



Clinical Weekly - 136th Edition

#JOURNALTUESDAY - by Abi Peck

Iliocapsularis: Technical application of fine-wire electromyography, and direction specific action during maximum voluntary isometric contractions [Download here](#)

1. Where is the origin and insertion site of the iliocapsularis?
2. What is the role of EMG and its value?
3. What movement and position was measured highest and lowest with the EMG?
4. What is the proposed role of iliocapsularis?
5. How could this study change practice?

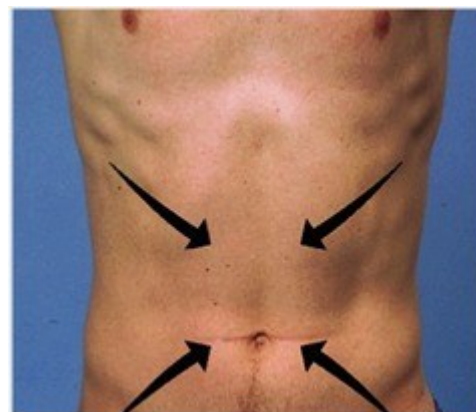
#CLINICALSKILLSFRIDAY - by Jess Miller

Abdominal Reflex

The Abdominal Reflex is innervated by T7-12 nerve roots.

The patient lies in supine with abdominal muscles relaxed. The clinician uses a blunt object to gently stroke the skin from lateral to medial sides in each of the four quadrants.

A positive response is characterised by contraction of the abdominal muscles and deviation of the umbilicus towards the stimulated area.



Picture from <https://tinyurl.com/m8jnyz4>

For the next **#CLINICALSKILLSFRIDAY**-Josh Featherstone will be taking over. He will be starting with a series on cranial nerve testing. Next time we will look at testing for Cranial Nerve I. Any pictures, suggestions or comments to Jessica.z.miller@ahpsuffolk-cic.nhs.uk





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#NEWSOFTHEWEEK - by Liz Wright

1. Monitoring athlete training loads

This consensus statement brings together key findings and recommendations from a previous conference in February 2016 'Monitoring athlete training loads', in which worldwide experts were brought together to share research and contemporary practice in this field. It provides a shared, conceptual framework for health professionals. Topics discussed include; what athlete load monitoring is and how it is applied in research and practice, the importance of load-monitoring, goals of monitoring and future areas in which this field is directed towards.

<http://journals.humankinetics.com/doi/pdf/10.1123/IJSP.2017-0208>

2. Weight loss and its influence on OA

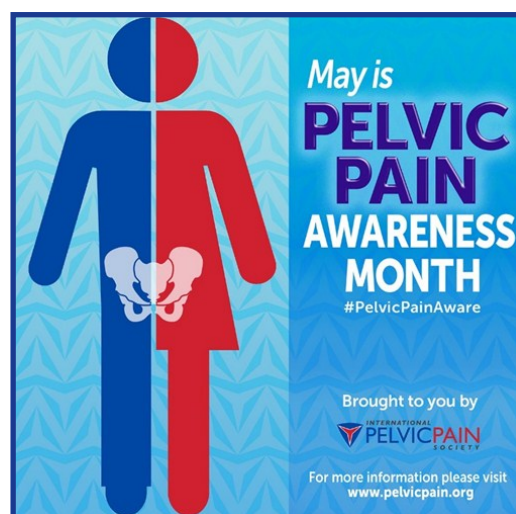
The association of weight loss with progression of cartilage changes on MRI over 48 months in overweight and obese participants compared with participants of stable weight was investigated. Participants who lost weight over a 48 month period showed significantly less cartilage degeneration. Moreover rates of progression were lower with increased rate of weight loss.

<http://pubs.rsna.org/doi/pdf/10.1148/radiol.2017161005>

3. Management of chronic pelvic pain

Improve your management of chronic pelvic pain with these helpful resources by the International Pelvic Pain Society. Additionally you can sign up for their free newsletter. Follow the 'patient' link to access free handouts such as a lecture 'resilience in the face of chronic pain'; a software app called 'Symple' which patients can use to put in the symptoms that they want to track, factors influencing their symptoms and pain levels. Also there is an 8 minute presentation by Dr. Elliot Krane about the 'Mystery of Chronic pain'.

<http://pelvicpain.org/home.aspx>



4. Utility of clinical tests to diagnose MRI-confirmed gluteal tendinopathy in patients presenting with lateral hip pain

Gluteal tendinopathy (GT) is a source of lateral hip pain, yet common clinical diagnostic tests have limited validity. Misdiagnosis and inappropriate management are common. This study determined the diagnostic utility of clinical tests for GT, using MRI as the reference standard.

Palpation of the greater trochanter and several clinical pain provocation tests applying compressive and tensile loads on the gluteal tendons were investigated.

Results indicate that a patient who reports lateral hip pain within 30 s of single-leg-standing is very likely to have GT. Patients with lateral hip pain who are not palpably tender over the greater trochanter are unlikely to have MRI-detected GT. <http://bjsm.bmj.com/content/51/6/519>





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#VITAMINOFTHEWEEK BY SAM ACKERLEY

VITAMIN D

Vitamin D is a fat soluble vitamin which usually refers either D₂ (ergocalciferol) or D₃ (cholecalciferol) both collectively known as calciferol.

Other forms include: D₁ - ergocalciferol + lumisterol (1:1), D₄ - 22-dihydroergocalciferol and D₅ - sitocalciferol

Vitamin D is available from the diet or dermal synthesis from sunlight both which are biologically inactive which require enzymatic in the liver and kidneys.



Function

Calcitriol (the biologically active form) circulates in the blood as a hormone, regulating the concentration of calcium (through the action of parathyroid hormones) and phosphate in the bloodstream and promoting the healthy growth and remodeling of bone.

Calcitriol can also synthesized by monocyte-macrophages in the immune system, which acts locally as a cytokine, defending the body against microbial invaders by stimulating the innate immune system.

Vitamin D increases intestinal absorption of calcium, iron, magnesium, phosphate, and zinc.

Top 10 sources (Per 100 grams) IU- international units. 1µg=40IU for Vitamin D

- Cod Liver Oil 10,000IU (1667%)
- Mushrooms (Portabello) 1136IU (189%)
- Oily Fish (Trout, cooked) 760IU (127%)
- Fish Roe (Eggs, Caviar) 484IU (81%)
- Fortified Cereals (Whole Grain Total) 332IU (56%)
- Tofu 154IU (26%)
- Dairy Products (Cheese) 108IU (18%)
- Pork (Extra Lean Ham) 92IU (15%)
- Eggs (Hard Boiled) 88IU (15%)
- Dairy Alternatives (Plain Soy Yogurt) 52IU (9%)



Deficiency

Deficiency results in impaired bone mineralization and bone damage which leads to bone-softening diseases:

Rickets is a childhood disease, is characterized by impeded growth and soft, weak, deformed long bones that bend and bow under their weight as children start to walk. This condition is characterized by bow legs and is largely found in low-income countries in Africa, Asia, or the Middle East

Osteomalacia is an adult disease characterised by bone softening, leading to bending of the spine, bowing of the legs, proximal muscle weakness, bone fragility, and increased risk for fractures.

Osteomalacia reduces calcium absorption and increases calcium loss from bone, which increases the risk for bone fractures.

Osteomalacia is thought to contribute to chronic musculoskeletal pain however there is no evidence to support that either supplementation alleviates chronic pain or the effected population have lower vitamin D levels.

Resources:

<https://www.healthaliciousness.com/articles/high-vitamin-D-foods.php>

https://en.wikipedia.org/wiki/Vitamin_D

<http://www.sciencephoto.com/image/262348/530wm/M2500038-Rickets-SPL.jpg>

<https://thedolcediet.com/wp-content/uploads/2017/01/d.png>

