrine
Adult Foot & Ankle Surgery

PHOTOGRAPHY BY DANIELLE SMITH

Senior moments

The elderly don't have sex? Carers in nursing homes are seeing otherwise and often butting heads with families and the law over how to deal with it. By Peter Munro.

HE'S ASLEEP NOW, CURLED TO ONE SIDE IN BED, HIS lower half covered with a blanket. Lying there with the television on and the door to his nursing home room open, he is the picture of an aged man, grey hair and eyes closed in the early afternoon. He has put away his blow-up sex doll. Time was, before his dementia advanced, they would be together in his room all day with the door closed. Away, too, is the pornography he owned before leaving his home for full-time aged care.

Hard though it is to conceive of this elderly man as a – from the penis-in-vagina-orgasm-fireworks experience to quiet intimacy.

"We reach a time in our life when sitting side by side and holding hands may be the ultimate in sexual intimacy." People are sexual beings their whole lives, she says. "We call it womb-to-tomb sexuality."

Yet about a quarter of Australians aged 18-24 believe older people don't have sexual relationships. Even the meaning of "old age" is skewed: younger respondents reckon you're old at 56; for older people it is 67.

People are outlasting their joints and tendons

This is a boom time for orthopaedic surgeons and physiotherapists

Dr John Negrine
Adult Foot & Ankle Surgery

Tibialis anterior

- Largest muscle of the anterior compartment
- The principle dorsi-flexor
- Little literature available
- Spectrum of pathology seen

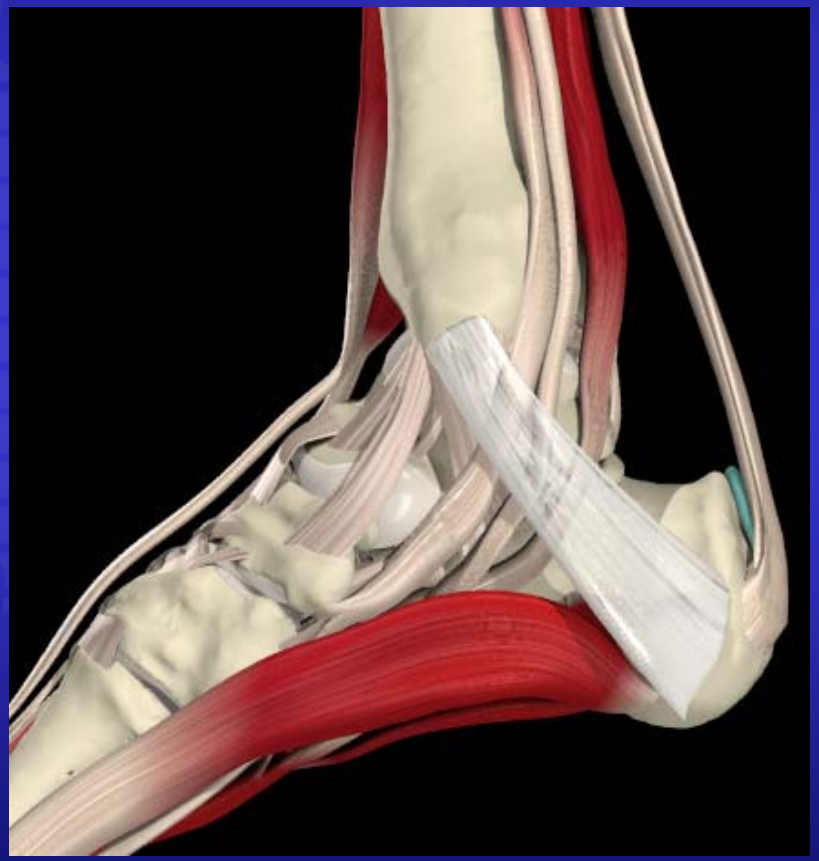
Dr John Negrine
Adult Foot & Ankle Surgery

Tibialis posterior tendinosis (like gall stones)

- Fat
- Fifty
- Female
- Diabetes
- Hypertension

Mann and Holmes

Foot Ankle Int 13:70-79,1992

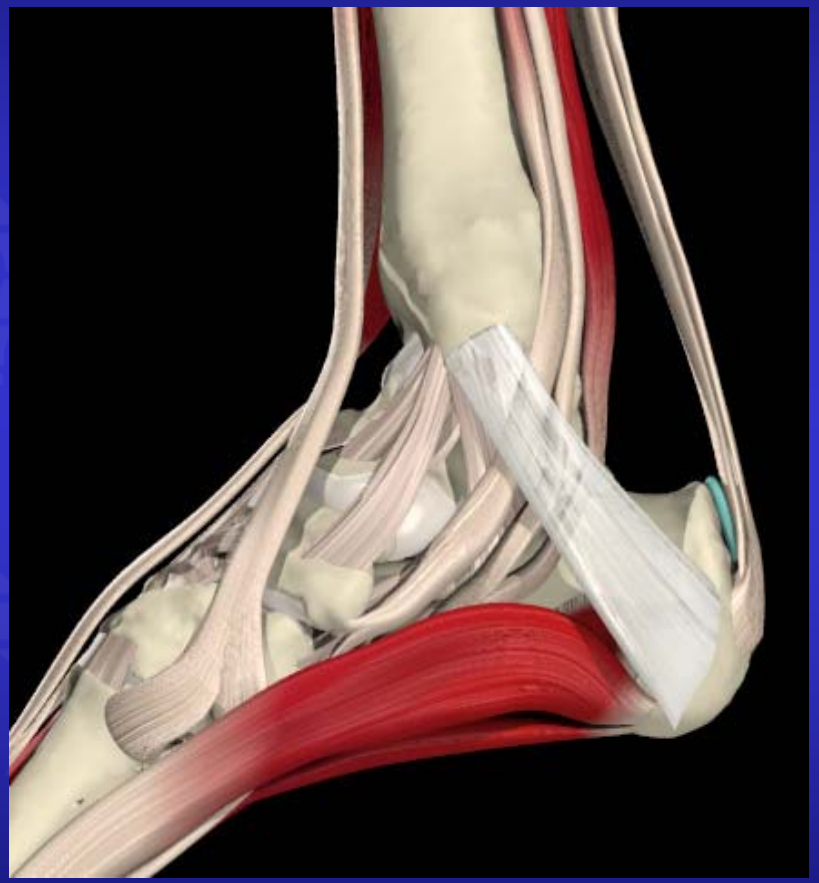


ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Tibialis anterior tendinosis

- Active (Golfers/walkers)
- Age 70
- Female > Male
- Not obese
- Systemically well



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

My practice year

- Foot and ankle exclusively in a group of 10 orthopaedic surgeons
- 5000 patients in consultation
- 500 operations
- Six cases of tibialis anterior tendinosis
- Four cases of rupture

Patient Demographics

Tendinosis (6)

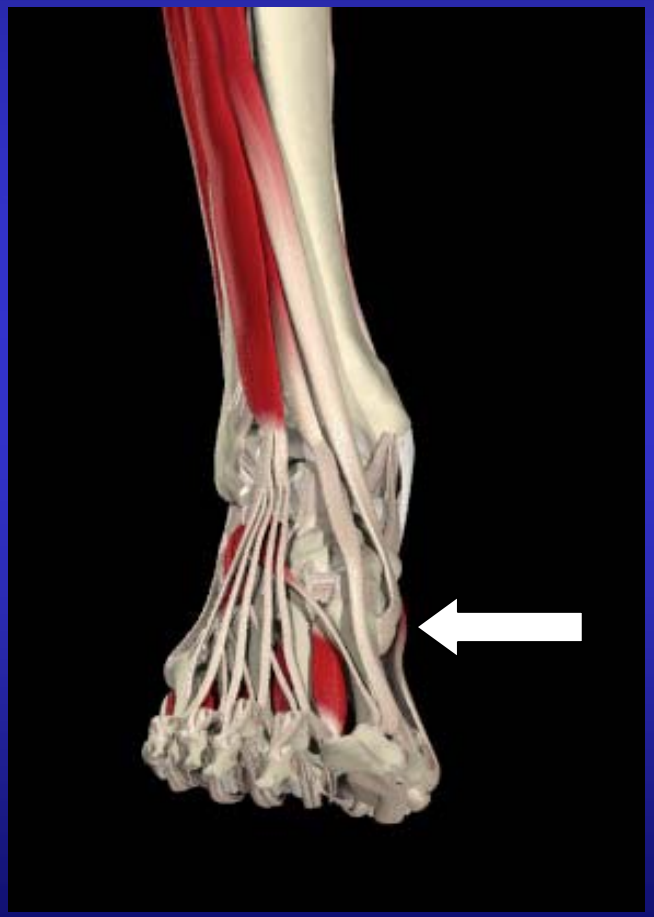
- Average age 66
- All females

Tib. Ant rupture (4)

- Average age 75
- All males

Tibialis anterior tendinosis Examination

- Observe the swelling medially
- Patient is point tender at the insertion
- Walking on heels often aggravates the pain
- Pain in bed at night

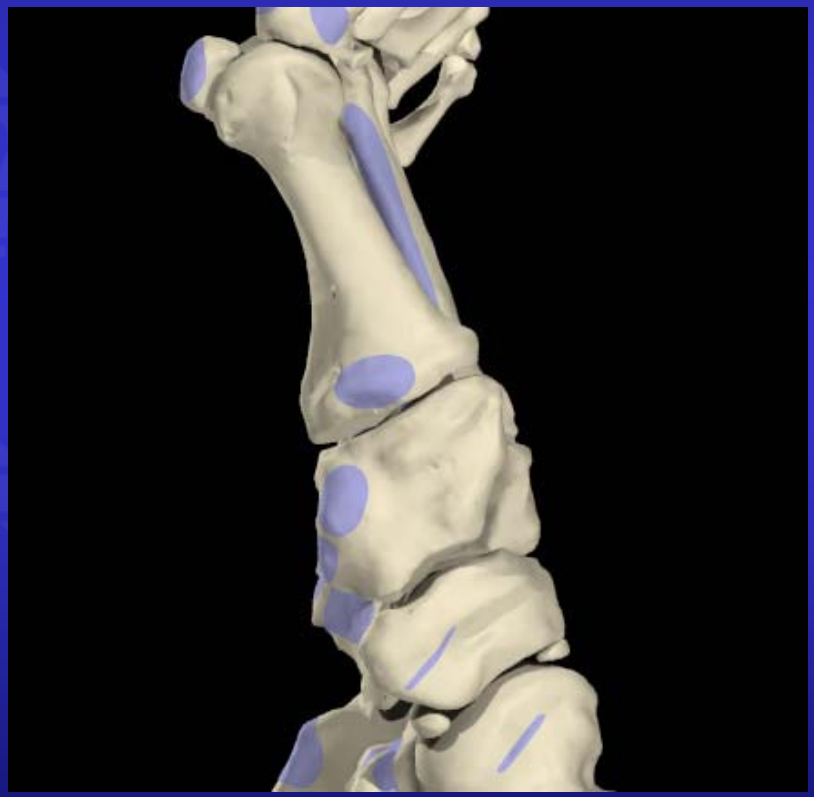


ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Differential diagnosis

- First TMT OA
- Neoplasia (PVNS, synovial sarcoma)
- Rupture presents as a foot drop ∴ c.peroneal n. palsy/L4 radiculopathy



Dr John Negrine
Adult Foot & Ankle Surgery

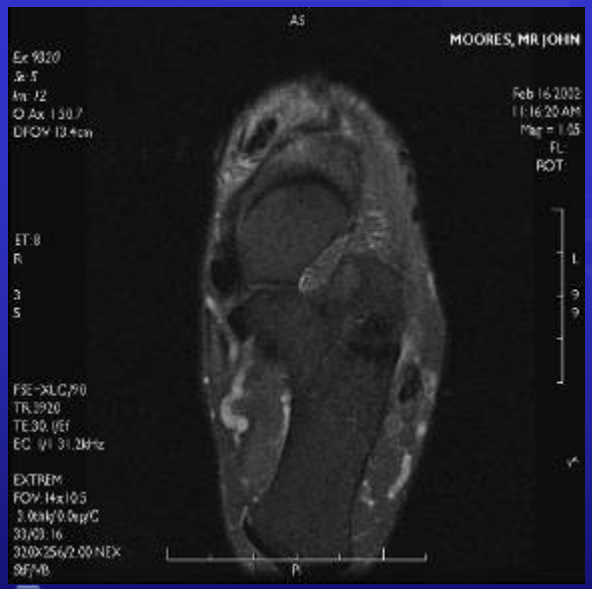
Tibialis anterior tendinosis Imaging

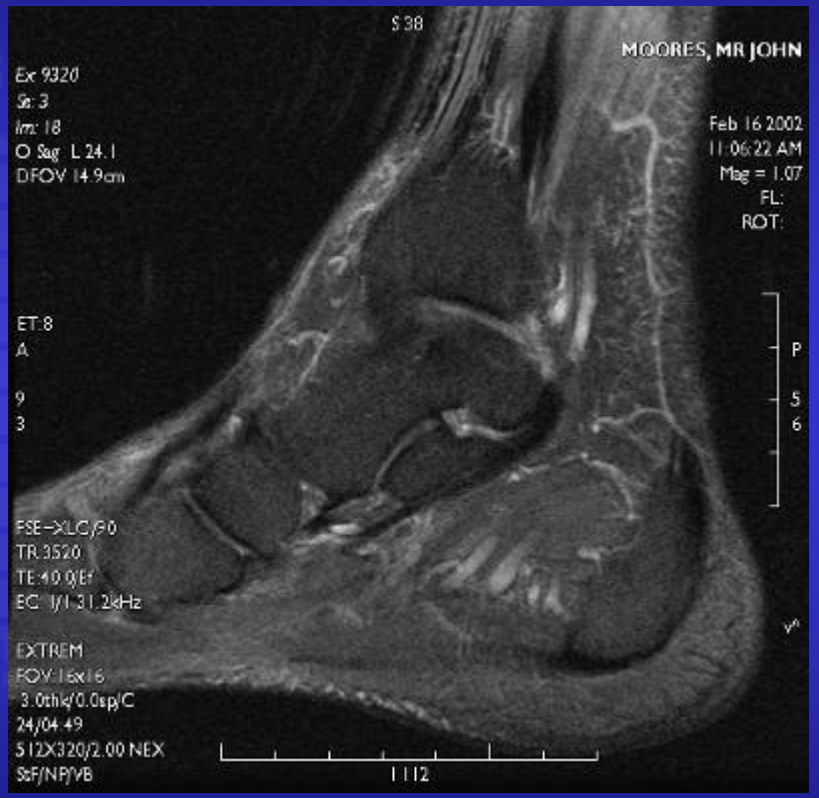
- Ultrasound- Thickened heterogeneous tendon
- MRI - Intrasubstance Signal changes/oedema/
- The elusive spur
- Assists differential diagnosis

Dr John Negrine
Adult Foot & Ankle Surgery

Tibialis Anterior Rupture

- Sagittal T1
- Tendon “Missing”
- Oedema around stump
- Fluid on axial View





MRI Images courtesy J. Linklater

Dr John Negrine
Adult Foot & Ankle Surgery

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Tibialis anterior tendinosis treatment

- Rest
- Aircast boot/Foot drop splint
- Anti-inflammatories
- Physiotherapy to stretch and strengthen
- No cortisone - ?? PRP/Stem Cells/Autologous tenocytes

Dr John Negrine
Adult Foot & Ankle Surgery

Tibialis anterior tendinosis Surgery

- Transfer peroneus tertius
- Debride the tendon
- Remove any TMT joint spurs

Dr John Negrine
Adult Foot & Ankle Surgery

Surgery

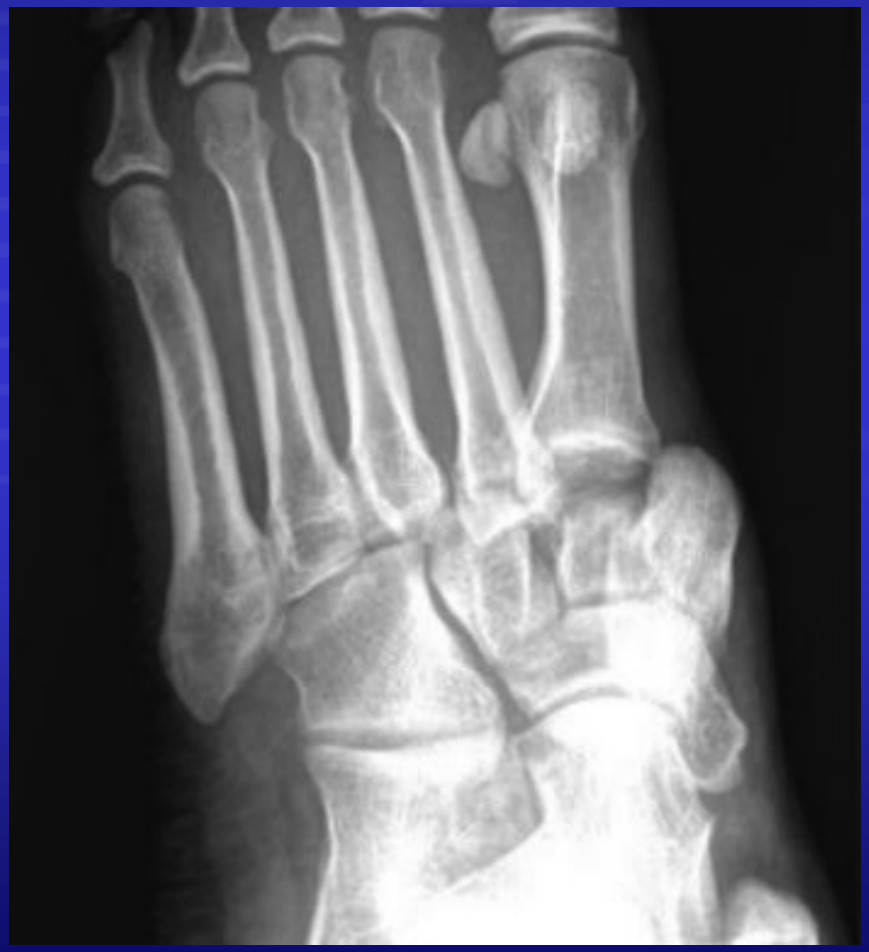
- Weave peroneus tertius (spare tendon) into the thickened stump of tibialis anterior
- Day surgery 2 weeks non-weightbearing 2 weeks in a boot
- Seems to work!

Midfoot arthritis

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Talking about primary not post-traumatic



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Biomechanics

TMT sagittal joint Motion Degrees:

- **1st** 1.6
- **2nd** .6
- **3rd** 3.5
- **4th** 9.6
- **5th** 10.2

Ouzounian TJ, Shereff MJ. In vitro determination of midfoot motion. Foot & ankle 1989;10:140-6.

Demographics

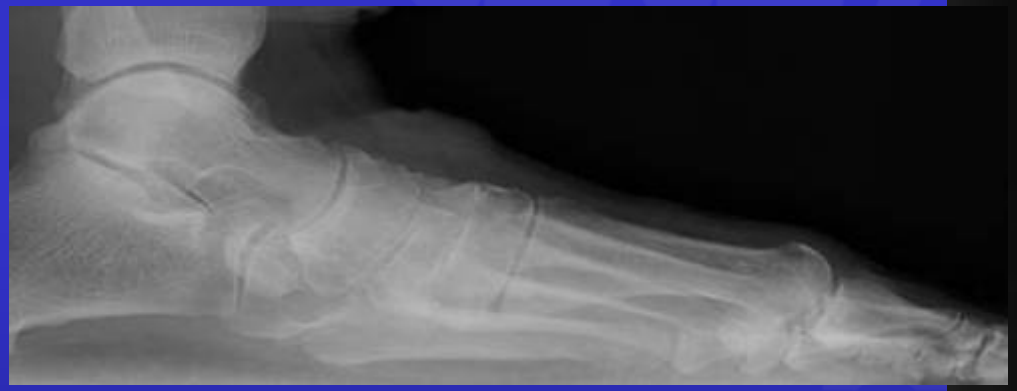
- Patients in 6th or 7th decade
- Present with a burning aching pain across the top of the midfoot
- Worse in tight shoes
- Classic history of having to loosen the laces to keep walking

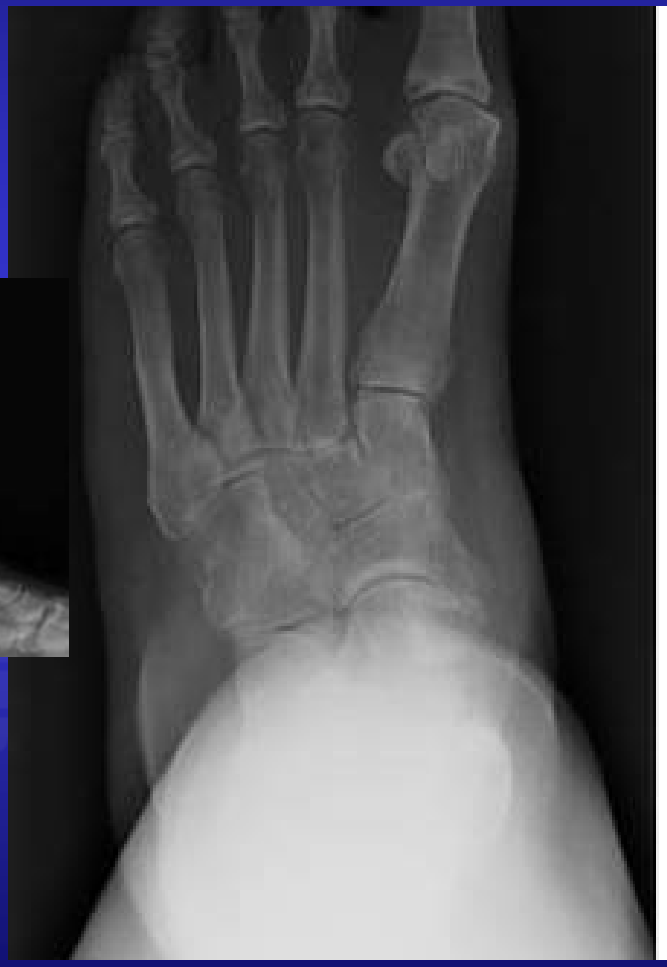
Dr John Negrine
Adult Foot & Ankle Surgery

Anatomical location

- Most commonly 2nd and 3rd joints
- Theorised that not only are they among the least mobile but they take more stress as a result of being the longest metatarsal
- Medial naviculo-cuneiform also common

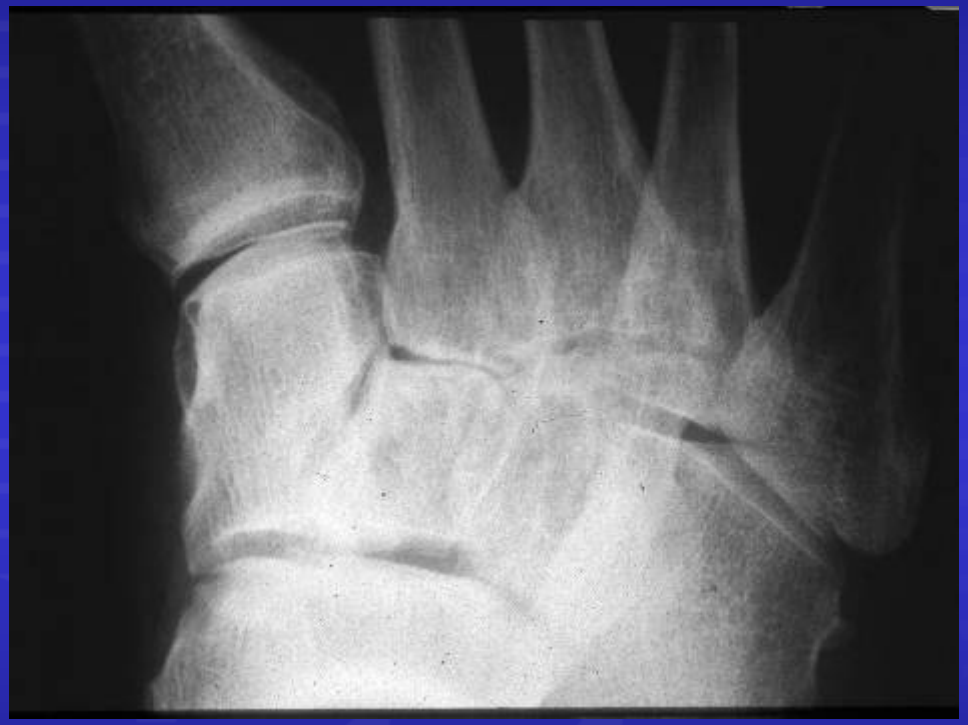
Radiology





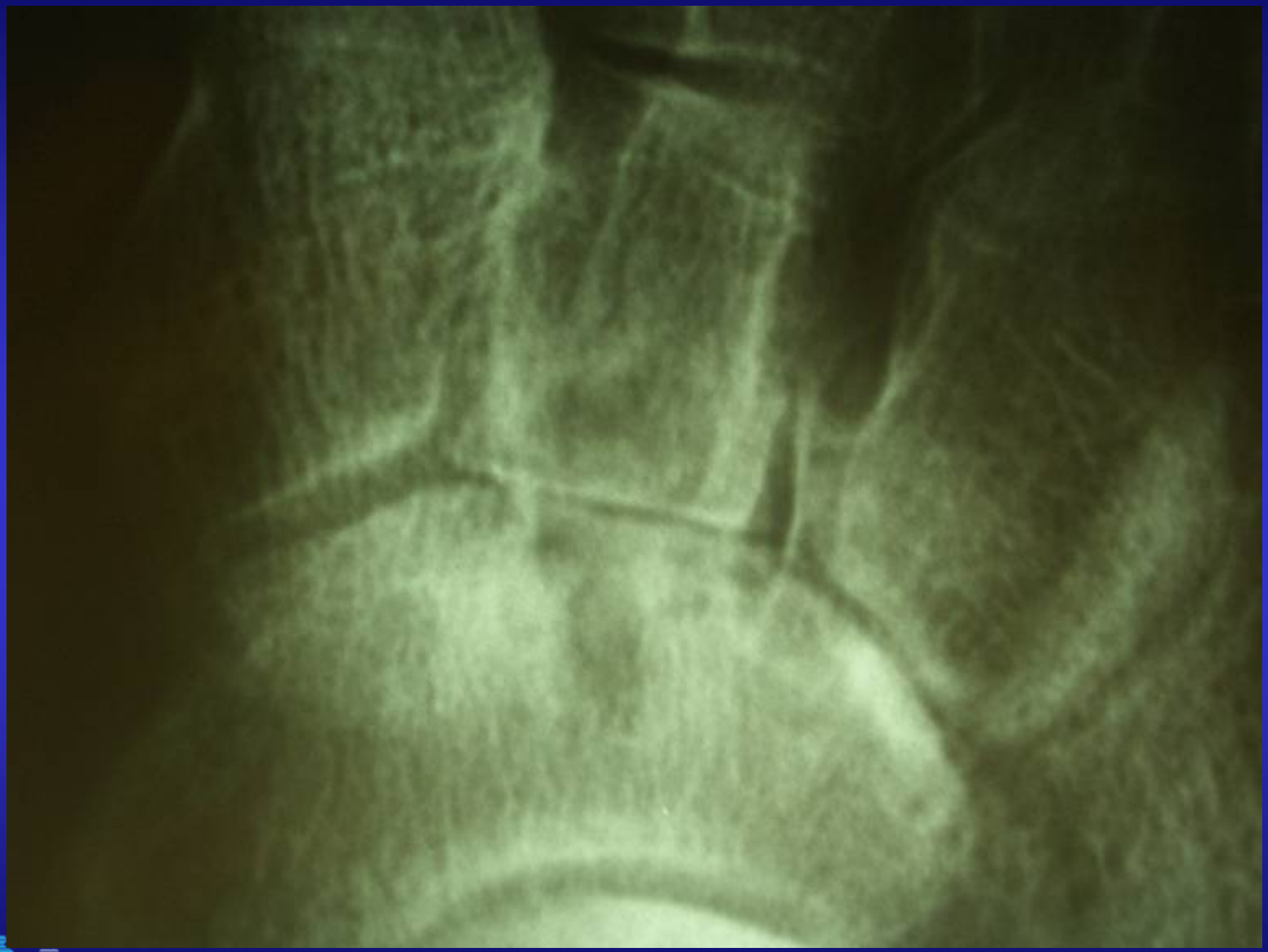
ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Treatment non-surgical

- Anti-inflammatories
- Rocker soled shoe
- Skip lacing shoes
- Steroid injection under x-ray or ultrasound control
- Stem cells/PRP: Quelle horreur!!!

Dr John Negrine
Adult Foot & Ankle Surgery

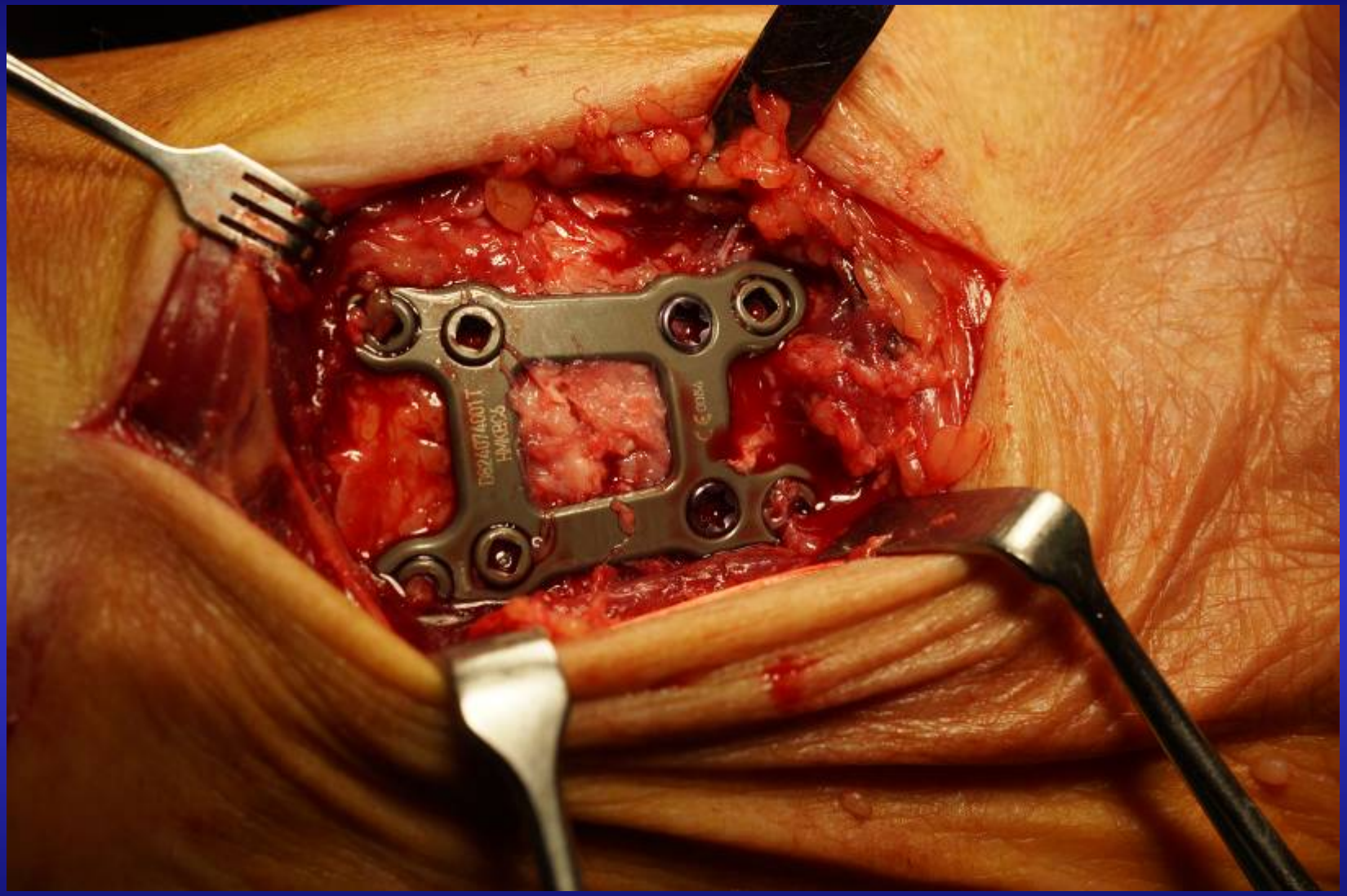
Definitive treatment

- Arthrodesis
- 6 weeks in plaster non-weightbearing/ 4 weeks in a walking boot
- Good for pain relief
- Patients do not notice any loss of movement
- Fusion rate approx. 80%

Dr John Negrine
Adult Foot & Ankle Surgery

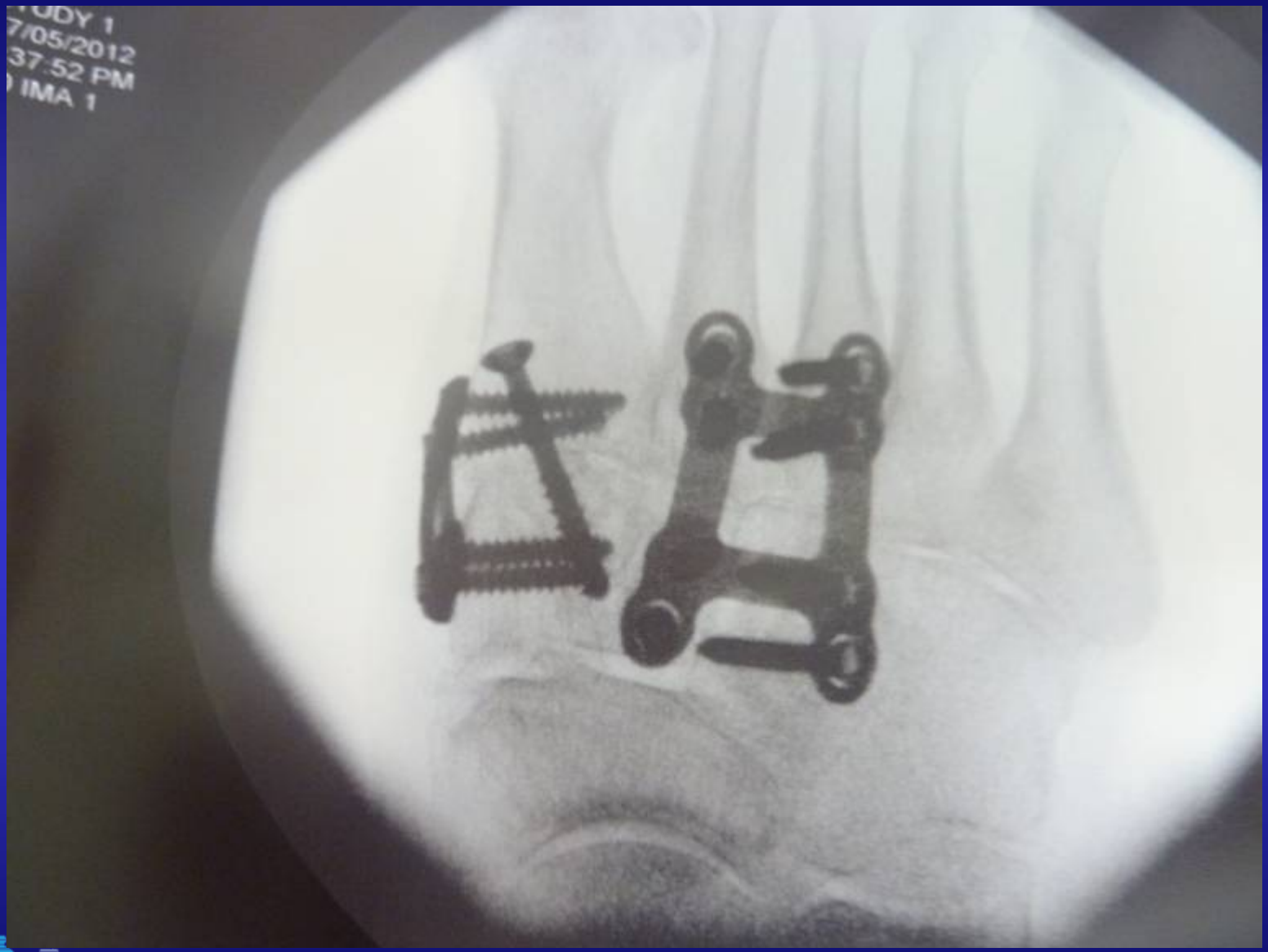
ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery



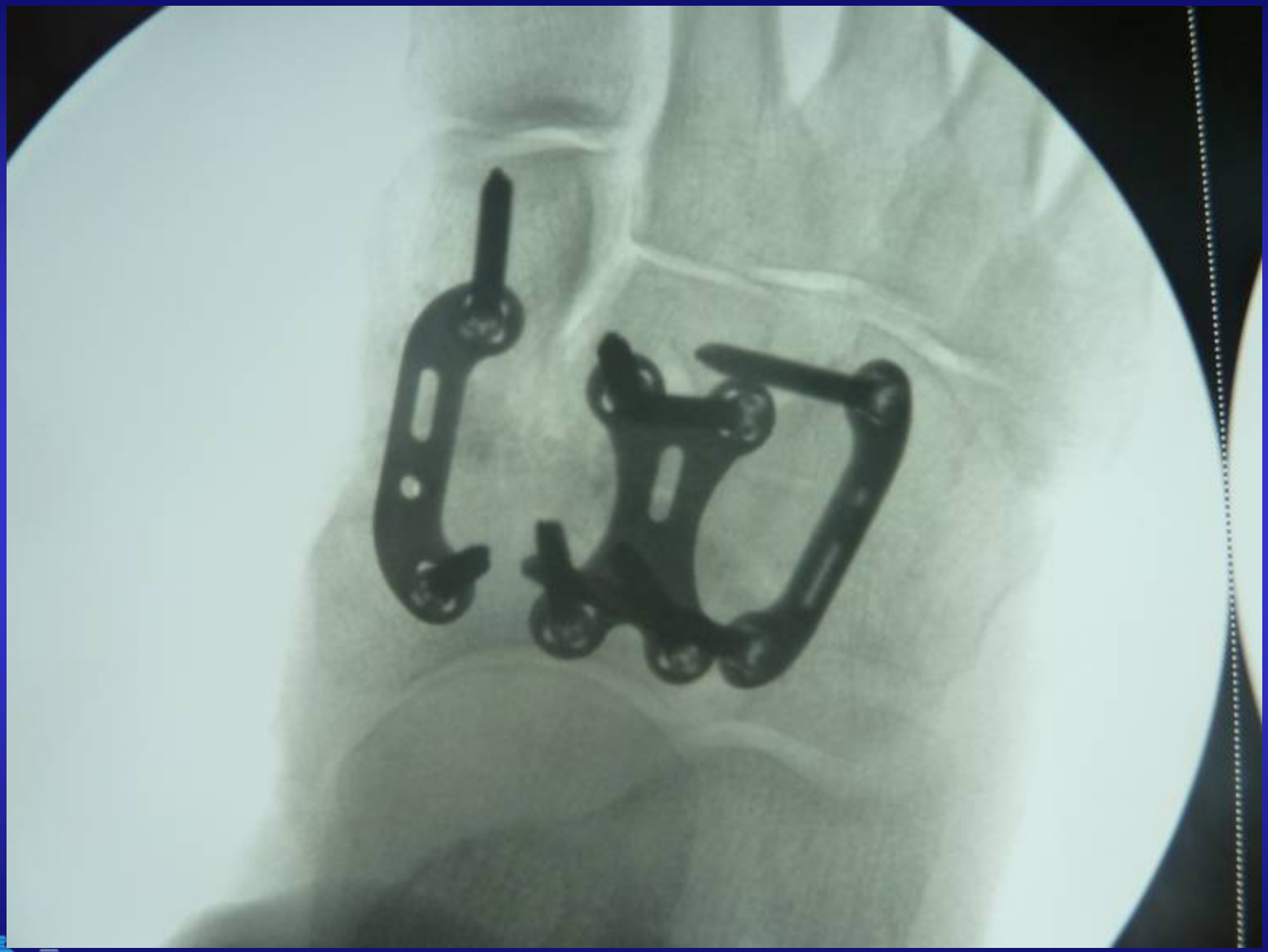
ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

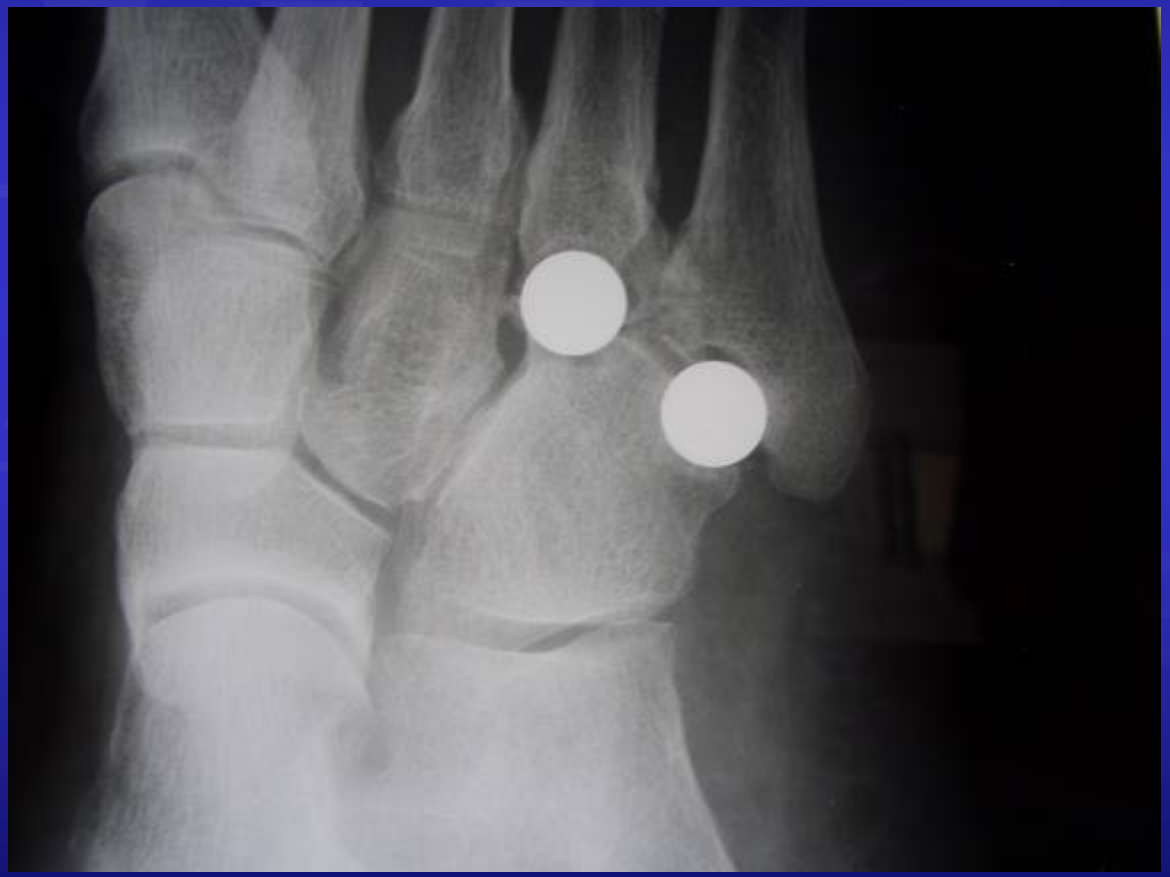


ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery



Bob’s Balls



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Ankle Ligaments

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

The commonest orthopaedic injury

- 1:10,000 population/day
- 460 people will sprain their ankles in Sydney today

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Who needs surgery acutely?

- Acute ligament repair never indicated in my opinion
- Displaced osteochondral fracture mechanically blocking the joint
- Acute tendon tear or dislocation peronei
- Displaced syndesmotic injury

Dr John Negrine
Adult Foot & Ankle Surgery

Natural history

- Most ankle sprains get better regardless of treatment and many never see a doctor, most ankle sprains do not cause ankle arthritis even with talar osteochondral fractures.

Who needs surgery late?

- Ligament instability failing a good physiotherapy program
- Ongoing pain from osteochondral fracture
- Scarring / failure to regain range of motion

Dr John Negrine
Adult Foot & Ankle Surgery

How to diagnose ankle instability

- You must talk to the patient

Dr John Negrine
Adult Foot & Ankle Surgery

You must examine the patient

Dr John Negrine
Adult Foot & Ankle Surgery

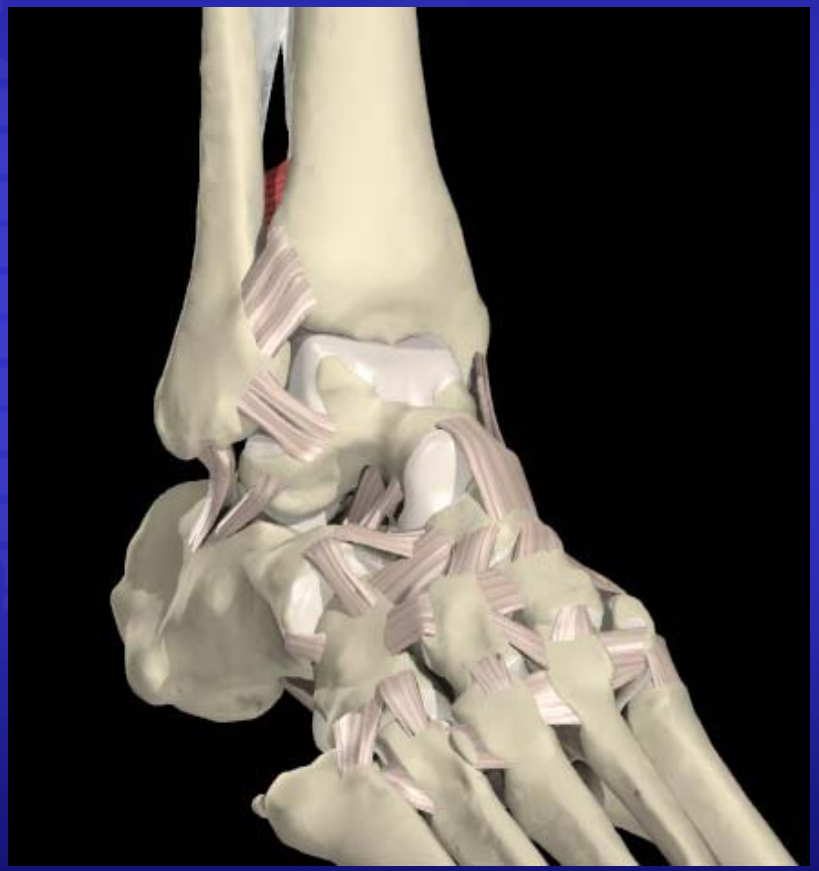
Ligament instability is not an MRI diagnosis

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Ligament anatomy

- Commonly anterior talo-fibular ligament
- Calcaneofibular ligament
- Less commonly the syndesmosis



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Calcaneo-fibular ligament

- Anatomy highly variable
- Ligament usually stretches before it tears
- Frequently re-attaches anteriorly

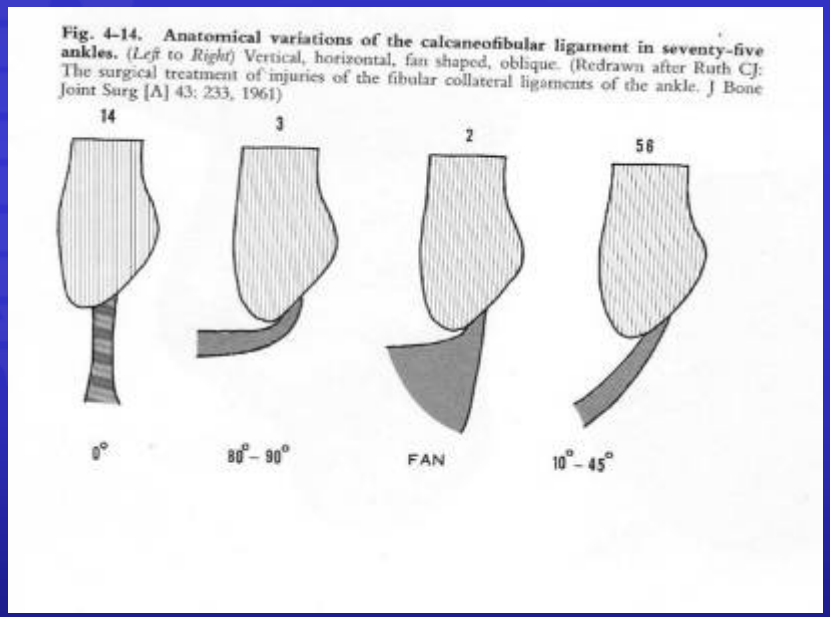
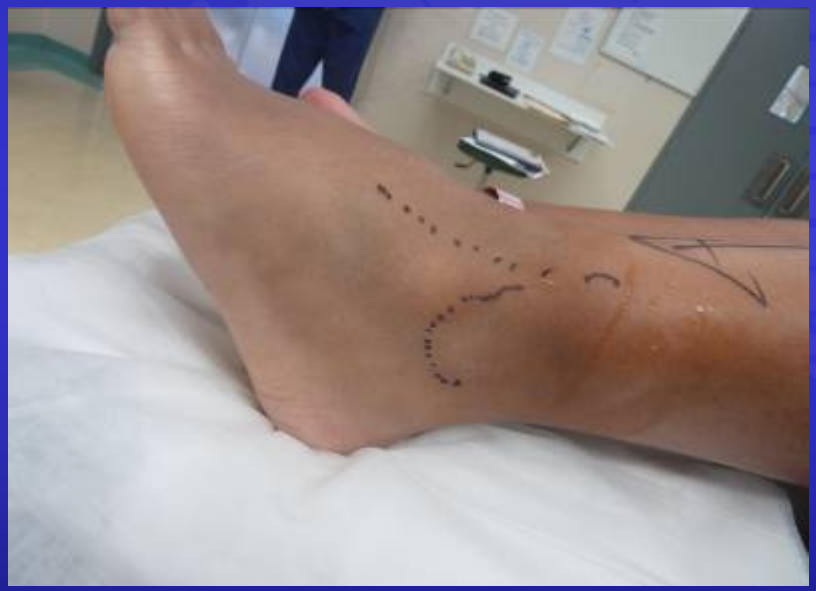


Fig. 4-14. Anatomical variations of the calcaneofibular ligament in seventy-five ankles. (*Left* to *Right*) Vertical, horizontal, fan shaped, oblique. (Redrawn after Ruth CJ: The surgical treatment of injuries of the fibular collateral ligaments of the ankle. J Bone Joint Surg [A] 43: 233, 1961)

ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Skin incision



- From tip of fibular malleolus
- 4cm anteriorly
- Extensile
- Previously described incision along the anterior edge of the fibula is not extensile

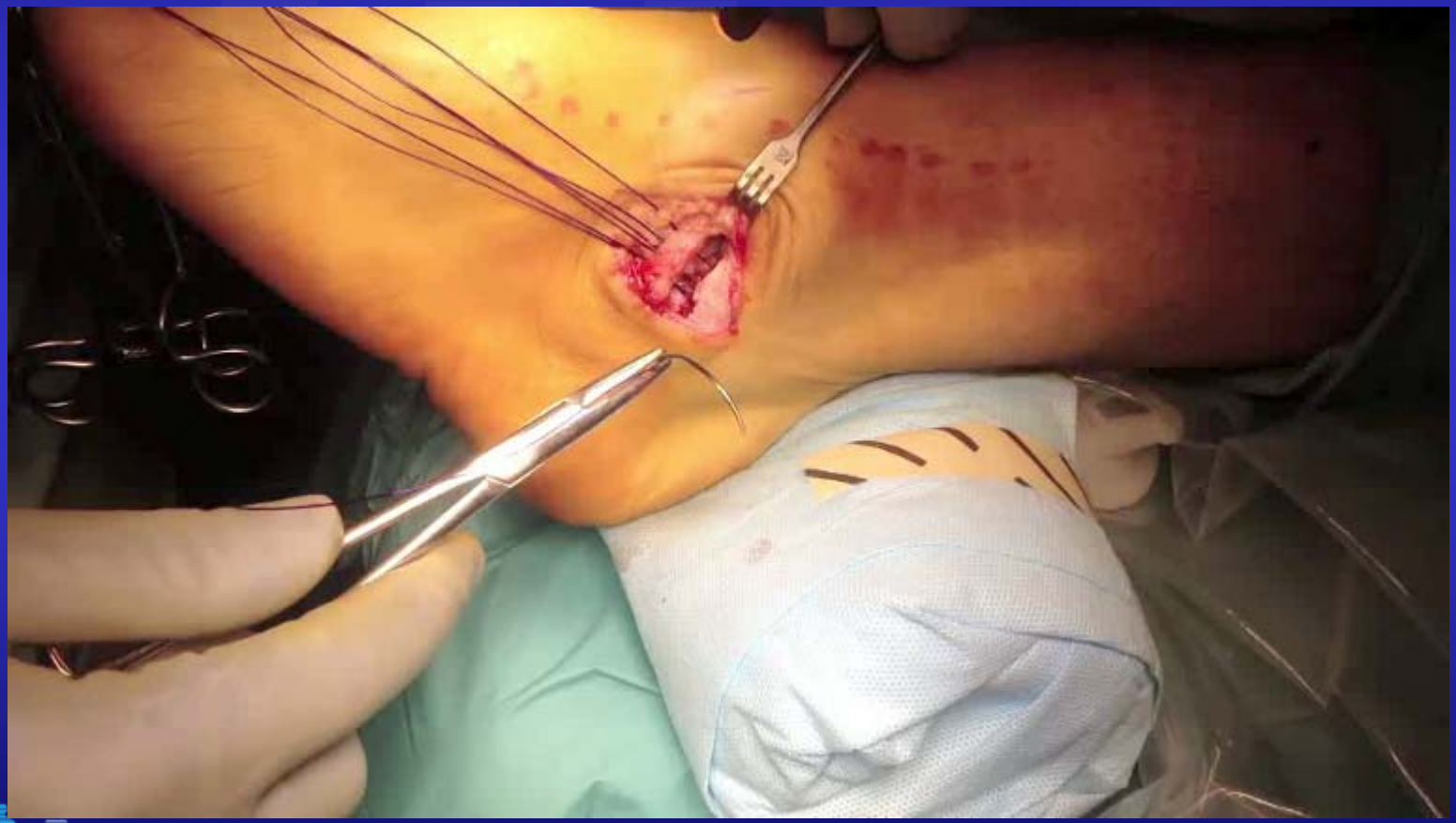
Dr John Negrine
Adult Foot & Ankle Surgery

Capsular incision

- Open capsule parallel to anterior fibula leaving a 5mm cuff
- Take care not to injure peroneal tendons inferiorly

Dr John Negrine
Adult Foot & Ankle Surgery

Capsular incision

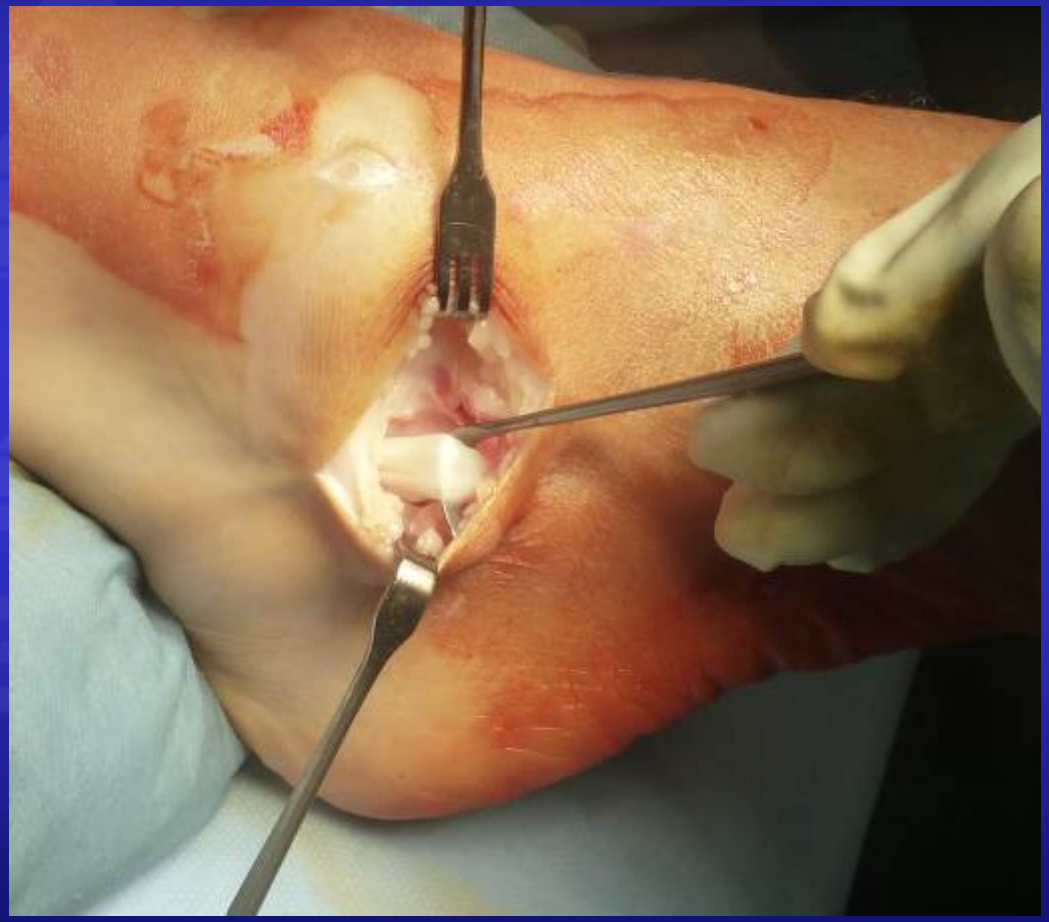


ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

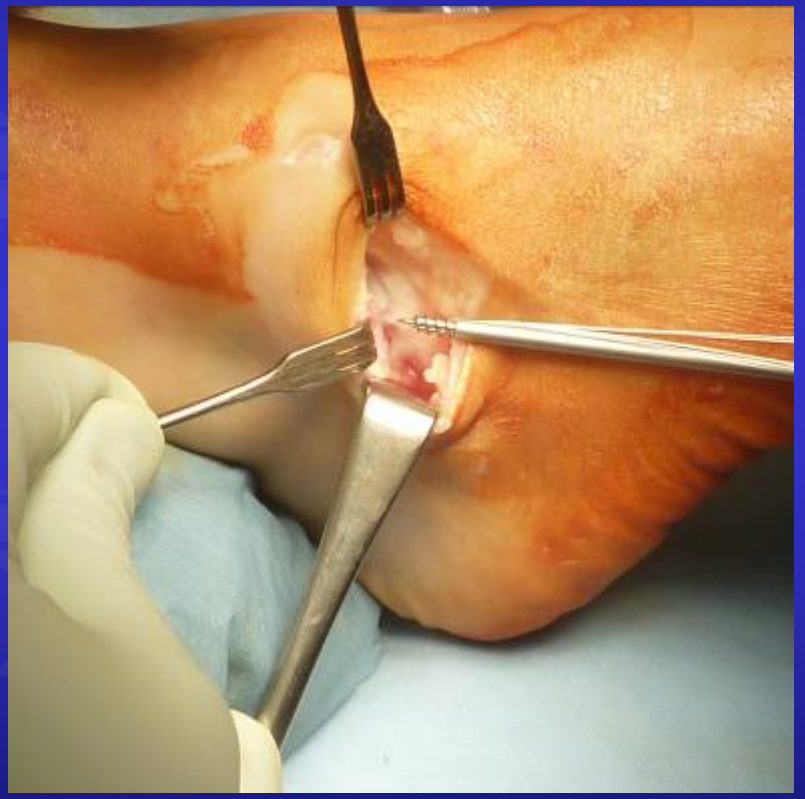
Open peroneal sheath

- Inspect peroneal tendons



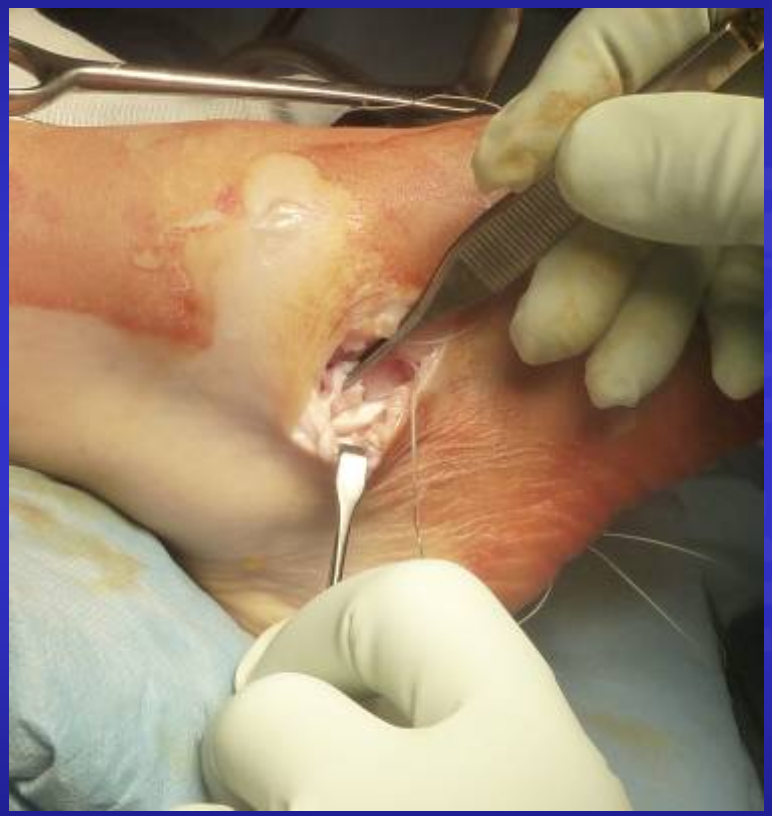
Re-attach calcaneo-fibular ligament

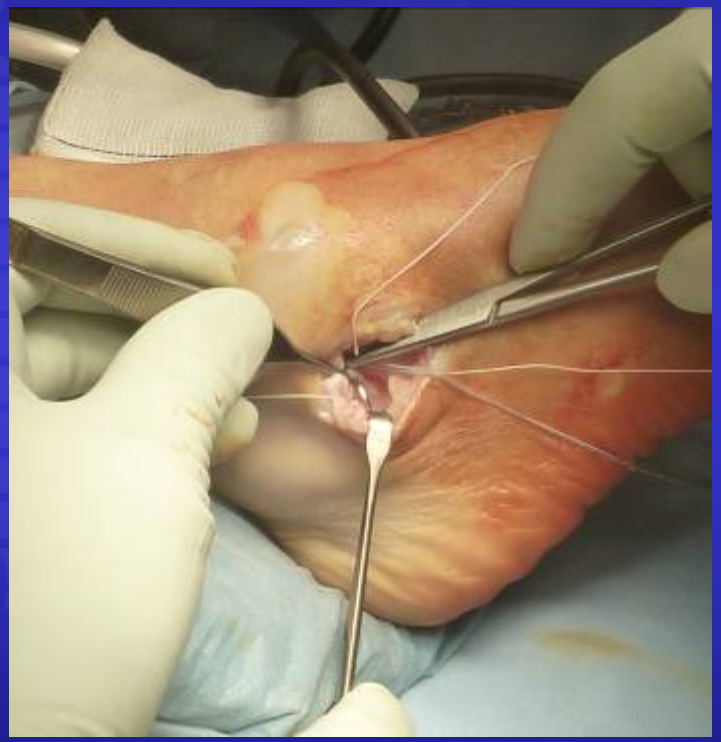
- I use a suture anchor
- A “screw in” anchor is easier to remove in case of revision



Dr John Negrine
Adult Foot & Ankle Surgery

Calcaneo-fibular ligament

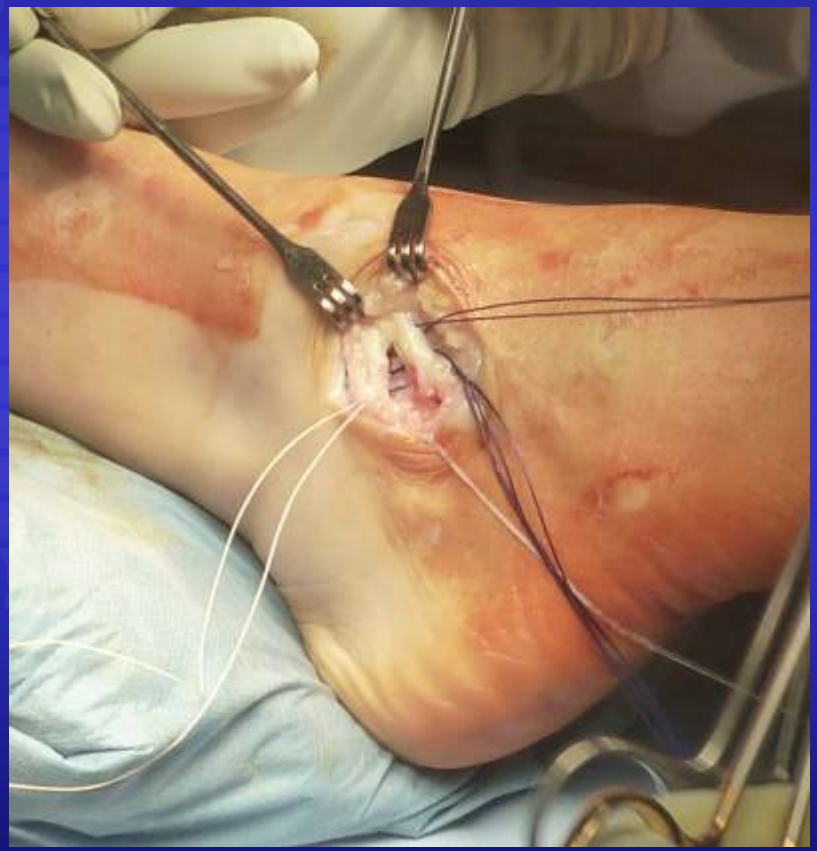




Dr John Negrine
Adult Foot & Ankle Surgery

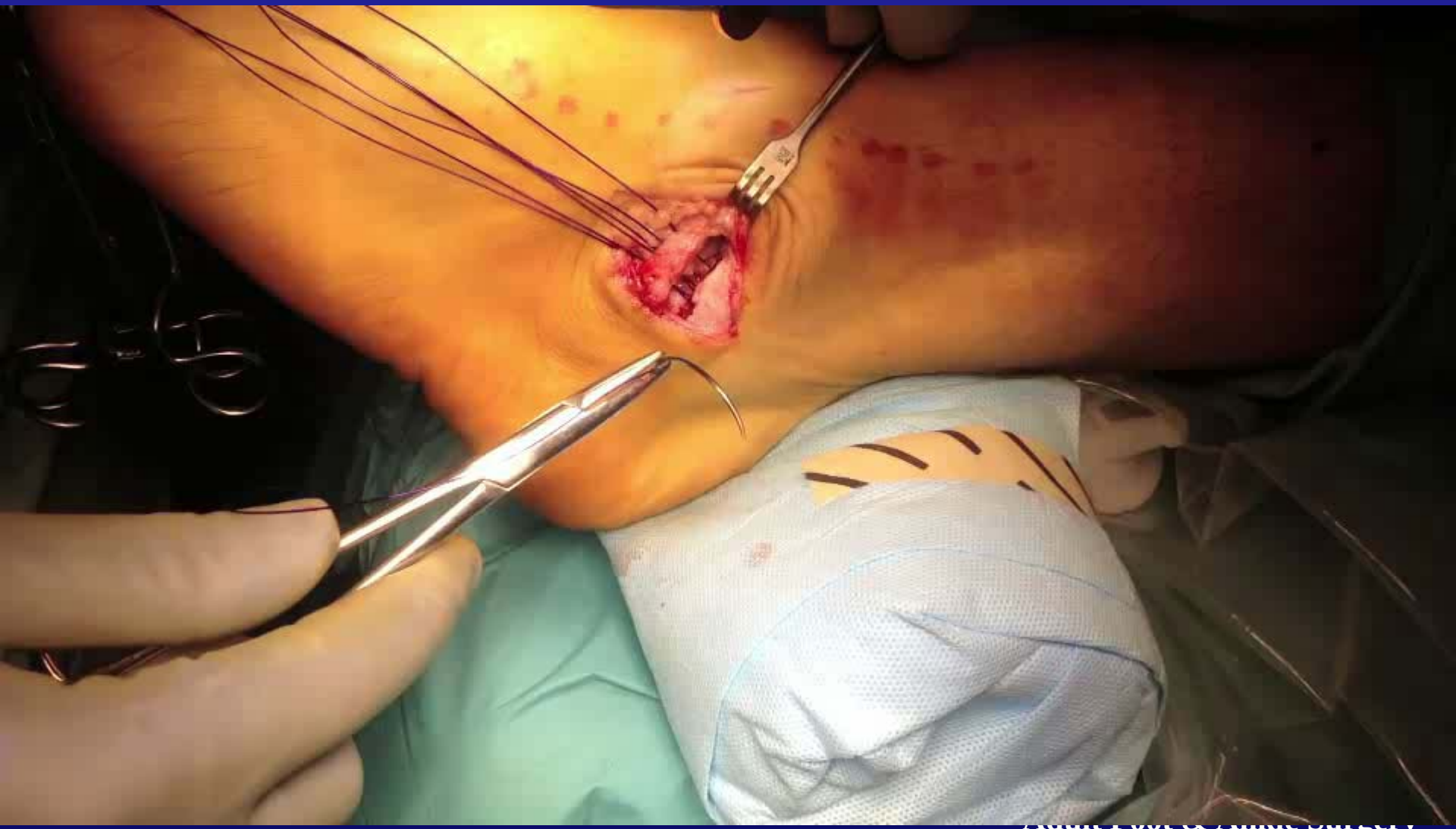
ATFL repair

- Basically “double breast” the capsule
- Contains the ligament
- I use #1 PDS sutures and oversew with #1 Vicryl



Dr John Negrine
Adult Foot & Ankle Surgery

ATFL repair

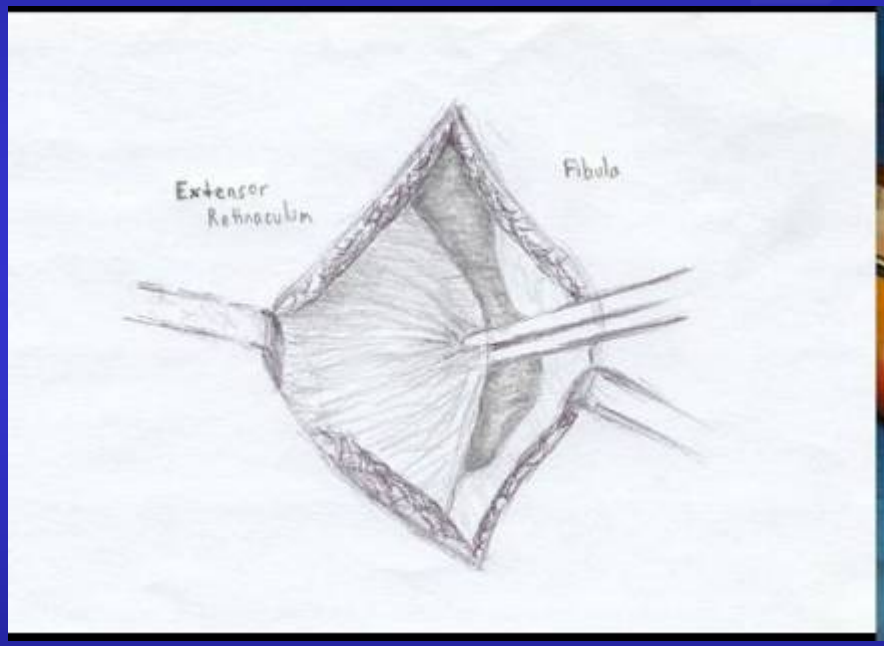


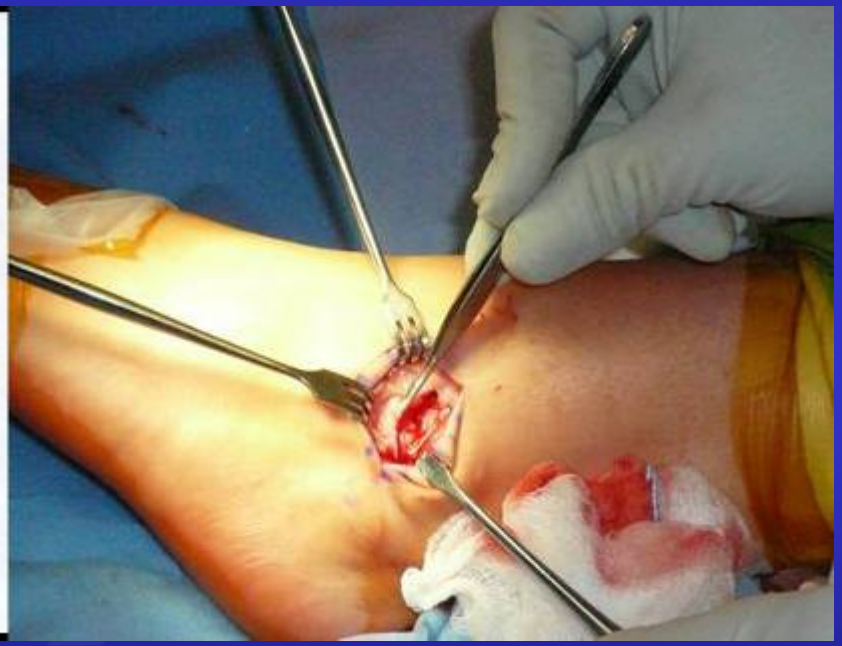
Gould modification

- Attach the inferior extensor retinaculum to the anterior fibula
- Said to reinforce the repair
- Adds to the subtalar stability

Dr John Negrine
Adult Foot & Ankle Surgery

Gould modification





ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Post operative regime

- 10 Days in plaster non-weight bearing
- 4 weeks in an airstirrup
- Physiotherapy at 6 weeks

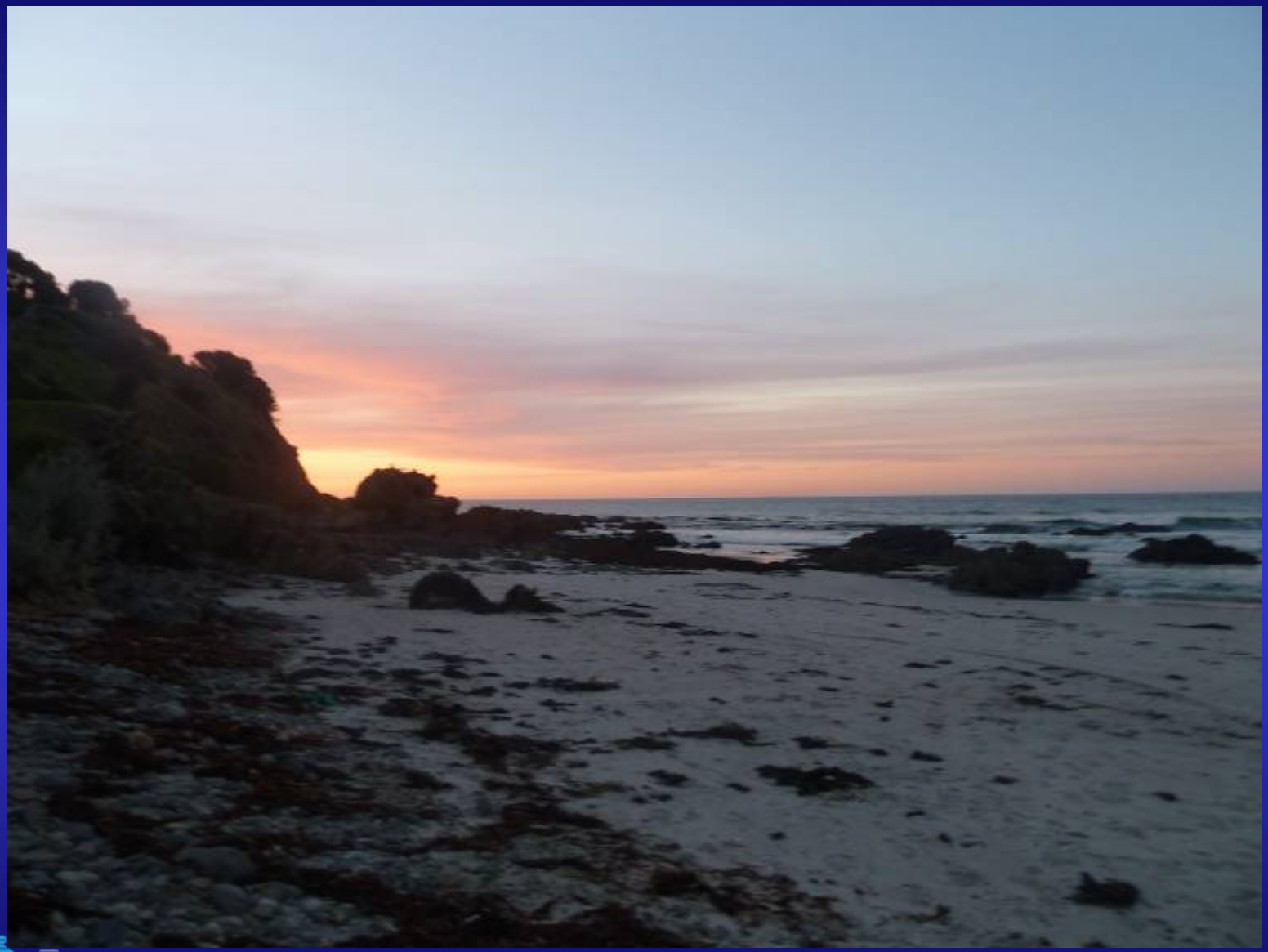
ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery

Rehabilitation

- At 6 weeks wobble board, peroneal strengthening
- Patients allowed to walk, cycle, swim
- Run at 3 months
- Return to non-contact sport at 3 months
- Return to contact sport 4 – 6 months

Dr John Negrine
Adult Foot & Ankle Surgery



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr John Negrine
Adult Foot & Ankle Surgery