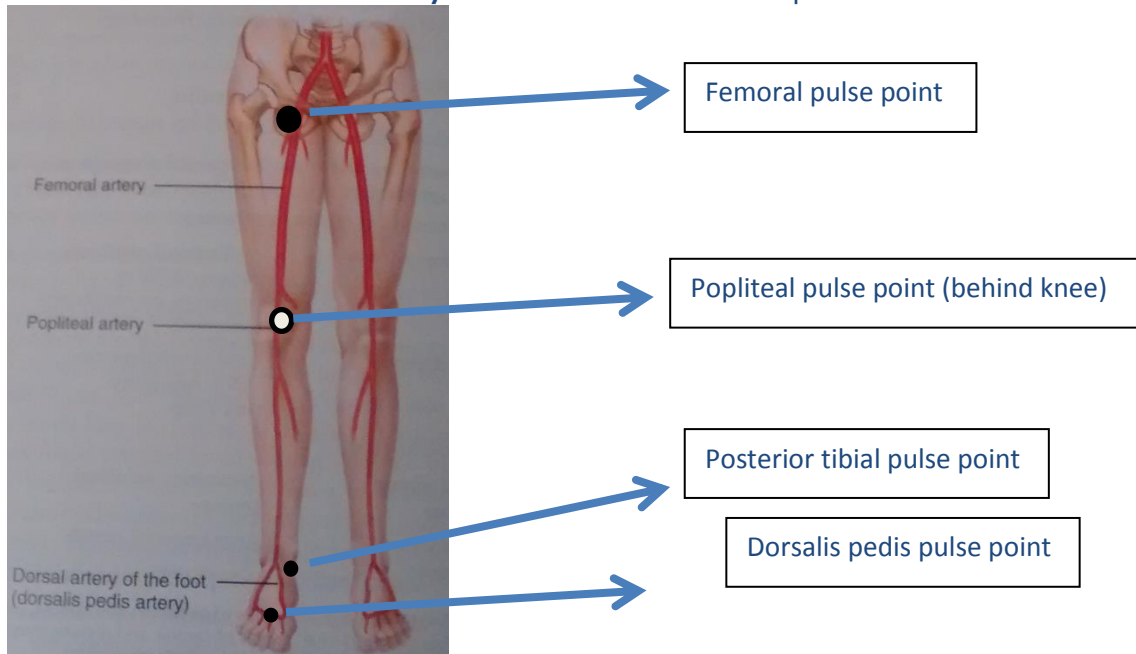


#JOURNALTUESDAY - by Abi Peck

The pathophysiology of patellofemoral pain – Scott Dye (2006; Clinical Orthopaedics and Related Research). Download [here](#).

- 1) What level of evidence does this paper provide and why?
- 2) What is homeostasis?
- 3) Explain what is meant by the envelope of function?
- 4) How can we change the envelope of function?
- 5) How would you apply this theory in clinical practice?
- 6) In practice, how would you achieve the zone of supraphysiological overload when treating a patient?

#CLINICALSKILLSFRIDAY by Jess Miller- Lower limb pulses



(Picture from Tortora and Derrickson- Anatomy and Physiology 13th Edition)

Femoral pulse

The external iliac artery becomes the femoral artery as it passes below the inguinal ligament.
To palpate: In supine, palpate halfway between pubic symphysis and ASIS (mid inguinal point).

Popliteal pulse

The femoral artery enters the popliteal fossa through the adductor magnus muscle where it becomes the popliteal artery.
To palpate: Flex knee to 90 degrees. Clasp sides of the knee gently and press tips of fingers into the popliteal fossa

Dorsalis pedis

The dorsalis pedis artery is derived from the anterior tibial artery which runs across the dorsum of the foot.

To palpate: Place fingers halfway down dorsum of the foot in line with the space between the first and second toes.

Posterior tibial

The posterior tibial artery passes through the lateral compartment of the leg then enters the sole of the foot by passing behind the medial malleolus.

To palpate: Palpate 2-3cm behind and below medial malleolus.

For the next **#CLINICALSKILLSFRIDAY**- Froment's Sign

Any pictures, suggestions or comments to Jessica.z.miller@ahpsuffolk-cic.nhs.uk

#NEWSOFTHEWEEK by Liz Wright

1. '10 myths about back pain and how to cope when it strikes': If you haven't already read this article – please do! *Providing the content are Dr Mary O'Keeffe, Dr Derek Griffin, Dr Kieran O'Sullivan, Professor Peter O'Sullivan and Professor Chris Maher. Say no more.* It provides the key evidence base behind disputing those myths that patients have, reassuring patients to help set the foundation of effective physiotherapy for the management of low back pain. Patient friendly – a great resource to share. <http://www.independent.ie/life/health-wellbeing/health-features/10-myths-about-back-pain-and-how-to-cope-when-it-strikes-35330563.html>



2. No evidence of difference in effectiveness between open and arthroscopic repair of rotator cuff tears: RCT – sample form 19 teaching general hospitals within the UK. The surgeons used their preferred method of repair. The Oxford Shoulder Score (OSS) was the primary outcome measure at 2 years. Imaging was performed at 1 year. Intention-to-treat analysis showed no statistical difference between the groups at two years. Interestingly, the re-tear rate = 46.4% for arthroscopic and 38.6% for open surgery. Poses the question – wrong type of repair, ineffective physiotherapy pre/post op and/or unsuitable patient selection to invasive? <http://www.bjj.boneandjoint.org.uk/content/99-B/1/107>

3. Motivated reason – further evidence to support: Motivated reasoning is confirmation bias taken to the next level. Leading people to confirm what they already believe, while ignoring conflicting data. It also drives people to develop elaborate explanations to justify holding beliefs that evidence have shown to be incorrect. It is very much emotion driven. Recently, a neuroscientific study looked at what happens in the brains of subjects whose beliefs were challenged. The data supports the role of emotion in belief persistence. Individual differences in persuasion were related to differences in activity within the insular cortex and the amygdala (structures crucial to emotion and feeling). The brain's systems for emotion, which maintain homeostatic integrity of the organism, appear to be engaged when protecting the aspects of our mental lives with which we strongly identify, including our closely held beliefs. <http://theness.com/neurologicablog/index.php/more-evidence-for-motivated-reasoning/>

4. Further evidence for rotator cuff stabiliser roles: The effect of rotator cuff muscle contraction on glenohumeral joint translation was assessed using **real time** ultrasound and electromyography. 20 asymptomatic adults were recruited. Intramuscular electrodes were inserted in supraspinatus, upper and lower infraspinatus, teres minor, upper and lower subscapularis. Anterior and posterior

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glenohumeral translations were measured (+/- translation force, +/- isometric internal and external rotation), in two positions (shoulder neutral, abduction) and views (anterior, posterior). 2 findings: Reduced glenohumeral translation with cuff muscle contraction in the neutral anterior, neutral posterior and abducted posterior positions; there are differences between the amount of translation limited by anterior and posterior cuff muscles in response to anterior and posterior translation forces = direction specific manner. [http://www.jbiomech.com/article/S0021-9290\(16\)31101-0/fulltext?elsca1=etoc&elsca2=email&elsca3=0021-9290_20161208_49_16_&elsca4=Biomechanics](http://www.jbiomech.com/article/S0021-9290(16)31101-0/fulltext?elsca1=etoc&elsca2=email&elsca3=0021-9290_20161208_49_16_&elsca4=Biomechanics)

#MEDOFTHEWEEK – by Alex Courtney-Hatcher

ALLOPURINOL

- Action –
 - Forms metabolite oxipurinol
 - Both allopurinol and oxipurinol inhibit the enzyme xanthine oxidase, which catalyses the end stage of the metabolism of purines to uric acid
 - Allopurinol half-life =1 hour
 - Oxipurinol half-life = 18 hours. Therefore therapeutic effect may be achieved by once-a-day dosage
 - Dose – 100-300mg daily

- Indications –
 - Conditions of excess body urate – gout (prophylaxis), neoplastic disease, renal failure, renal stones, psoriasis
 - Treatment should not be started until acute attack of gout has resolved, as further attacks may be initiated
 - **Initial treatment should be in conjunction with NSAIDs for 1/12 as prophylaxis against acute gout attack**
 - In conjunction with diuretic therapy

- Cautions –
 - Immediate withdrawal when rash occurs as serious hypersensitivity reactions such as Stevens-Johnson syndrome (SJS) or toxic epidermal necrolysis (TEN) may occur
 - Increased frequency of rash reported in patients taking amoxicillin
 - If taken in conjunction with diuretics or ACE inhibitors as renal function may be affected
 - Allopurinol tablets contain lactose so should be avoided in patients with lactose intolerance

- Side-effects –
 - Rare and usually minor in nature

<https://www.evidence.nhs.uk/formulary/bnf/current/10-musculoskeletal-and-joint-diseases/101-drugs-used-in-rheumatic-diseases-and-gout/1014-gout-and-cytotoxic-induced-hyperuricaemia/long-term-control-of-gout/allopurinol>

Disclaimer: This edit is for information/education use only and does not entitle people to advise patients on medication.