Stanmore Foot and Ankle Specialists

NHS
Royal National Orthopaedic Hospital
NHS Trust

THE PRINCESS GRACE HOSPITAL
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HCAHealthcare UK
Outpatients & Diagnostics
Elstree

Spire
Bushey Hospital

Foot and Ankle Examination and Common Conditions

Mr Matt Welck

Consultant Orthopaedic Foot & Ankle Surgeon

18th June 2021

Royal National Orthopaedic Hospital
Private Care

MATTHEW WELCK
CONSULTANT ORTHOPAEDIC SURGEON
FOOT AND ANKLE SPECIALIST

WORLD'S BEST SPECIALIZED HOSPITALS 2021

World's Best Specialized Hospitals 2021

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Rank ▲	Hospital	Department	City	Country
1	Hospital For Special Surgery	**Orthopedic Care**	New York, NY	United States
2	Mayo Clinic - Rochester	**Department of Orthopedic Surgery**	Rochester, MN	United States
3	Charité - Universitätsmedizin Berlin	**Centrum für Muskuloskeletale Chirurgie**	Berlin	Germany
4	Helios ENDO-Klinik Hamburg	**Orthopädie**	Hamburg	Germany
5	Severance Hospital - Yonsei University	**Department of Orthopedic Surgery**	Seoul	South Korea
6	Schulthess Klinik	**Orthopädie**	Zürich	Switzerland
7	The Johns Hopkins Hospital	**Department of Orthopaedic Surgery**	Baltimore, MD	United States
8	Massachusetts General Hospital	**Department of Orthopaedic Surgery**	Boston, MA	United States
9	The Royal National Orthopaedic Hospital - Stanmore	**Orthopedic Care**	Stanmore	United Kingdom
10	Hospital Universitario La Paz	**Traumatología y Cirugía Ortopédica**	Madrid	Spain
11	Istituto Ortopedico Rizzoli	**Ortopedico**	Bologna	Italy
12	Asan Medical Center	**Department of Orthopedic Surgery**	Seoul	South Korea
13	KyungHee University Medical Center	**Department of Orthopedic Surgery**	Seoul	South Korea
14	Northwestern Memorial Hospital	**Center for Comprehensive Orthopaedic and Spine Care**	Chicago, IL	United States
15	Brigham And Women's Hospital	**Department of Orthopaedic Surgery**	Boston, MA	United States

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Relevant to you!

Foot and Ankle Examination (Face to Face)
How to perform
Lots of Pictures!

Common Conditions as we go

- www.matthewwelck.com
- Slides & Proforma all on website.
- 45 mins then stop for questions
- Interactive

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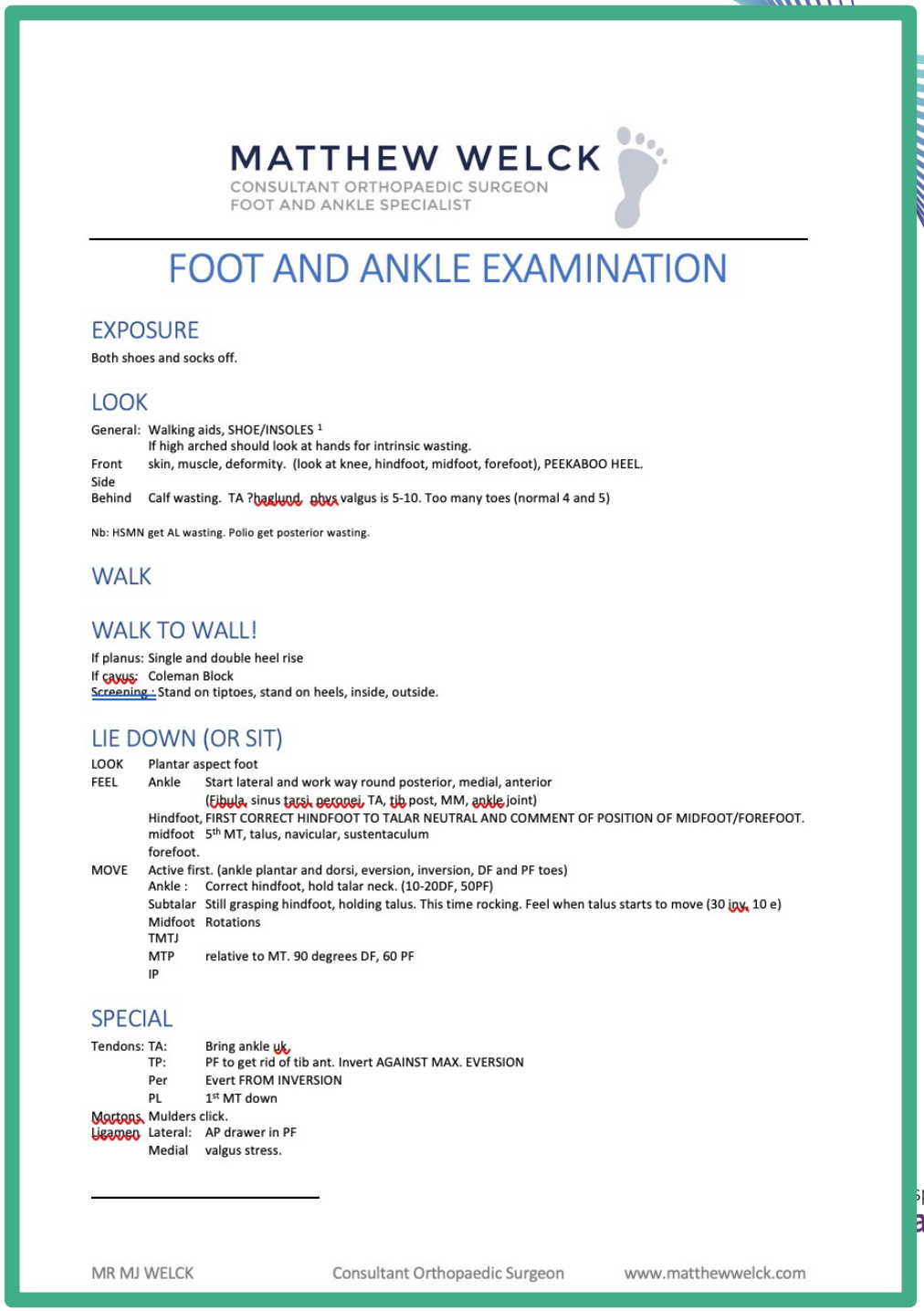
Overview

- Exposure
- Look Standing
  - Walk
  - Walk to Wall
  - Lie or sit
- Feel
- Move
- Special Tests



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FOOT AND ANKLE EXAMINATION

EXPOSURE

Both shoes and socks off.

LOOK

General: Walking aids, SHOE/INSOLES [1]
If high arched should look at hands for intrinsic wasting.
Front skin, muscle, deformity. (look at knee, hindfoot, midfoot, forefoot), PEEKABOO HEEL.
Side
Behind Calf wasting. TA ?haglund, phys valgus is 5-10. Too many toes (normal 4 and 5)

Nb: HSMN get AL wasting. Polio get posterior wasting.

WALK

WALK TO WALL!

If planus: Single and double heel rise
If cavus: Coleman Block
Screening : Stand on tiptoes, stand on heels, inside, outside.

LIE DOWN (OR SIT)

LOOK Plantar aspect foot
FEEL Ankle Start lateral and work way round posterior, medial, anterior
(Fibula, sinus tarsi, peronei, TA, tib post, MM, ankle joint)
Hindfoot, FIRST CORRECT HINDFOOT TO TALAR NEUTRAL AND COMMENT OF POSITION OF MIDFOOT/FOREFOOT.
midfoot 5th MT, talus, navicular, sustentaculum
forefoot.
MOVE Active first. (ankle plantar and dorsi, eversion, inversion, DF and PF toes)
Ankle : Correct hindfoot, hold talar neck. (10-20DF, 50PF)
Subtalar Still grasping hindfoot, holding talus. This time rocking. Feel when talus starts to move (30 inv, 10 e)
Midfoot Rotations
TMTJ
MTP relative to MT. 90 degrees DF, 60 PF
IP

SPECIAL

Tendons: TA: Bring ankle uk
TP: PF to get rid of tib ant. Invert AGAINST MAX. EVERSION
Per Evert FROM INVERSION
PL 1st MT down
Mortons Mulders click.
Ligamen Lateral: AP drawer in PF
Medial valgus stress.

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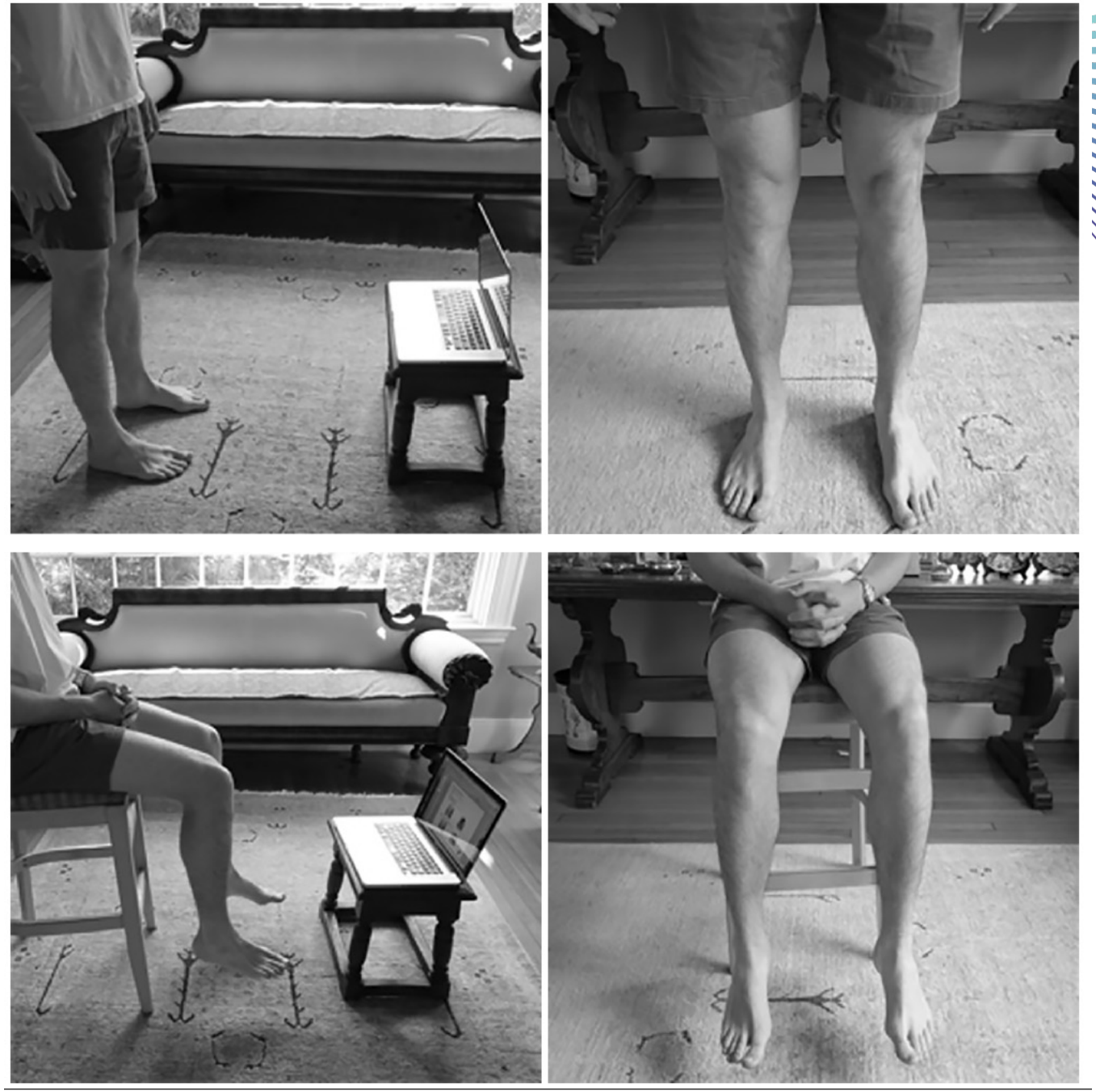
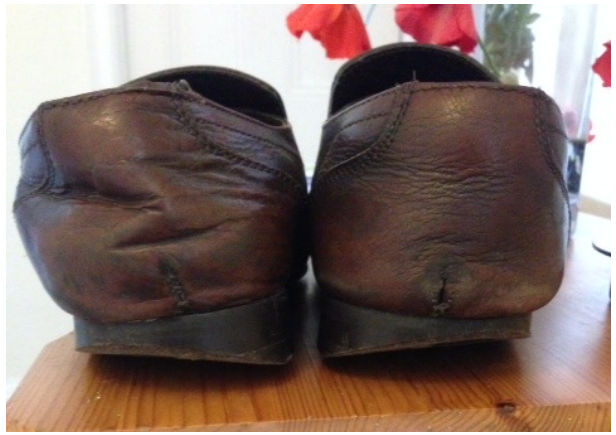
Exposure

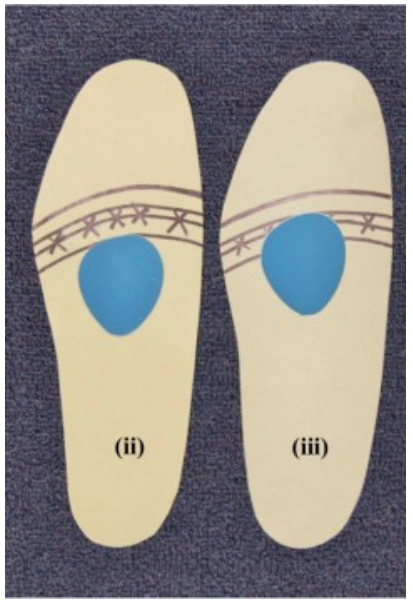
- Both Shoes and Socks Off
- Expose to Knees

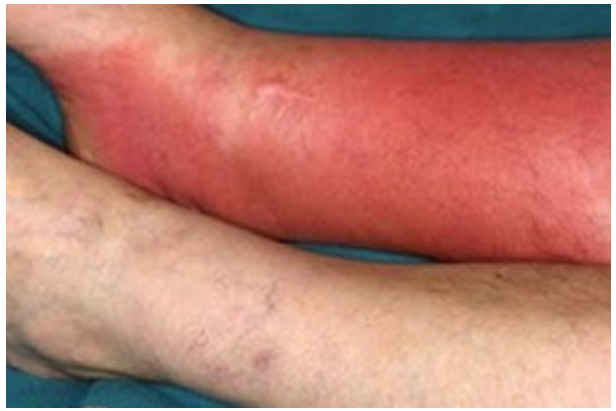


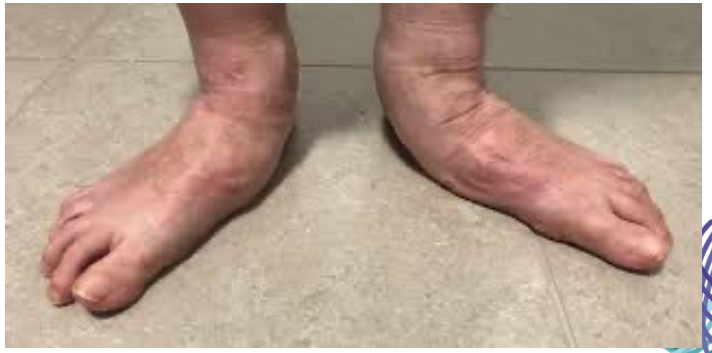
Look (standing, walking, wall, sitting)

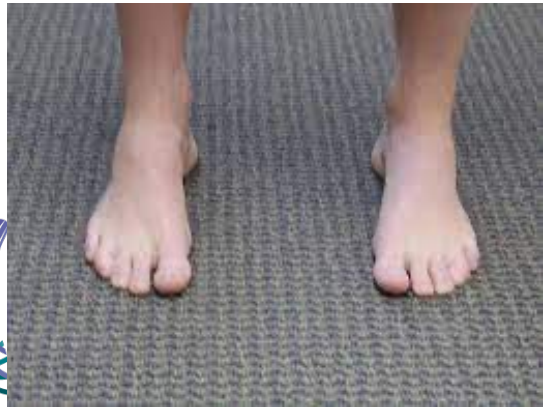
- Shoes
- Insoles
- Knees
- Skin/soft tissues
- Muscle
- Bony deformity

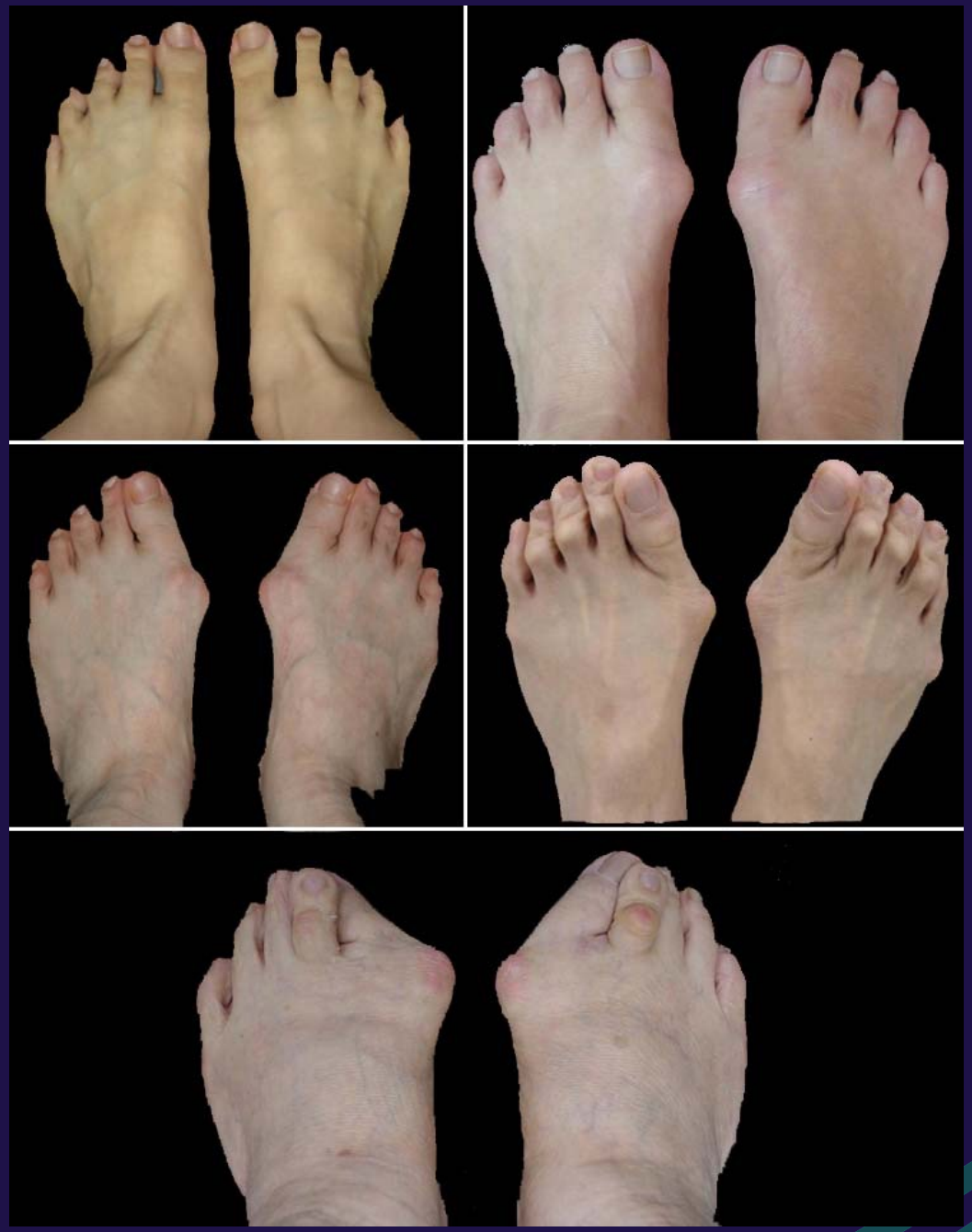












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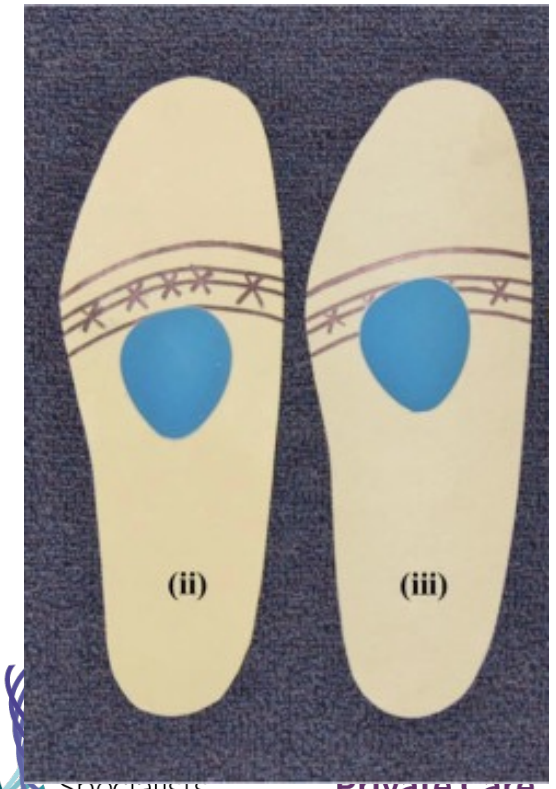
Conservative Treatment

- Footwear modification
- Bunion pads
- Toe separators
- Bunion splints – darco
- Insoles: Flat feet, metatarsalgia.



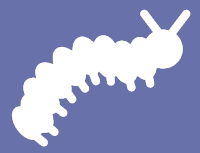
Pure cosmesis:

Generally not;

Length of recovery.
Potential for stiffness.

Generally advise against high heels after.

Pain: **eminence**, joint, toe crowding, shoe limitation



Lesser toe: MTS and Hammering

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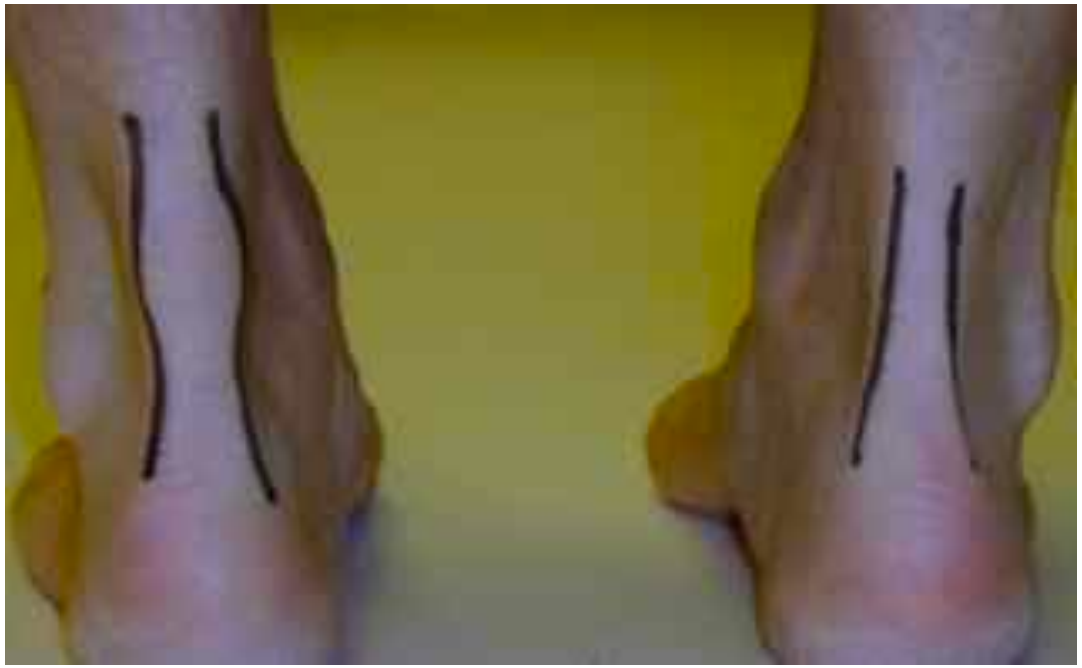

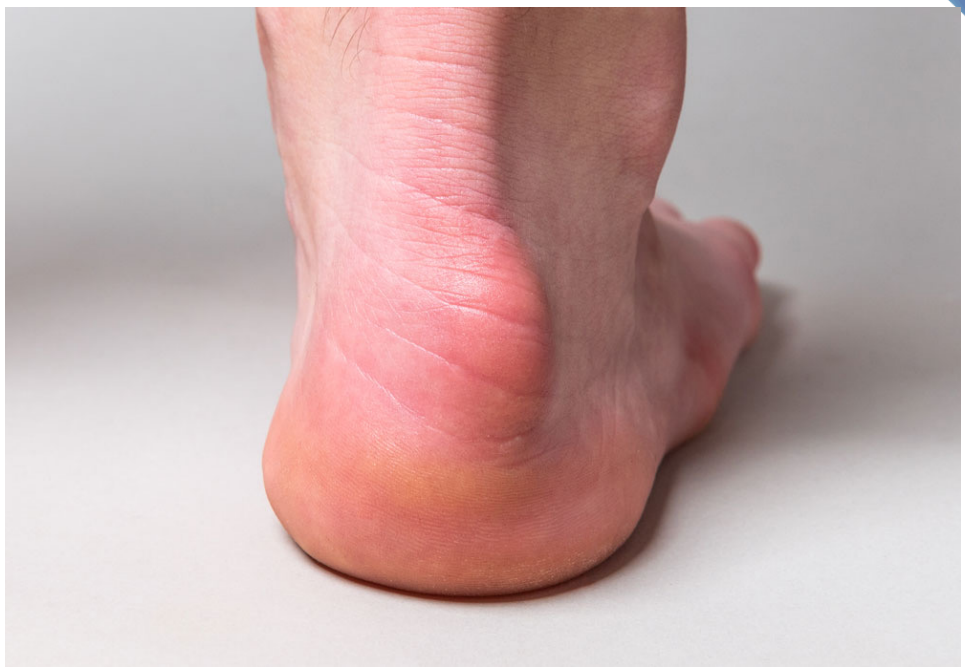

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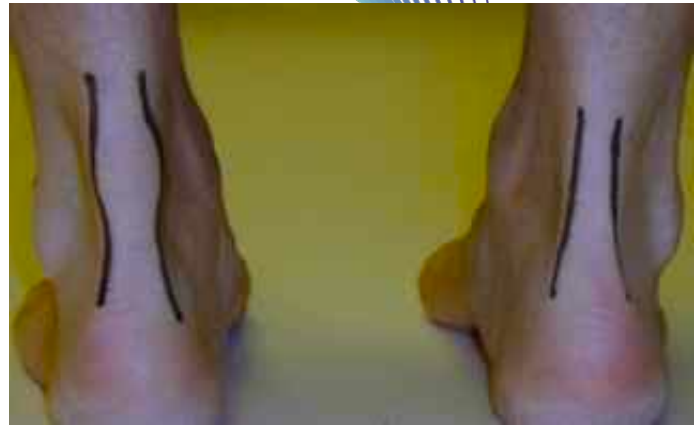
Rx – Non insertional.



Rest/Activity Modification.

Analgesia: NSAID, cold compress

Self Physio: If tight. ECCENTRIC. 12 weeks *.

Orthotics – change trainers

Primary care

refer

Formal Physio – kinesiotape, deep frictional massage?

Shock wave

Injections

Night splints?

Gastroc release

Tendon Debridement +/- FHL transfer

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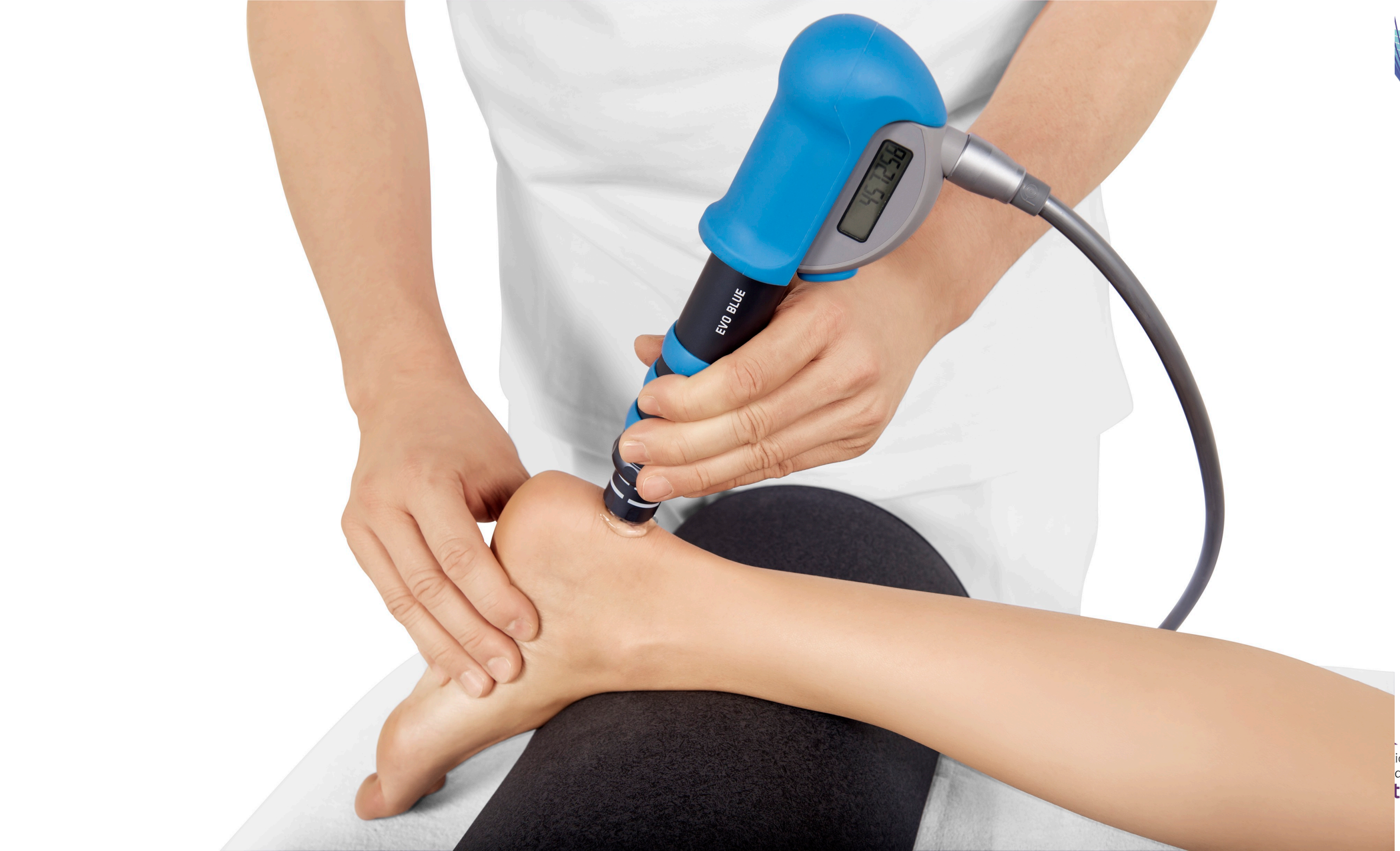

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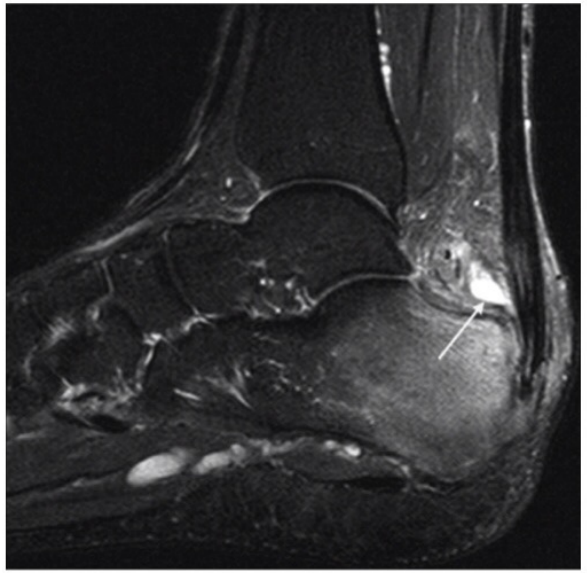
Rx –Insertional.



Rest/Activity Modification. BOOT 6 weeks.

Analgesia: NSAID, cold compress

Self Physio: Eccentric. LESS EFFECTIVE (90 vs 30%)

Orthotics - heel lift.

Formal Physio

Shock wave – LESS but still EFFECTIVE

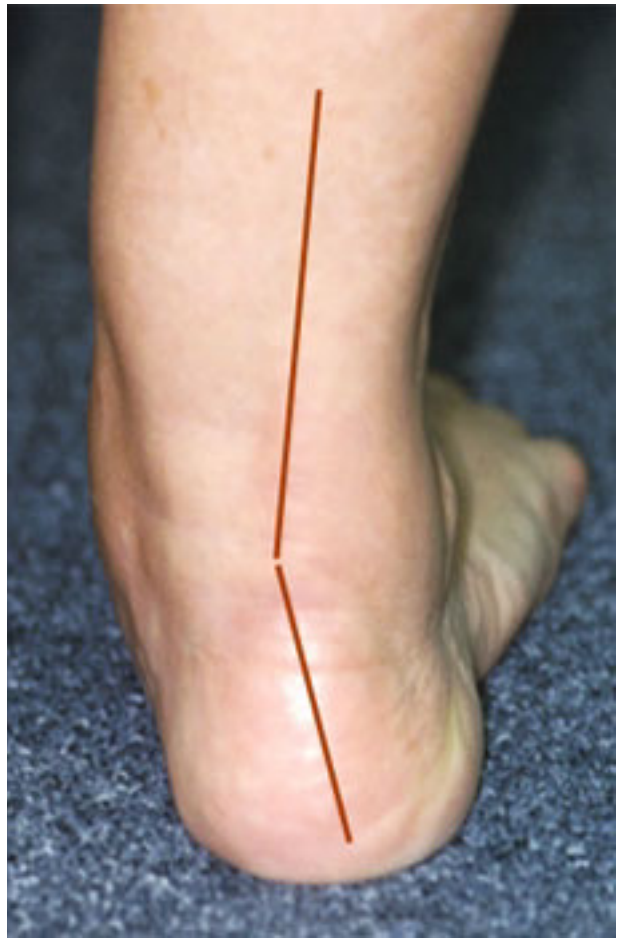
Injections?

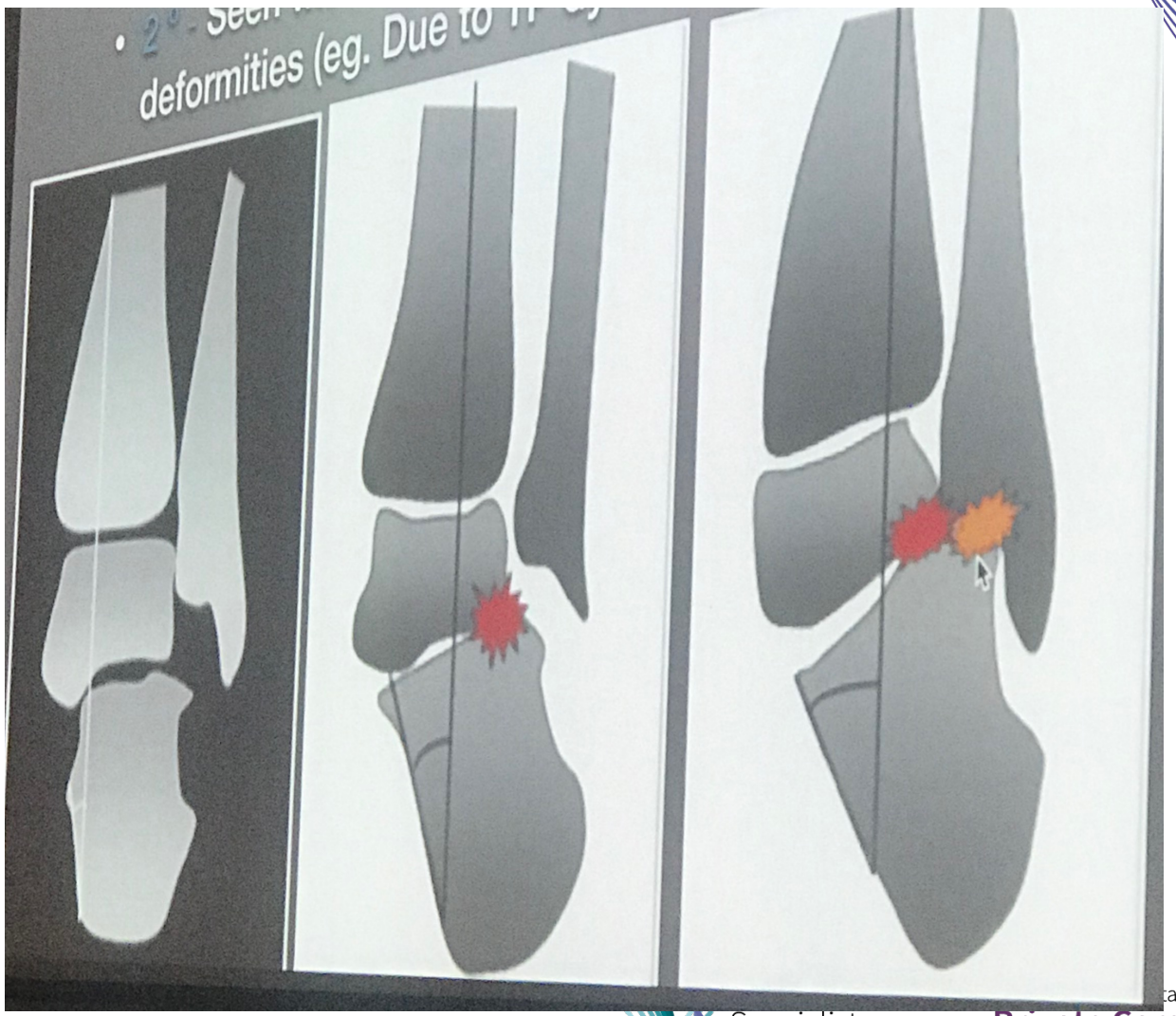
Gastroc release

Open/Arth haglunds debridement.

DEBRIDEMENT WITH SPEEDBRIDGE REINSERTION.

ZADEK

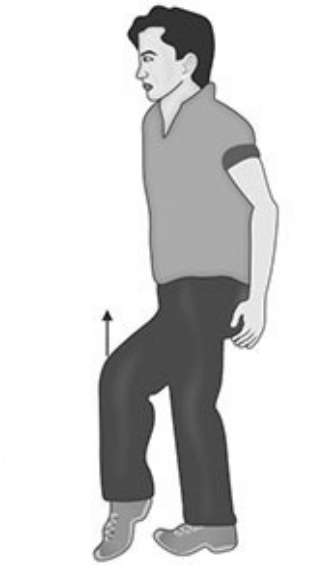



deformities (eg. Due to

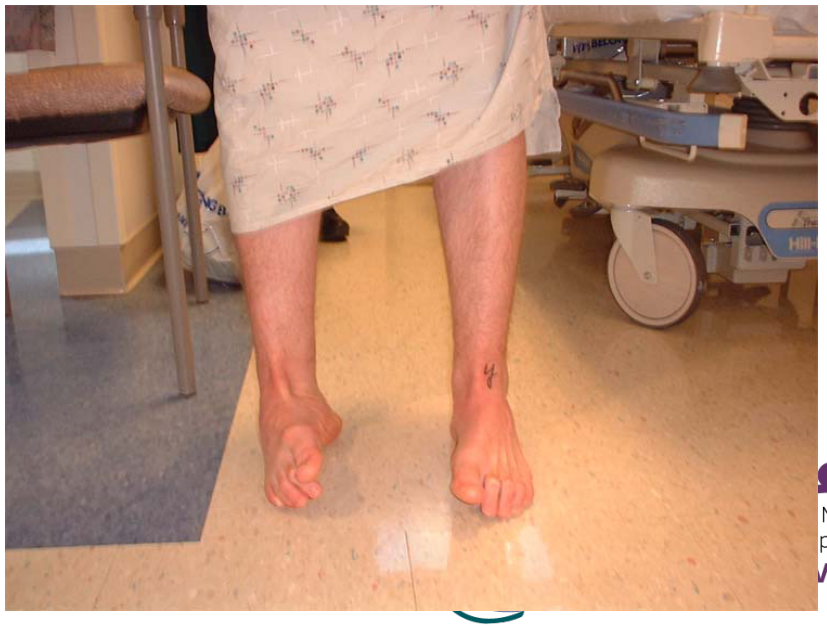
Walk

- Flat foot – increasing valgus
- High arch foot – contact on outer border foot
- ER gait: ankle arthritis
- Antalgic gait – Plantar fasciitis
- High steppage gait – foot drop

- Screening



C High-steppage gait



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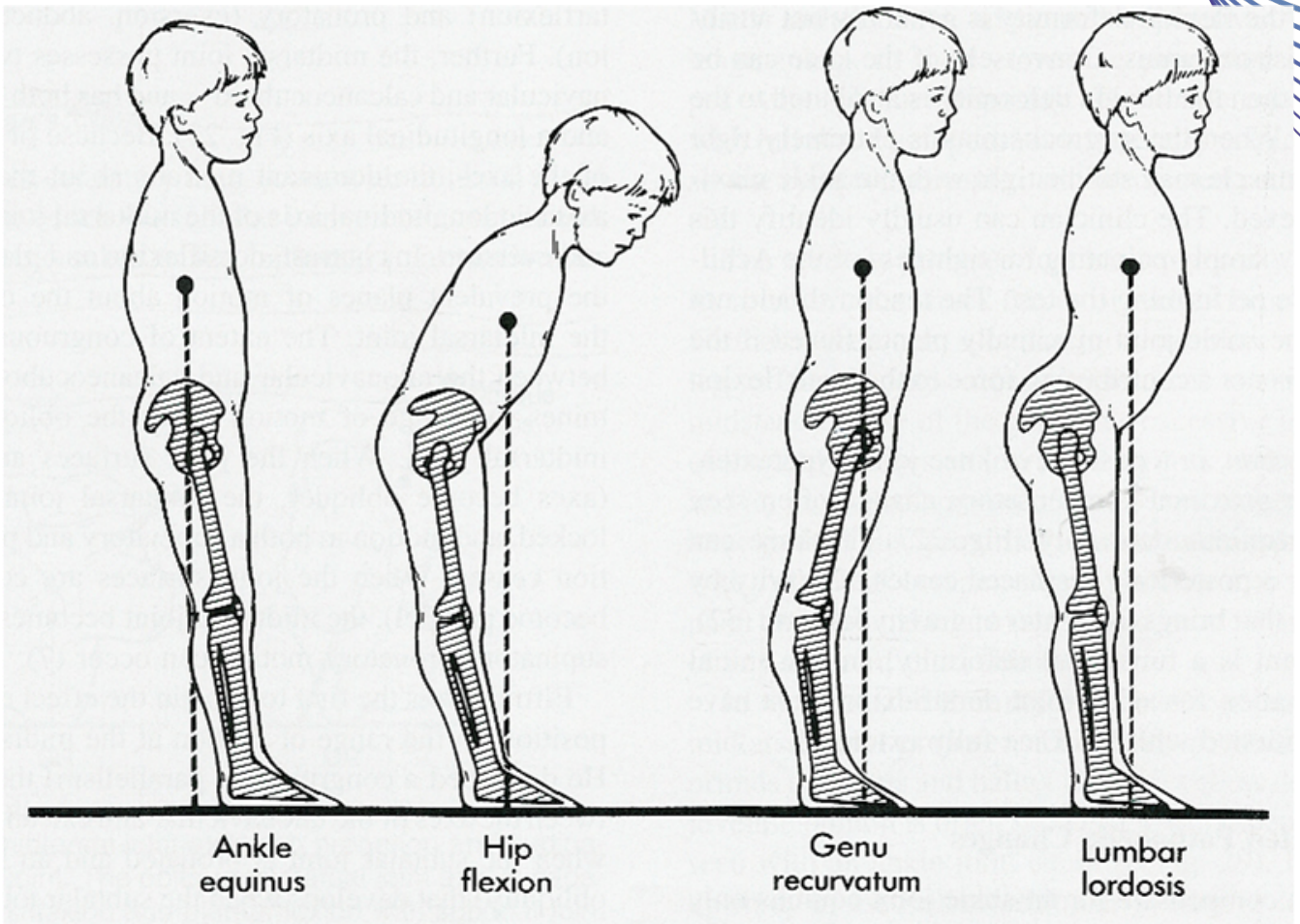

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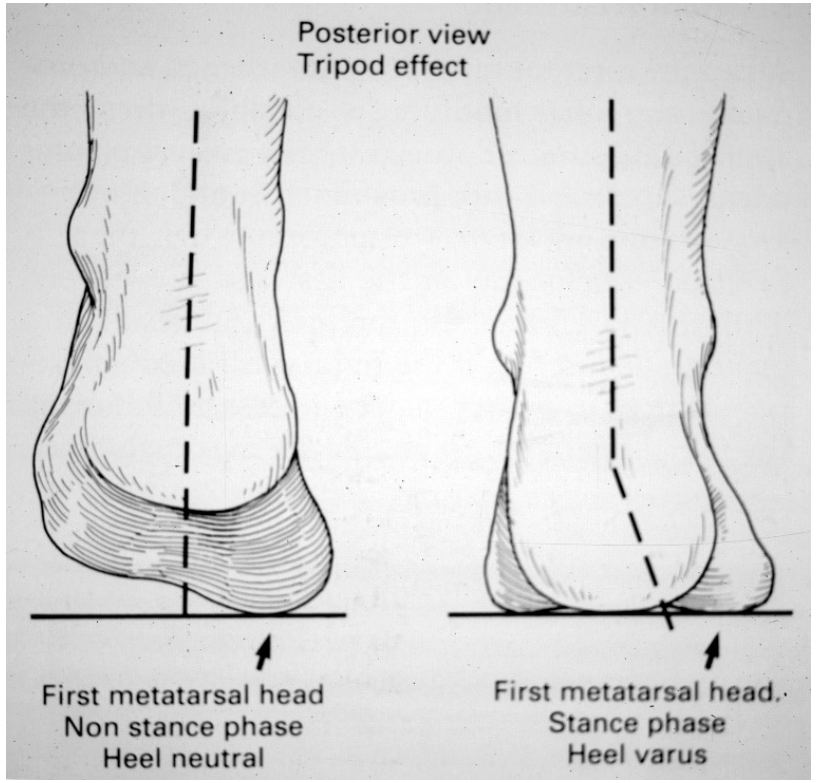
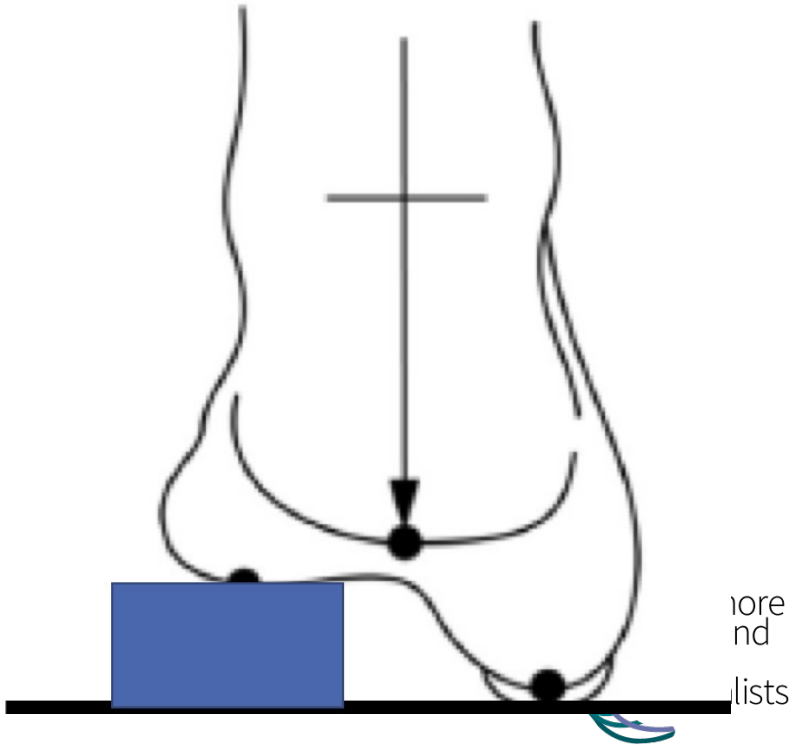
Walk to Wall

- SLHR if flat
- Coleman Block Test if high arch





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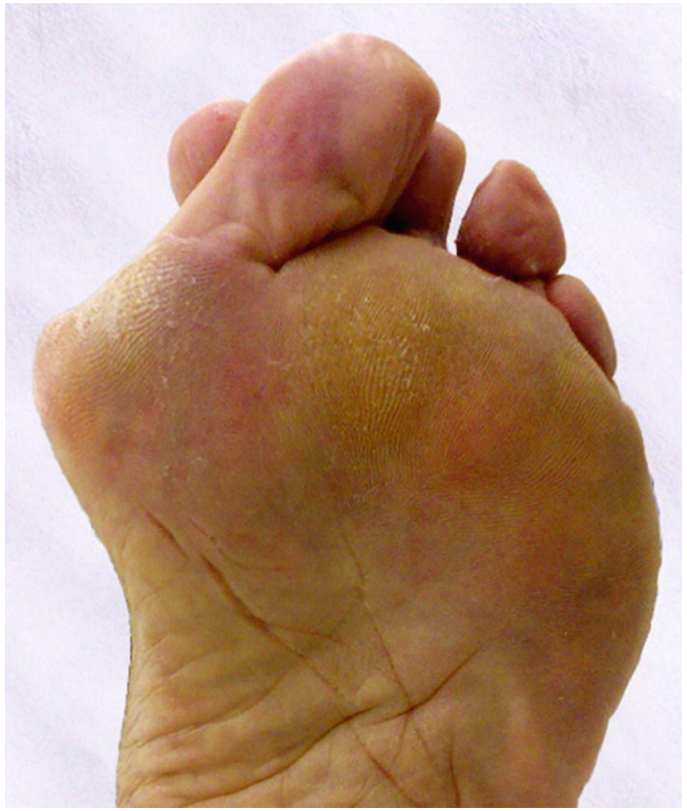
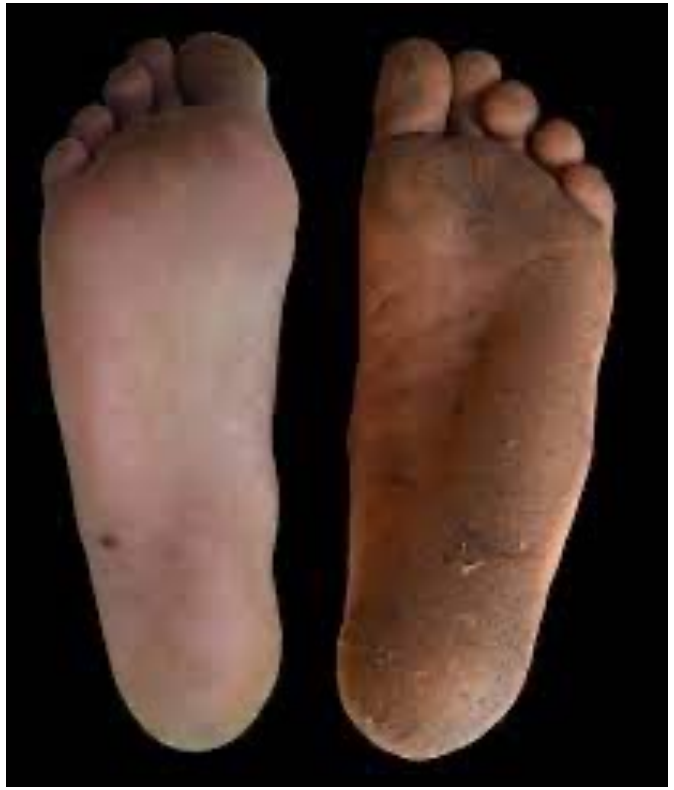
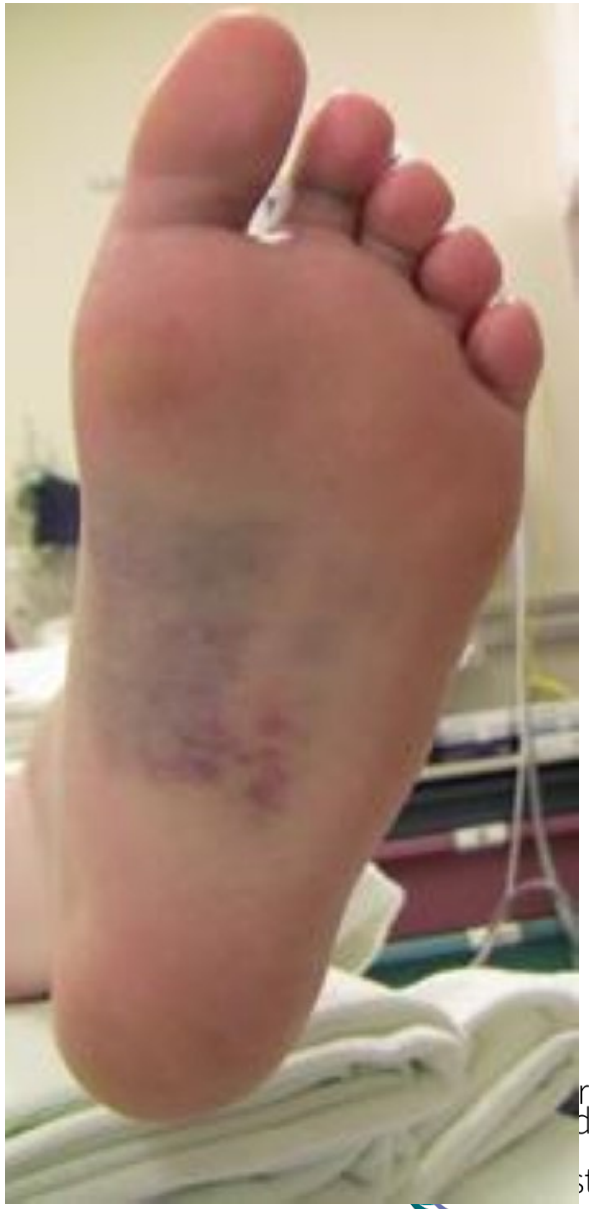
Look : sitting or Lying







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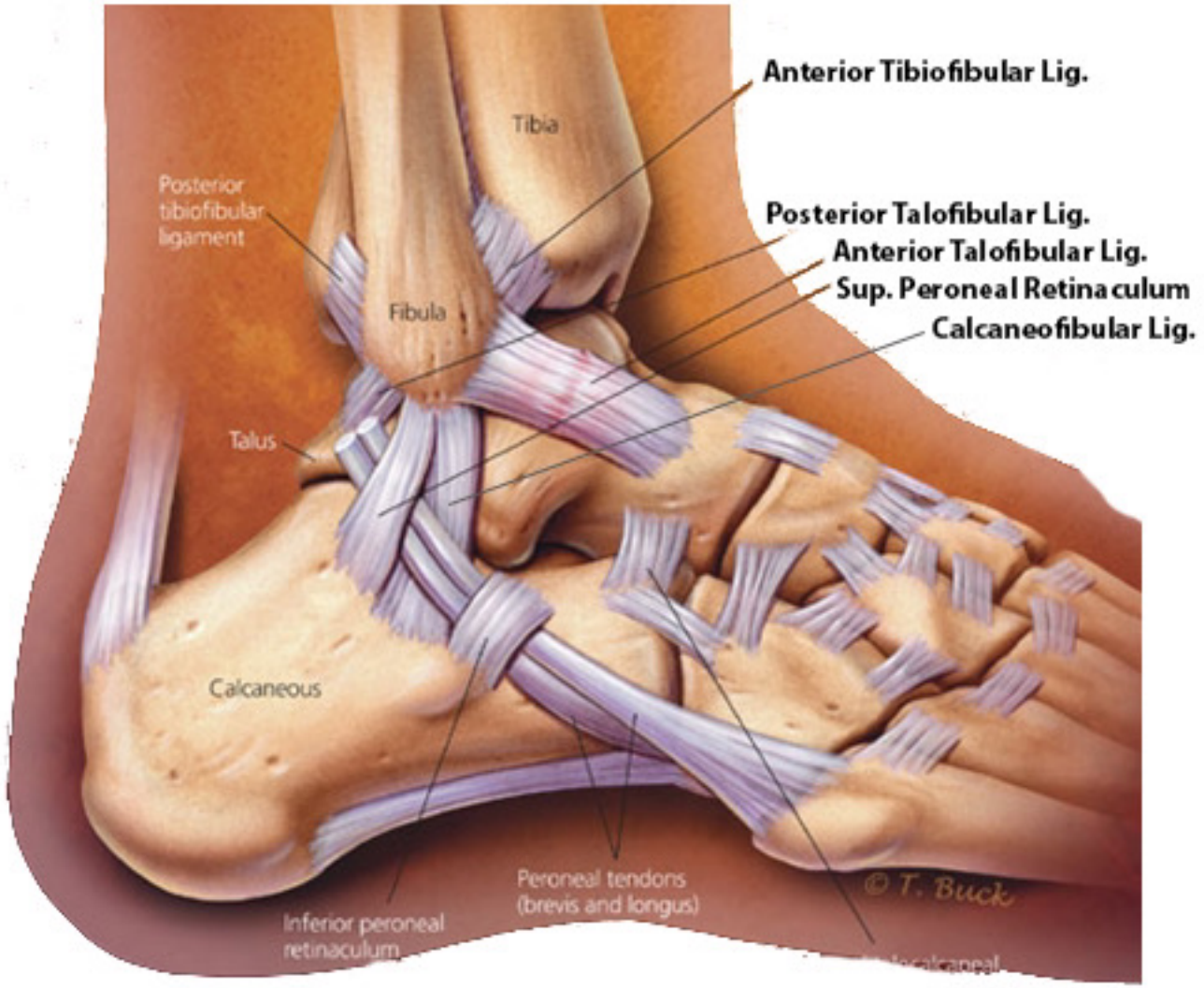
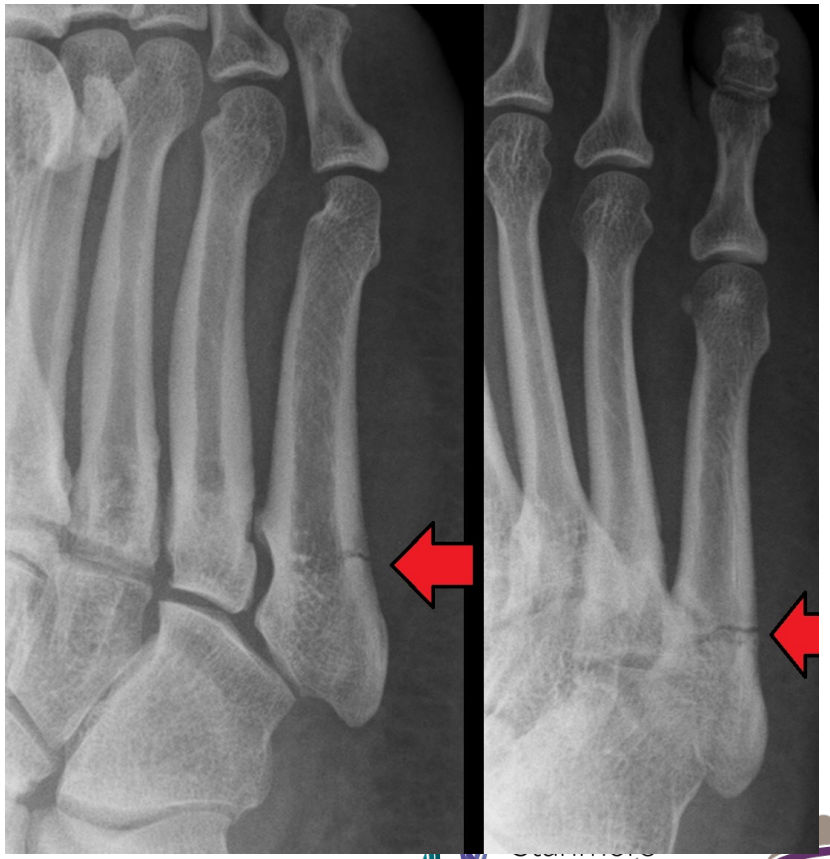
Feel :Lateral, Anterior, Medial, Posterior, Sole





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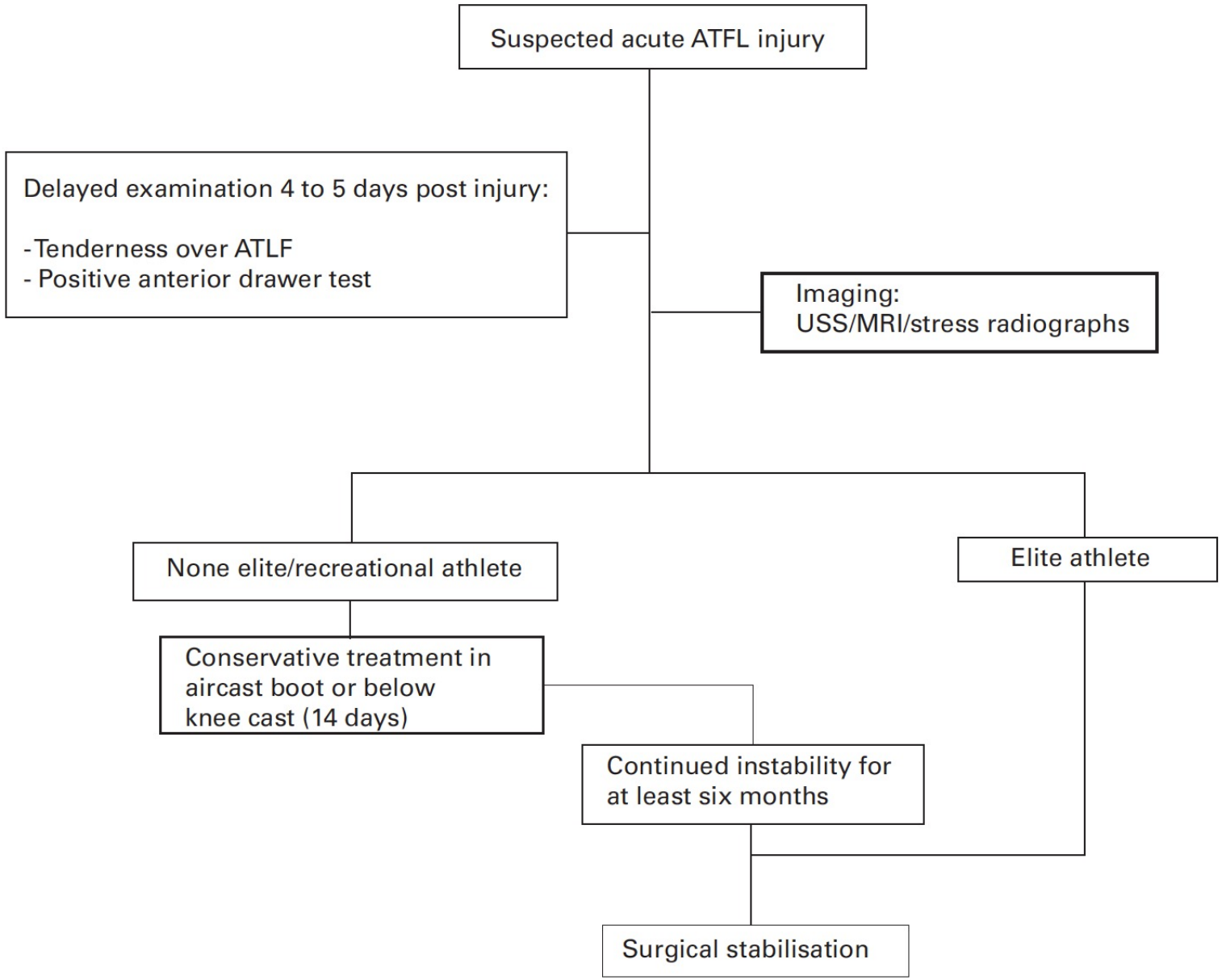

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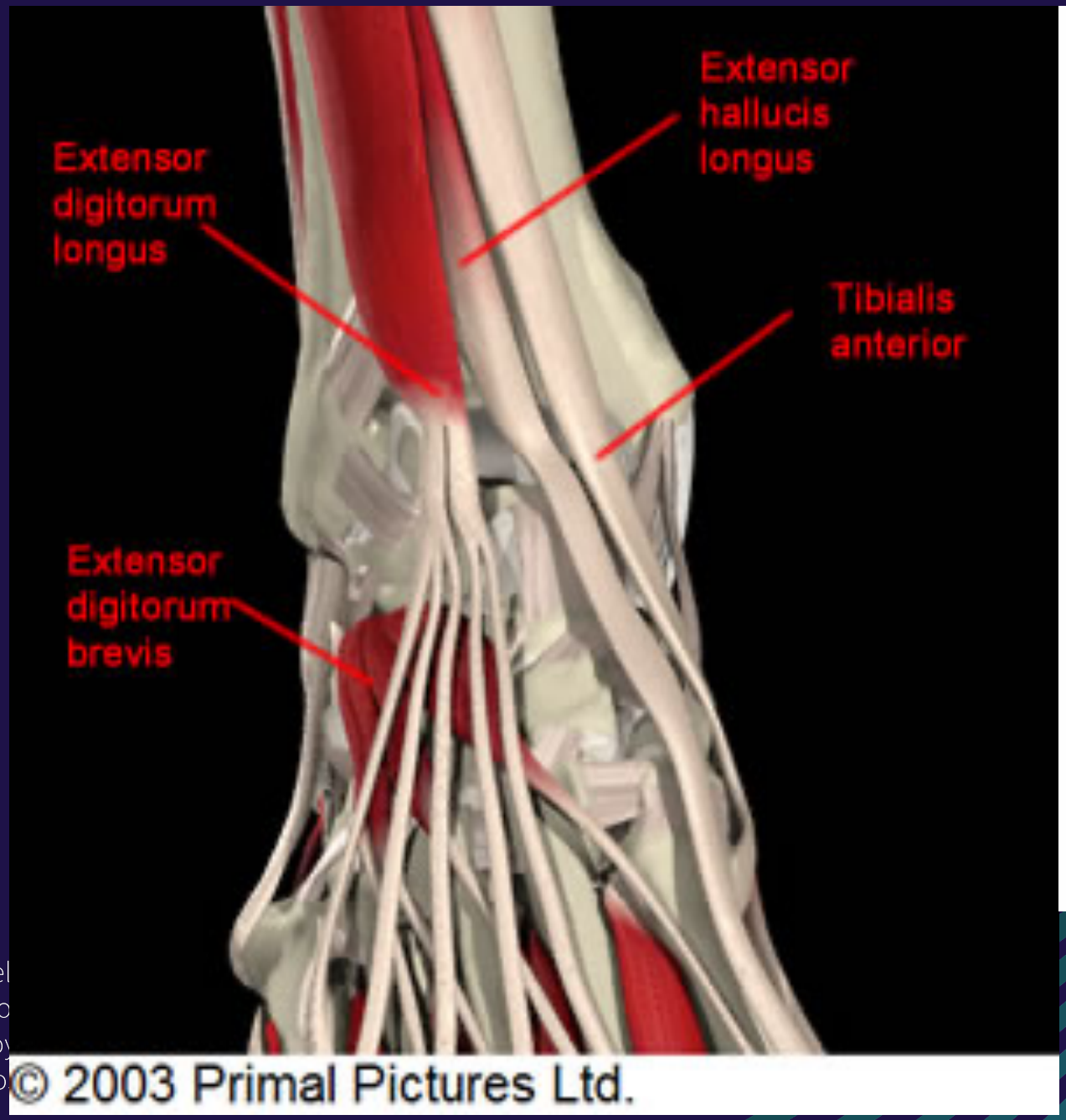

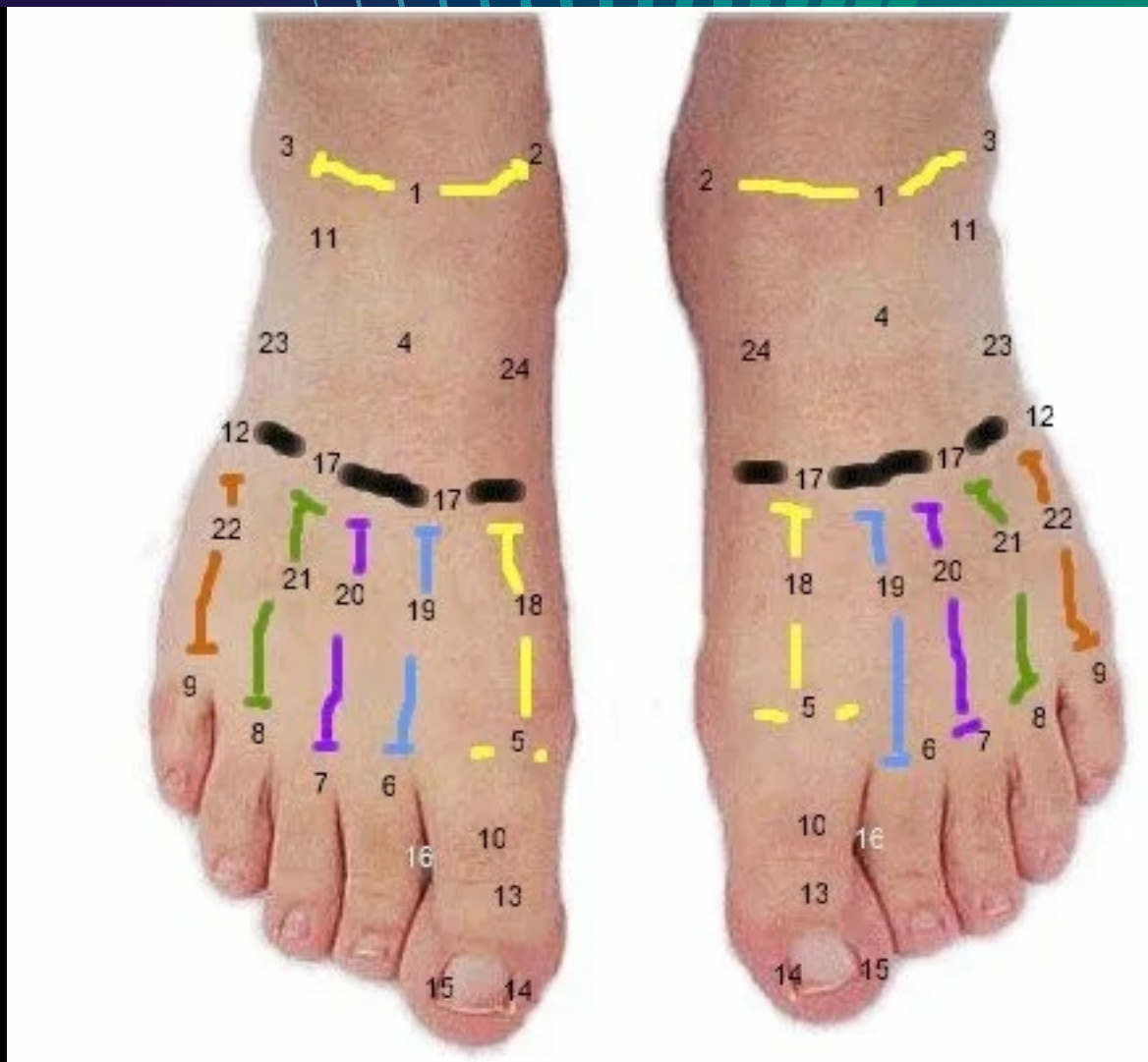

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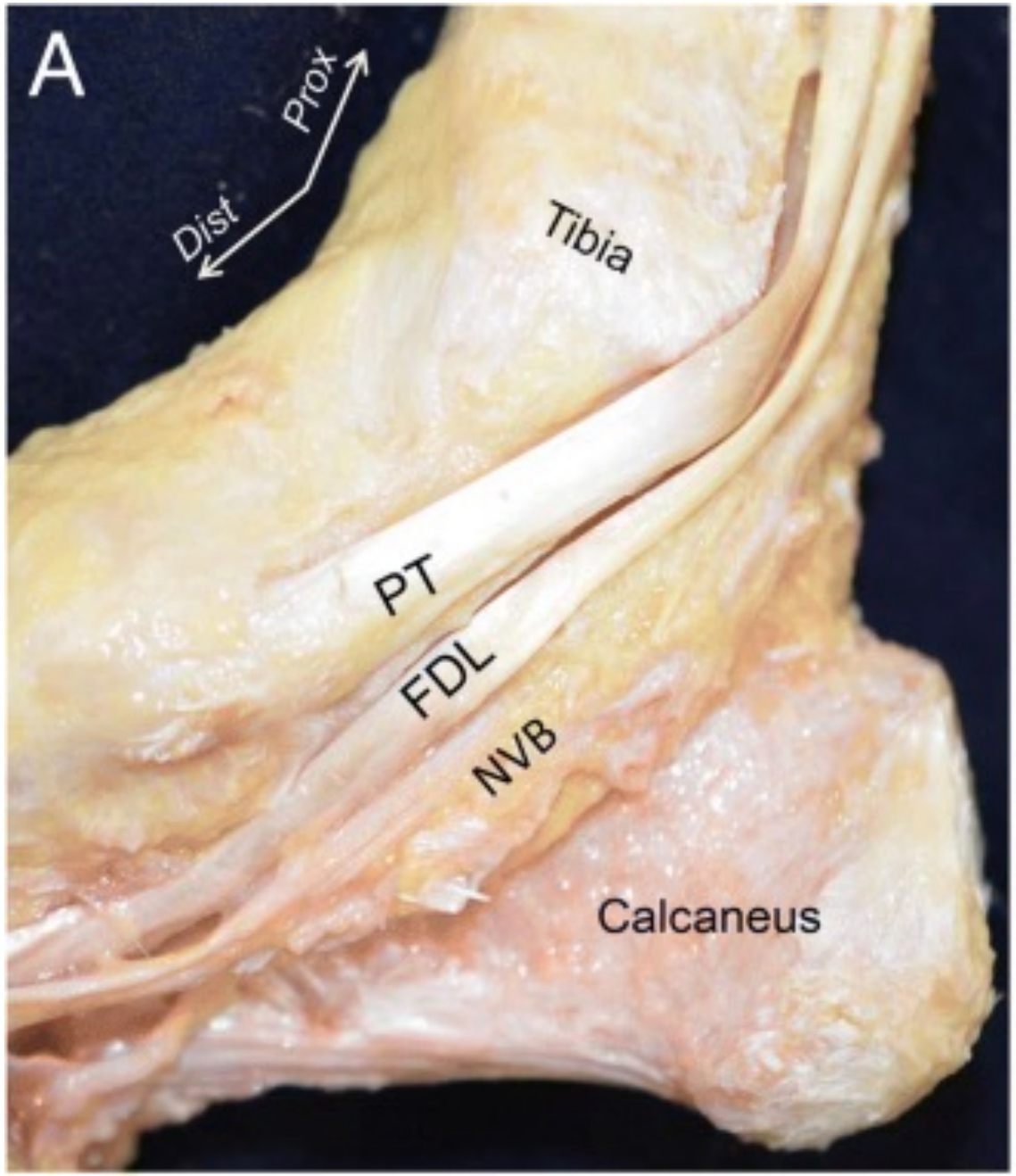

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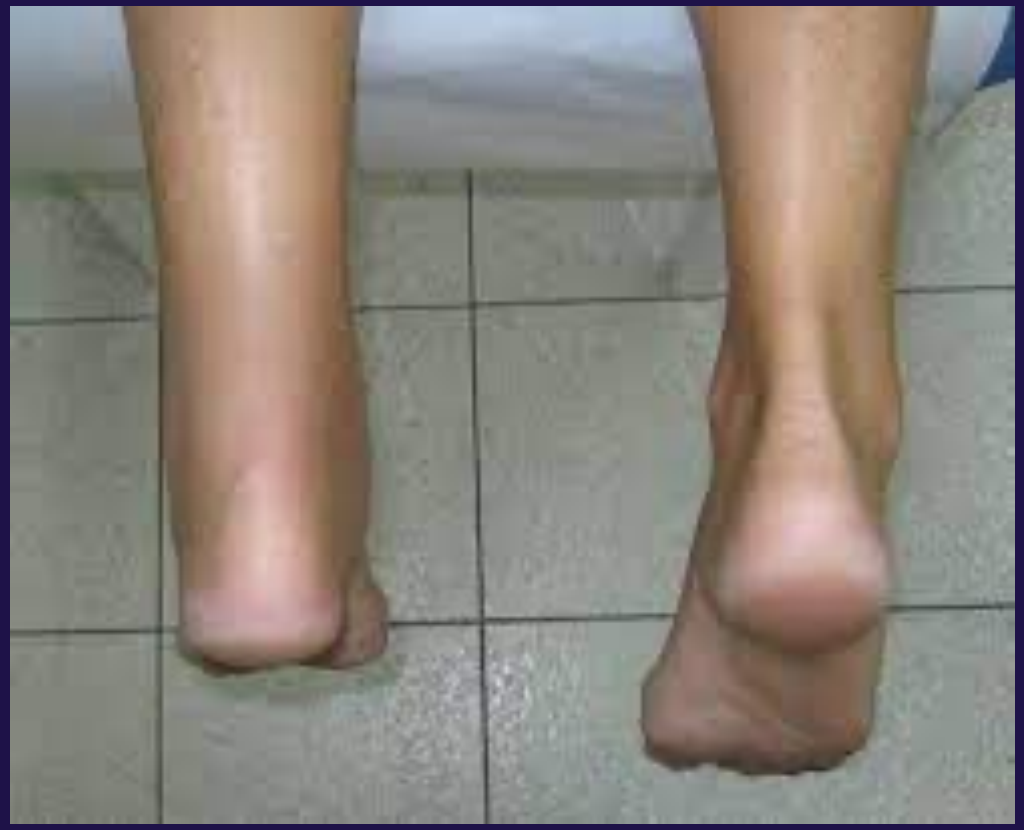

Sensitivity of tests for acute achilles tendon rupture

Gap	0.73
Ankle of declination	0.88
Calf squeeze	0.96

Simmonds' triad of tests 100% sensitive

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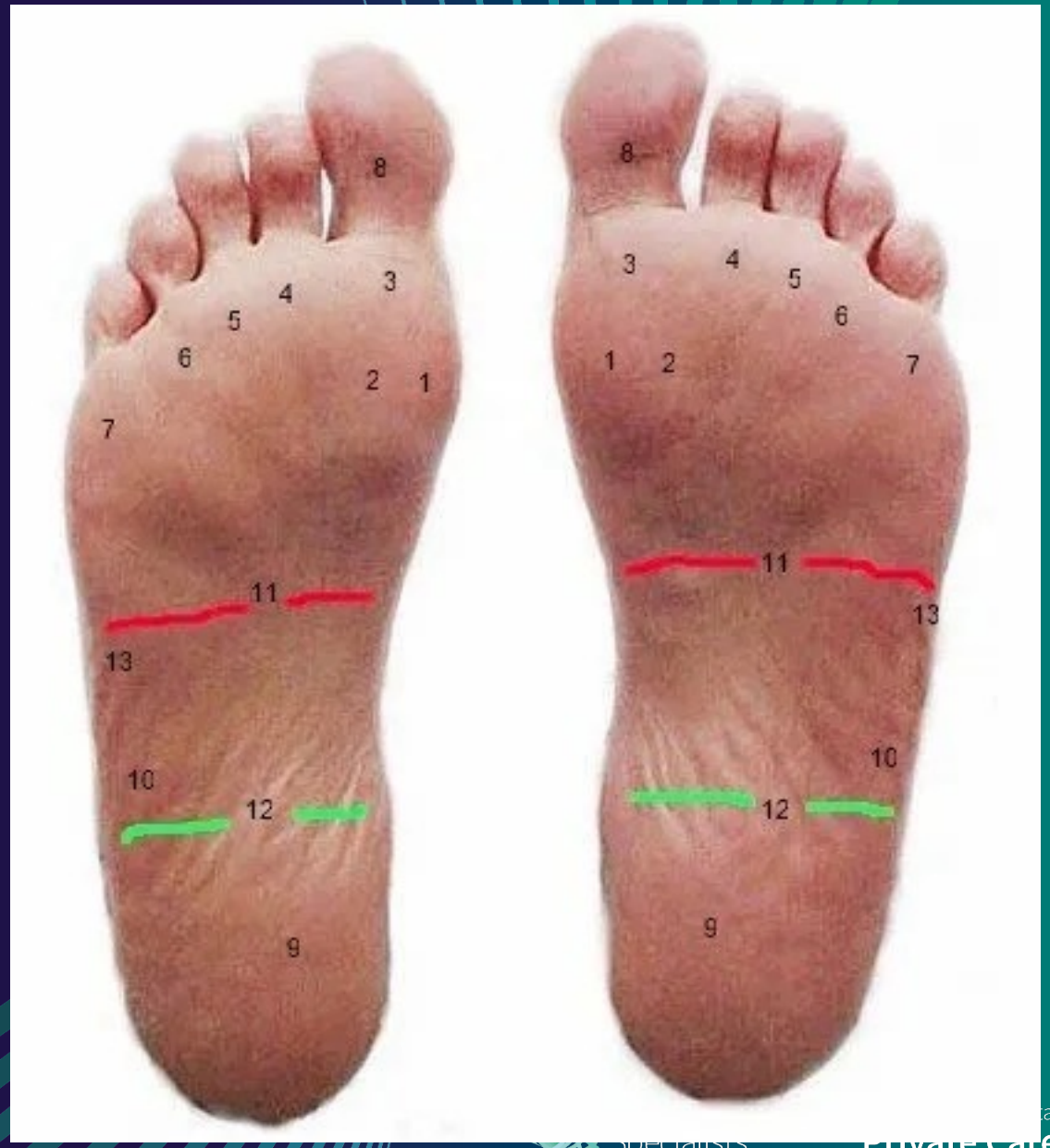

Specialists

Private Care

Rx PF

Rest (self limiting), cushioned shoes, avoid barefoot.

Analgesia & Ice

Self Physio (Achilles. And PF)

Insoles

Physio

Shockwave

Injection

Nightsplints

Gastrocnemius Release

Plantar Fascia Release

SURGICAL PROCEDURE	EPONYMOUS	ANATOMIC LEVEL
Proximal GT	Silfverskiöld	5
Deep GSR	Baumann	4
Distal GT	Strayer	3
Superficial GSR	Vulpius Baker	2
TAL	Hoke White Paley	1

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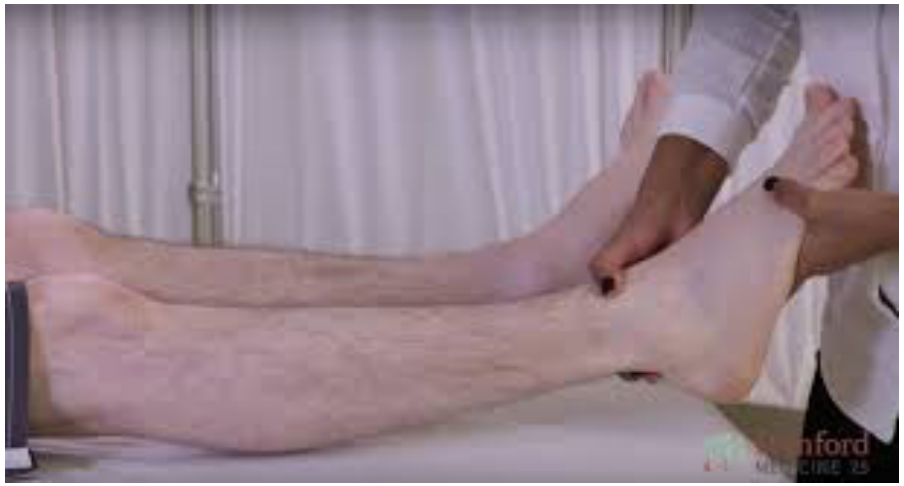
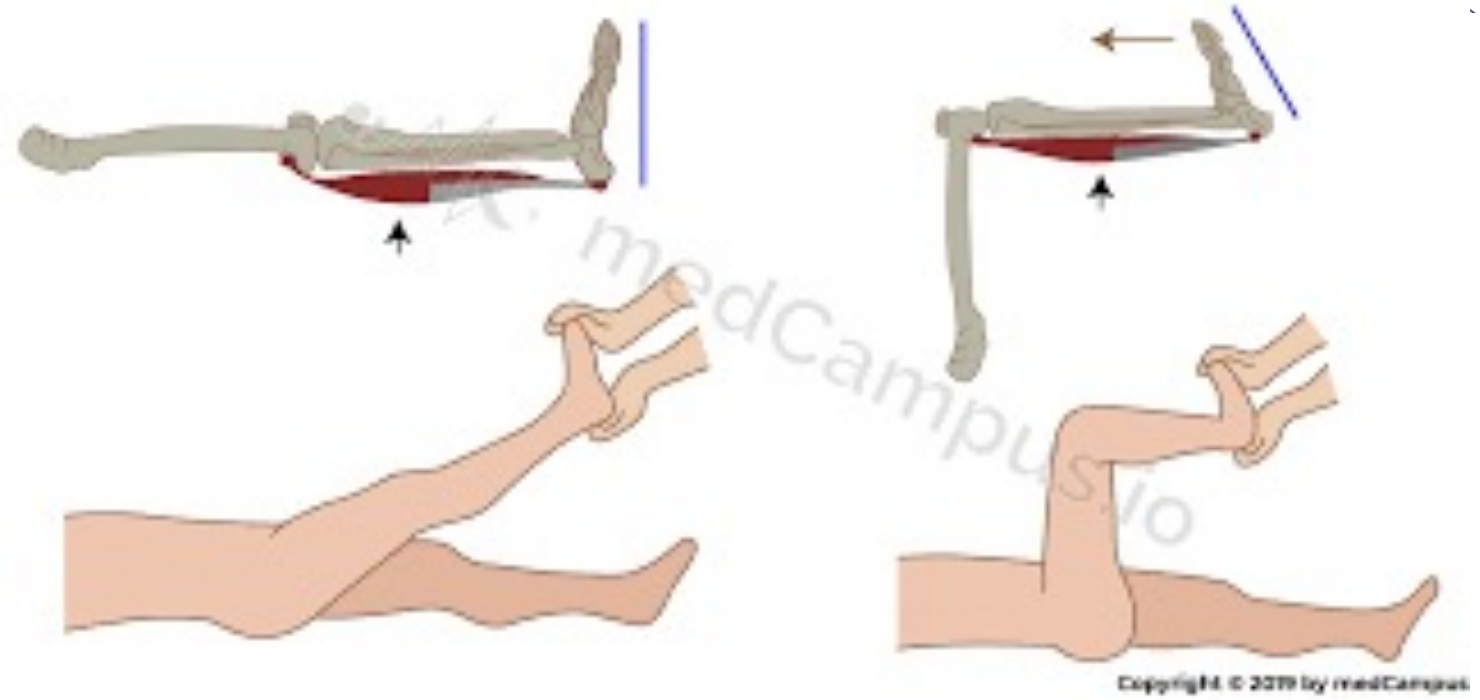
Move – Ankle, Hindfoot, Midfoot, Forefoot





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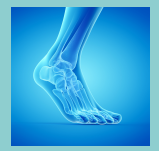
RX - OP



Indications: Refractory to Conservative.

Arthroscopy

Debridement,
Microfracture, Cheilectomy

Arthrodesis

Arthroscopic or Open

3:1 fusion to replacement

Arthroplasty

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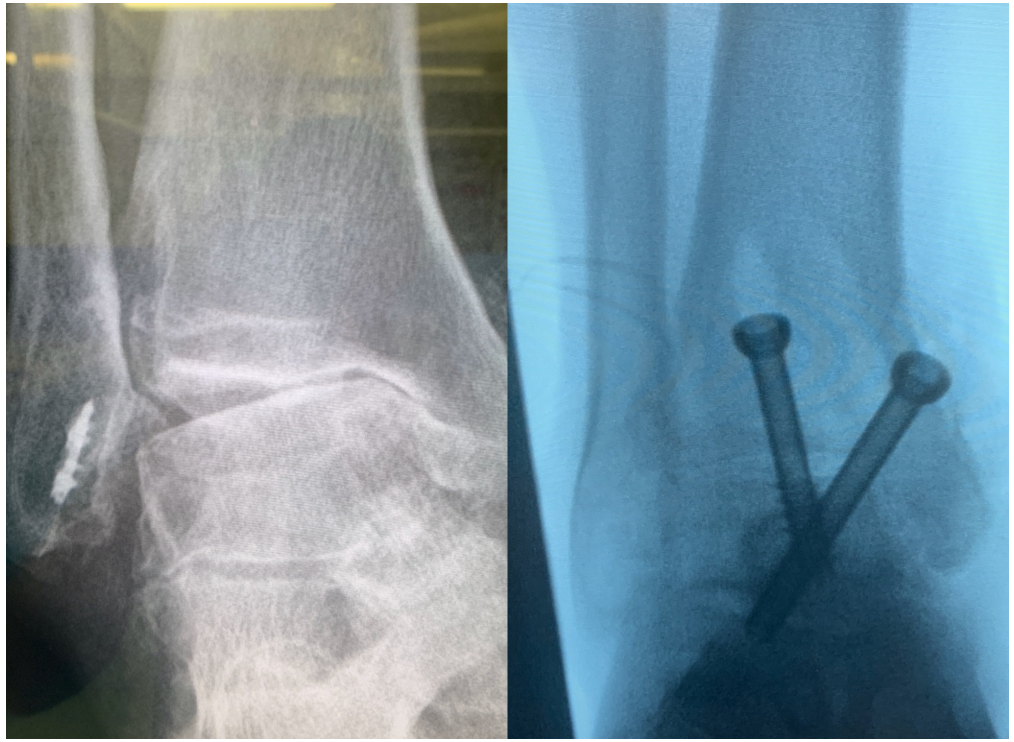
Arthrodesis – Arthroscopic or Open

- If Successful will stop ankle pain for long term
- If isolated can have near normal gait pattern (forum)

- BUT
- Puts pressure on adjacent joints that can wear out
  - STJ, TNJ, Knee, hip
  - When STJ,TNJ then altered gait
- Post op
  - 4/4/4



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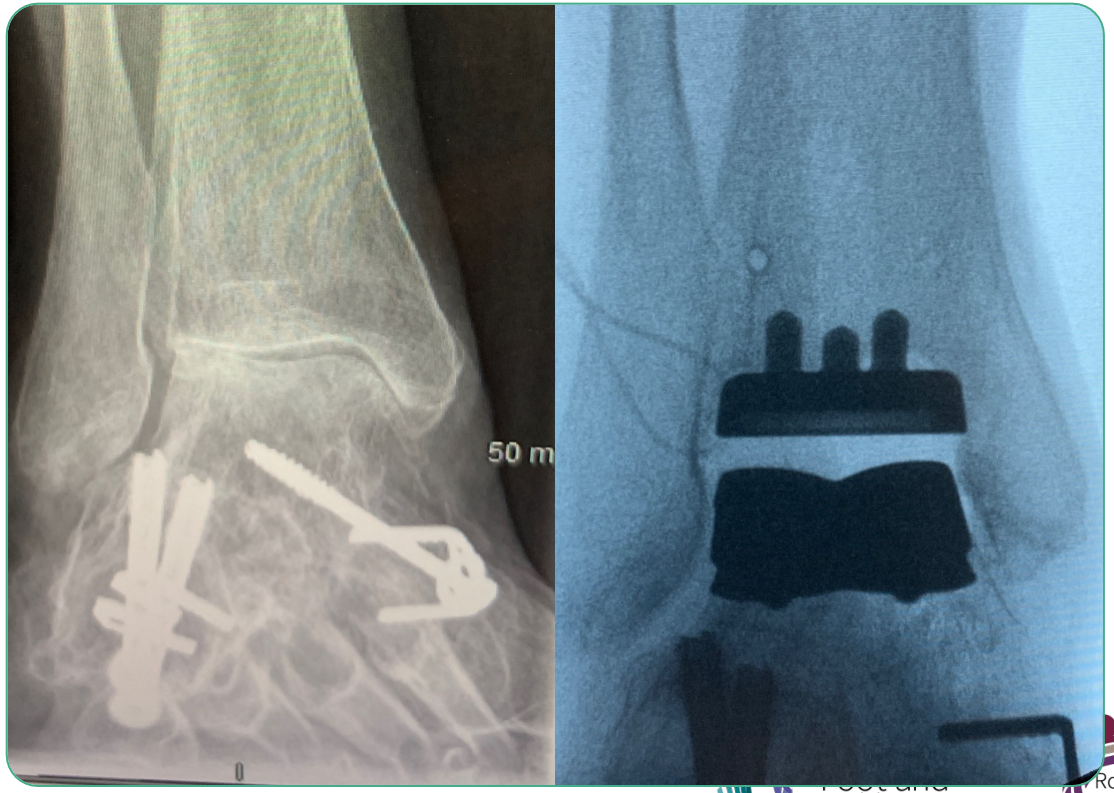
Arthroplasty

- Metal tibia, metal talus, Polyethylene insert
- Allows more physiological movement
- Theoretically protective to adjacent joints with more normal gait.
- Wear at approx. 1-2% per year.
  - 10 years 80—90%
- Post op
  - 6 weeks plaster
  - 2/52 then 4/52.



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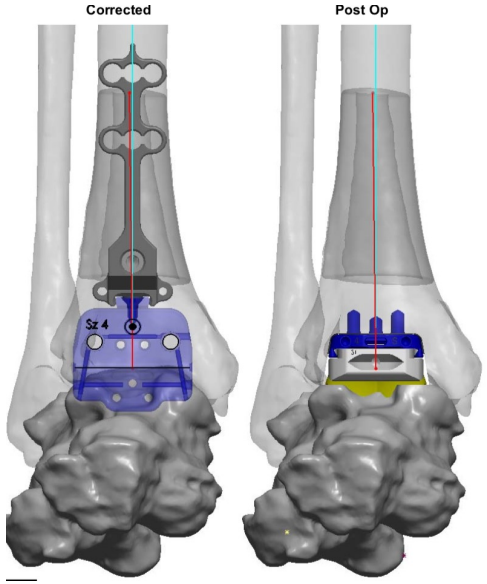

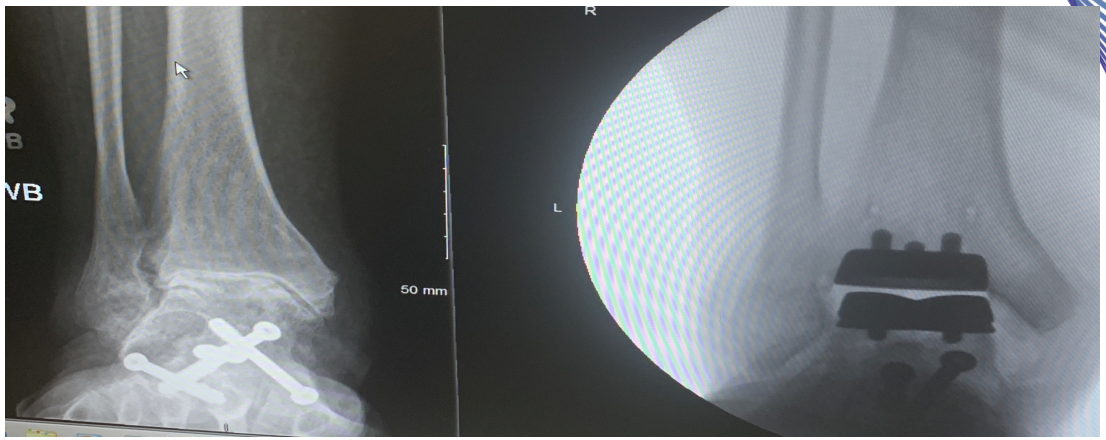

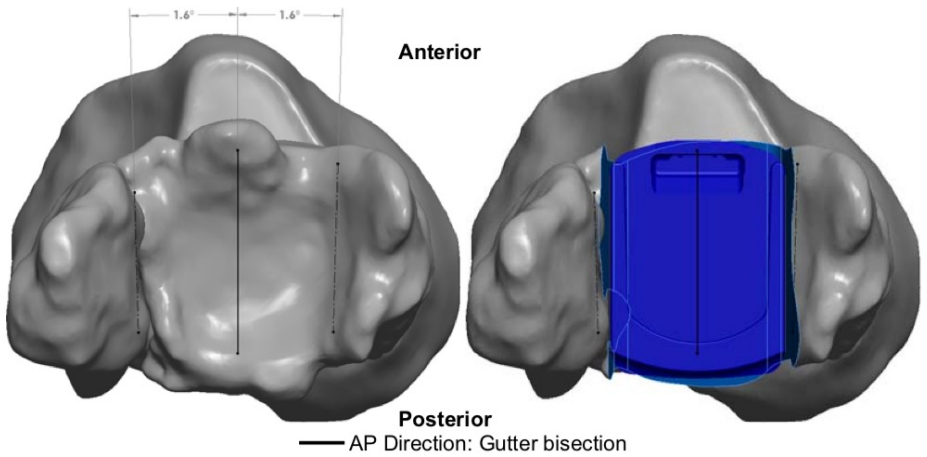

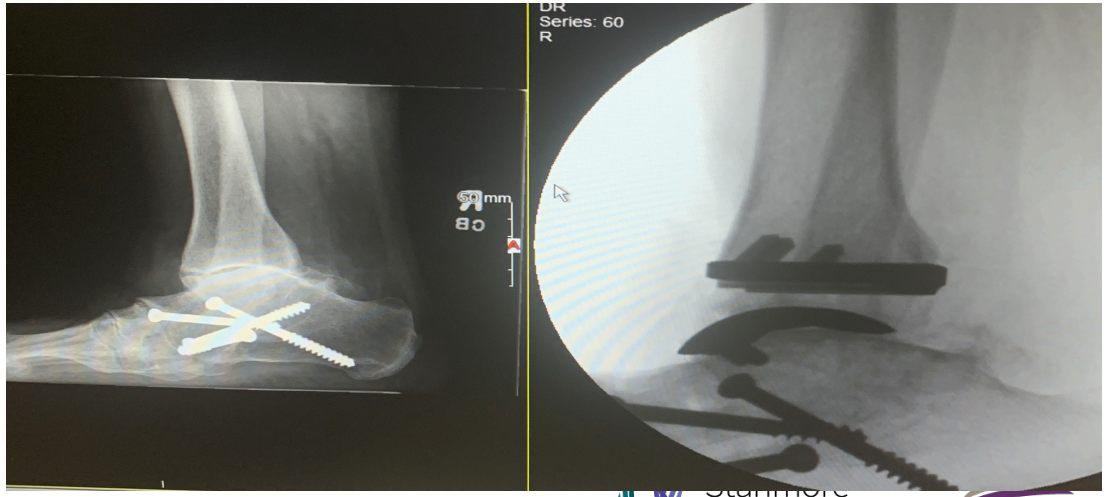

Foot and Ankle Specialists

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Contraindications

Active Infection	AVN/Marked Osteoporosis	Severe deformity
Neurological dysfuction.	Obesity.	Age

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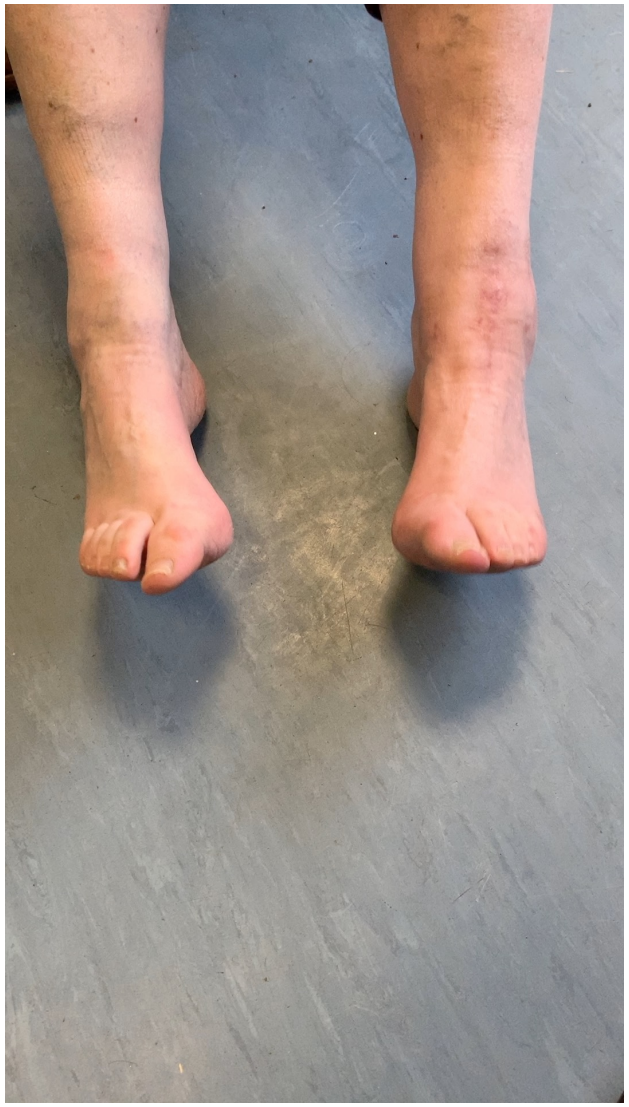

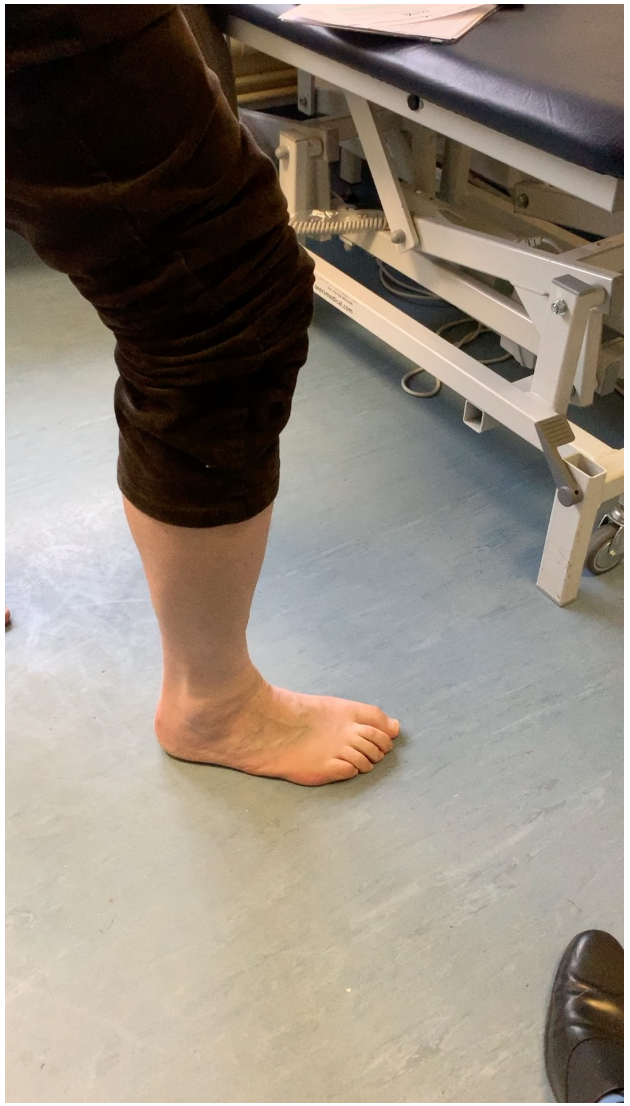

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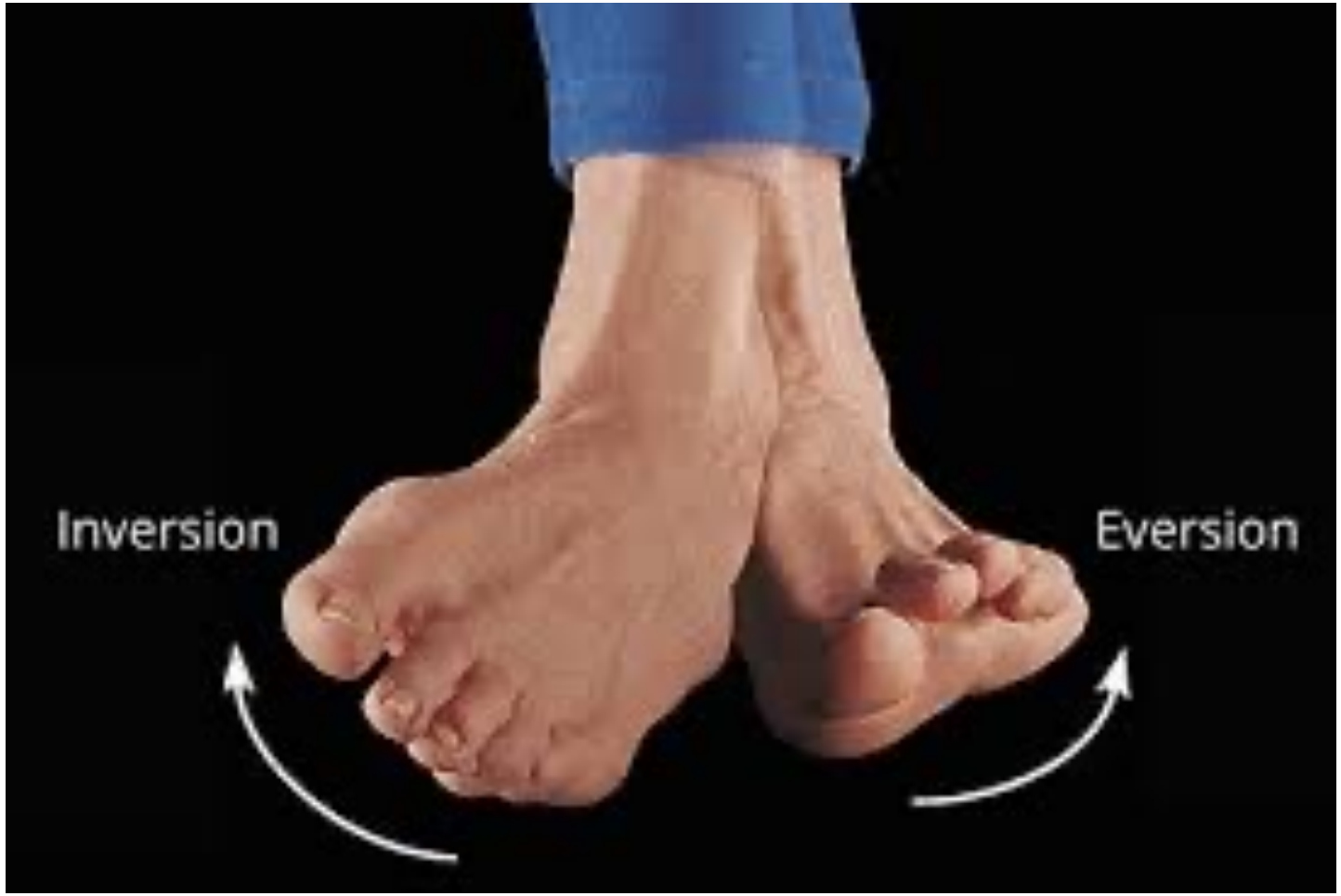
	Primary procedures	
	No.	%
Total ankle primaries	890	
Patient physical status		
P1 - Fit and healthy	103	12%
P2 - Mild disease not incapacitating	622	70%
P3 - Incapacitating systemic disease	165	19%
P4 and P5	0	0%
Indication for surgery		
Osteoarthritis	811	91%
Rheumatoid arthritis	50	6%
Other inflammatory arthropathy	21	2%
Other	15	2%
Tibia-hindfoot alignment		
Physiological neutral	370	42%
5-15° Varus	229	26%
16 - 30° Varus	65	7%
>30° Varus	7	1%
5-15° Valgus	139	16%
16-30° Valgus	39	4%
>30° Valgus	1	<1%
Not available	40	4%
Pre-operative range of movement ankle dorsiflexion		
5-20°	355	40%
Neutral	411	46%
Fixed equinus	95	11%
Not available	29	3%
Pre-operative range of movement ankle plantarflexion		
5-15°	480	54%
16-45°	353	40%
Not available	57	6%

	Primary procedures	
	No.	%
Total ankle primaries	890	
Total ankle primaries with patient data	859	97%
Female age	328	38%
Average	66.94	
SD	11.56	
Interquartile range	60.86-74.33	
Male age	531	62%
Average	69.44	
SD	9.08	
Interquartile range	63.52-75.89	
Female age groups		
<45 years	14	4%
45-54 years	34	10%
55-64 years	71	22%
65-74 years	135	41%
75-84 years	63	19%
>85 years	11	3%
Male age groups		
45-54 years	37	7%
55-64 years	124	23%
65-74 years	210	40%
75-84 years	145	27%
>85 years	15	3%



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Special Tests

- Mulders Click

- Mortons Neuroma
  - Often secondary
  - Injections
  - Excision

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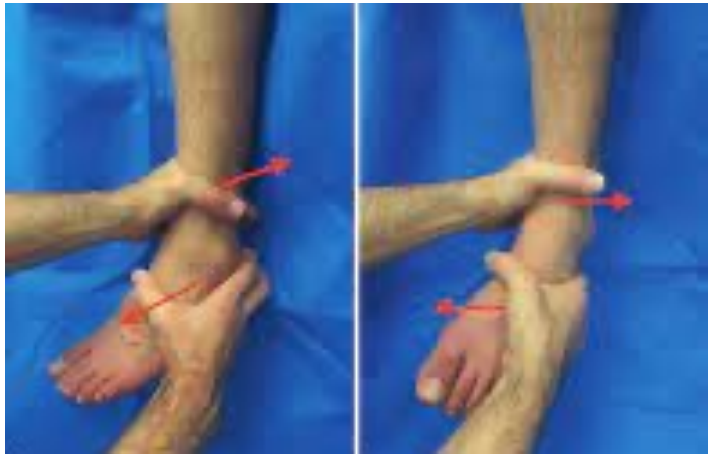
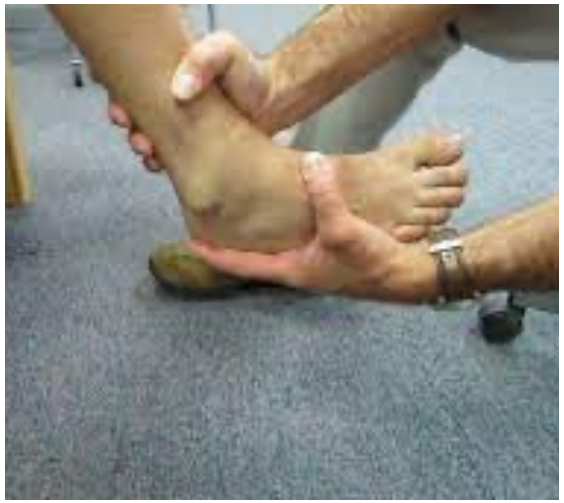
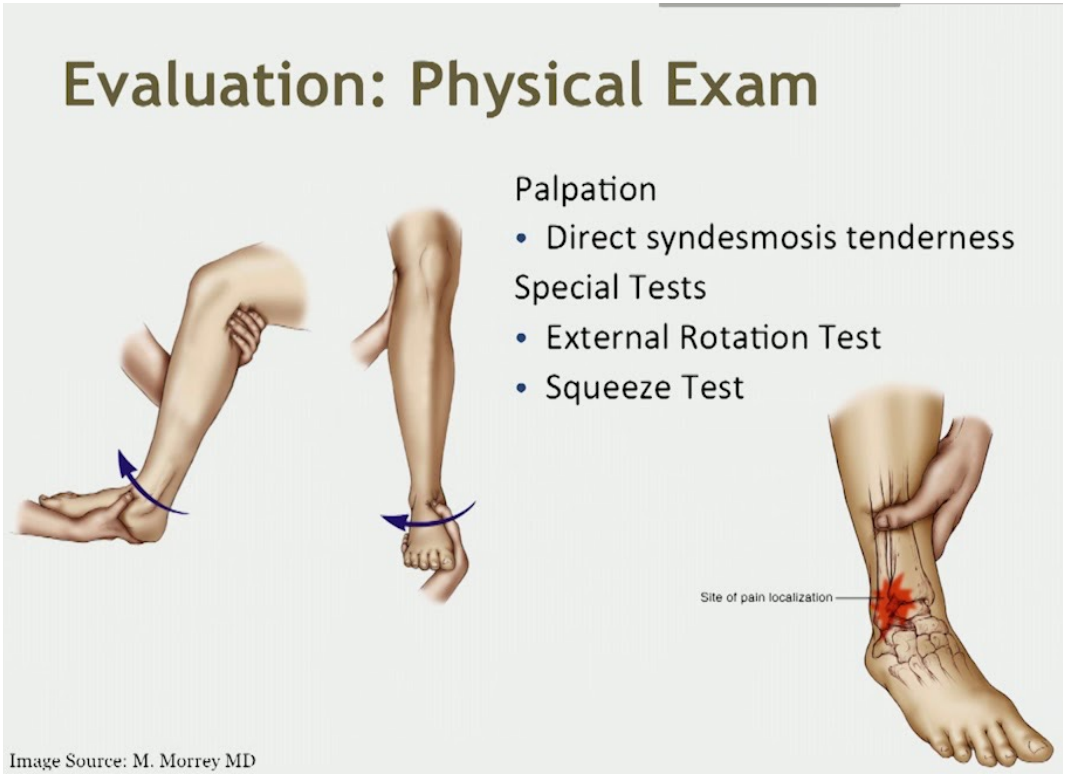
Ligaments

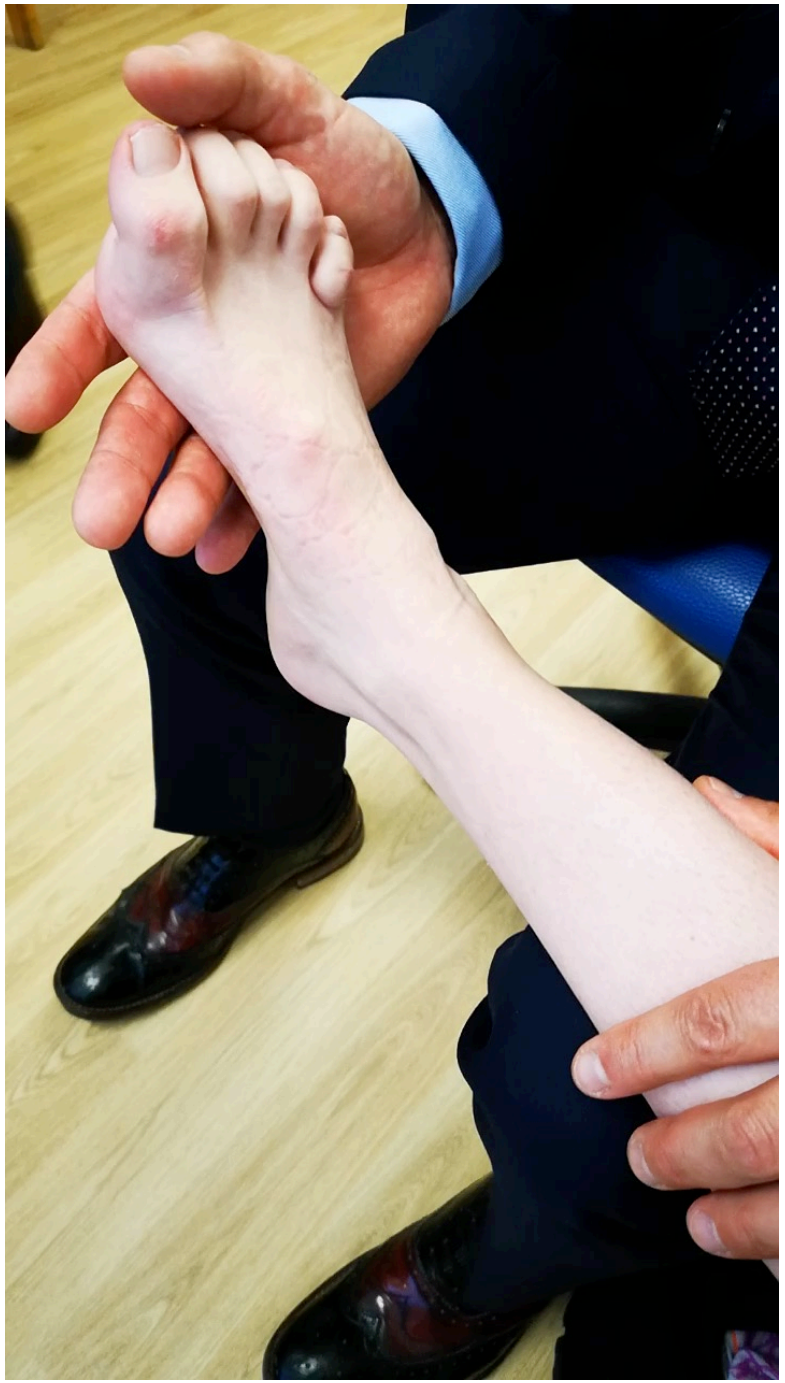
- ATFL
- CFL
- SYNDESMOSIS







Tendons



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THANK YOU
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Delivering excellence in
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