



# Clinical Weekly - 159<sup>th</sup> Edition

#JOURNALTUESDAY - by Abi Peck

Atrophy of the quadriceps is not isolated to the vastus medialis oblique in individuals with patellofemoral pain [Download here](#)

**1. Did the trial address a clearly focussed issue?**

Yes – does VMO have an effect on PFP

- Studies used patients with unilateral and bilateral PFP
- Ultrasound images (%muscle bulk in the quadriceps)
- Control: similar participants to symptomatic group

**2. Was the assignment of patients to treatments randomised?**

No treatment was given. Group allocation could not be randomised.

**3. Were all of the patients who entered the trial properly accounted for at its conclusion?**

Yes – 70 people entered the study. 35 control group and 35 with PFP.

**4. Were patients, health workers and study personnel 'blind' to treatment?**

Blinding was not possible from the researcher who captured the images but the images were stored in a de-identified format to blind the researcher to group allocation.

**5. Were the groups similar at the start of the trial?**

Yes – control vs PFP group were matched by age and sex.

**6. Aside from the experimental intervention, were the groups treated equally?**

Yes – ultrasound equipment, procedure and researcher were all the same.

**7. How large was the treatment effect?**

No significant difference in size of VMO in patients with PFP to those without. There was a reduction in quadriceps size in patients with unilateral PFP compared to the other leg.

**8. How precise was the estimate of the treatment effect?**

Unilateral PFP = p value below 0.05 + between groups p value below 0.038.

**9. Can the results be applied in your context?**

Yes

- VMO should not to targeted for rehab for PFP
- Overall quadriceps strength may have an impact on PFP – concentrate on strengthening

**10. Were all the clinically important outcomes considered?**

No

- Just looked at ultrasound imaging
- Could have looked at pain, muscle strength/endurance, functional outcomes

**11. Are the benefits worth the harms and costs?**

Yes

- No harms, relatively cheap to do (cost – ultrasound equipment)
- Shows VMO doesn't play a huge role in PFP





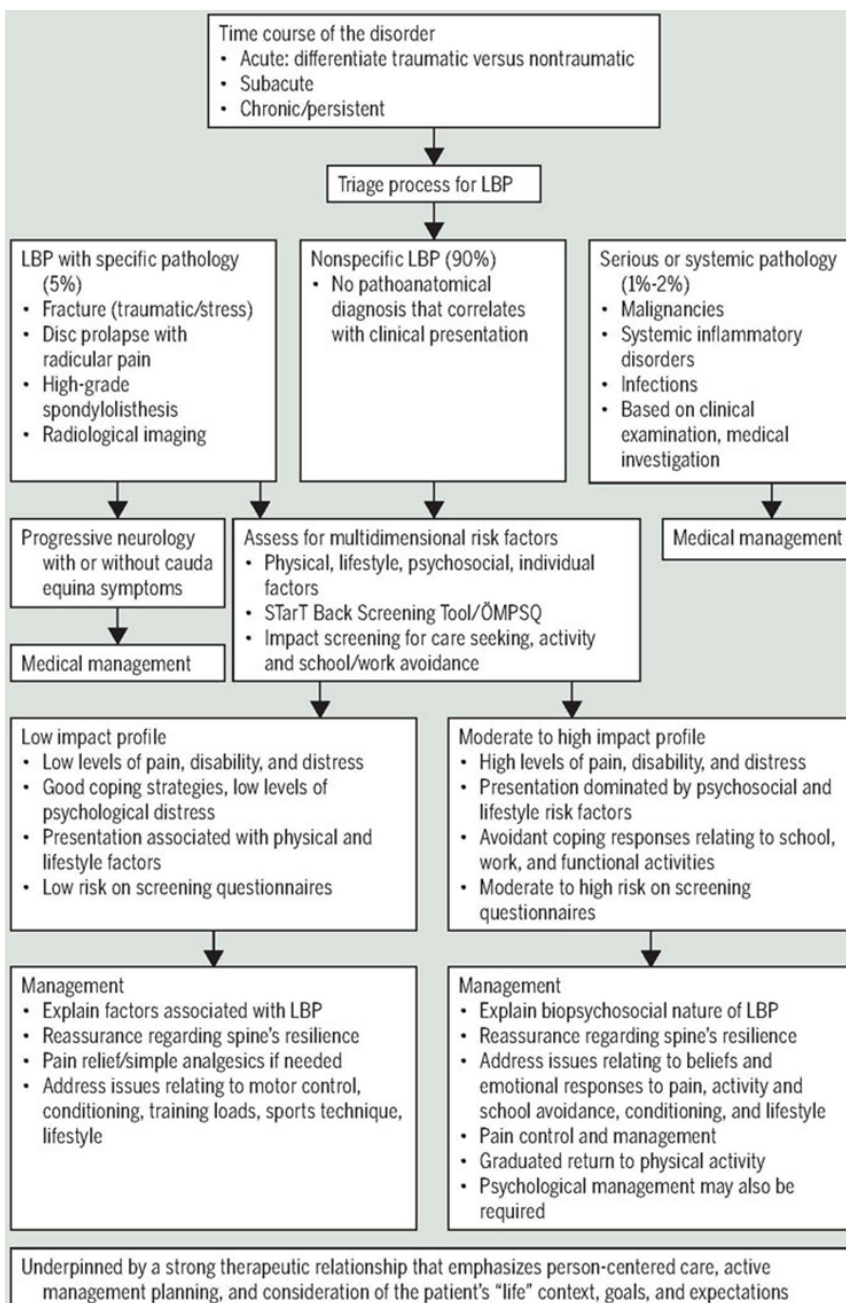
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## #NEWSOFTHEWEEK - by Liz Wright

### 1. Video on the management of back pain: ideal for waiting rooms!

The Heart of England NHS Media Hub created this simple video to explain simple tips on the management of low back pain, briefly explaining red flag features also. The video is just over 2 and a half minutes and helps to empower patients to manage their back symptoms.

<https://vimeo.com/210768020>



### 2. Understanding Adolescent Low Back Pain From a Multidimensional Perspective: Implications for Management

Low back pain is a growing health disorder in adolescence which for many sets a path into adulthood, often associated with health care seeking and disability. As health care providers we have an imperative responsibility not to reinforce unhelpful beliefs and behaviours associated with LBP. Interventions that reinforce positive back pain beliefs, functional restoration, and a healthy lifestyle hold the ability to reduce the disability burden of low back pain. Future research is required to identify interventions that target vulnerable adolescents, aiding the prevention of disability. See the flow chart for a clinical framework for the triage, profiling and management of LBP in adolescents.

<http://bit.ly/2hKZapY>





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## #NEWSOFTHEWEEK - by Liz Wright

### 3. High rates of OA develop after ACL Surgery: An Analysis of 4108 Patients

A meta-analysis was performed to determine the prevalence of OA after an ACL reconstruction, exploring the effects of length of time after surgery, preoperative time interval from injury to surgery, and patient age at the time of surgery. A meta-analysis of the prevalence of radiographic post traumatic OA after ACL reconstruction was performed of studies with a minimum of 5 years' follow-up, with a level of evidence of 1-3. The presence of OA was defined according to knee radiographs. Results found the prevalence of OA after an ACL reconstruction significantly increased with time. Longer chronicity of ACL tear and older age at the time of surgery were significantly positively correlated with the development of OA. A timely referral and treatment of symptomatic patients are vital to diminish the occurrence of post traumatic OA.

<http://bit.ly/2zu3PEE>

## #FRACTUREFRIDAY BY JOE RUSSELL

### Carpal bone Fracture - Metacarpal Fractures

#### **Anatomy**

The metacarpals form the intermediate part between the carpals and phalanges of the hand. The body is prismoid in form, and curved, so as to be convex in the longitudinal direction behind, concave in front.

#### **Epidemiology**

Metacarpal fractures are common, they represent 10% of all fractures and 40% of hand fractures.

There are specific fractures of the 1st and 5th metacarpals, which will be covered in subsequent editions of the clinical weekly.

Metacarpal shaft and neck fractures are usually a result of axial loading or direct trauma (clenched fist and solid surface); torsional force may also result in this type of injury.

Metacarpal head injury: these are intra-articular fractures that result from axial loading or direct trauma; collateral ligament avulsion fractures are caused by forced deviation of the flexed metacarpophalangeal joint (MCPJ).



Metacarpophalangeal joint dislocations are the most frequent and a result of forced hyperextension of the digit.

#### **Management**

Normally conservative management is sufficient but displaced fractures are often managed with ORIF, K-wire or closed reduction percutaneous pinning.

#### **Resources**

<http://bit.ly/zzmUjll>  
<http://bit.ly/2x9mzsl>

