



Clinical Weekly - 151st Edition

#JOURNALTUESDAY - by Abi Peck

Article: 'The foot core system: a new paradigm for understanding intrinsic foot muscle function'.

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1. What were the aims of this study?

To provide a new paradigm by which to view foot function, assessment and treatment.

2. What did the study suggest?

That more attention needs to be focussed on static and dynamic foot core function in rehabilitation programmes.

3. What are the four arches in the feet?

- Medial longitudinal arch
- Lateral longitudinal arch
- Anterior transverse arch
- Posterior transverse arch

4. How does this paper suggest you assess the intrinsic muscle function of the foot?

- Observe the neutral foot position in a single leg stance
- Assessing: navicular height and the over activity of the extrinsic muscles

5. What are the best exercises suggested for activating the plantar intrinsic muscles?

- Toe flexion exercises i.e. towel curls and marble pick ups
- 'Short foot exercises' – crunching up the foot in standing

6. Why do we do Achilles strengthening for plantar fasciitis?

Although the achilles doesn't directly attach into the plantar aponeurosis, it can put tension through this tissue by applying force to the calcaneus.





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#NEWSOFTHEWEEK - by Liz Wright

1. 1 hour of physical activity to eliminate effects of 8 hours sedentary

A systematic review examined the associations of sedentary behavior and physical activity with all-cause mortality. High levels of moderate intensity physical activity (about 60–75 min per day) seem to eliminate the increased risk of death associated with high sitting time. These results provide further evidence on the benefits of physical activity, particularly in societies where increasing numbers of people have to sit for long hours for work and may also inform future public health recommendations. <http://bit.ly/2aiTaCq>

2. Why is the problem of pain escalating?

Drugs remain the predominant approach for chronic pain which is one main reason why the problem of pain is worsening. Chronic pain can never truly be overcome by thinking that drugs are going to solve all. We have been brought up in a society in which medication is embedded in our thinking -we expect it, healthcare delivers it. Reality is very different, which is why the continued use of the biomedical model for chronic pain consistently lets people down. This is now an old fashioned approach that does not help. Read on for further guidance and advice on the management of chronic pain. <https://understandpain.com/2017/08/20/drugs-and-pain/amp/>

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3. The Effects of Resistance Exercise Training (RET) on Anxiety: A Meta-Analysis and Meta-Regression Analysis of Randomized Controlled Trials.

The valuable effects of RET are well known, including increased strength and function; however, less is known regarding the effects of RET on mental health outcomes. Aerobic exercise has well-documented positive effects on anxiety, but a quantitative synthesis of RET effects on anxiety is required. Findings showed RET significantly reduced anxiety symptoms. Larger effects were found among healthy participants compared to participants with a physical or mental illness.

Effect sizes did not significantly vary according to sex, control condition, program length, session duration, frequency, intensity or whether strength significantly improved. <http://bit.ly/2fYDA3U>

One Hour of Physical Activity Eliminates the Detrimental Effects of 8 Hours of Inactivity

Reference : by Ulf Ekelund et al. The Lancet 2016

Designed by @YLMsportScience

The conclusions of this meta-analysis were drawn from data collected on more than 1 million men and women



Sitting for more than 8 h/day and with no additional physical activity is similar to that of smoking and obesity in terms of mortality risk



If long periods of sitting time each day are unavoidable (eg, for work or transport), it is important also to be physically active

8 HOURS



1 HOUR

60–75 min of moderate intensity physical activity per day seem to eliminate the increased mortality risks associated with high total sitting time





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#FRACTUREFRIDAY BY SAM ACKERLEY

Carpal bone fractures

Scaphoid fractures - 70-80% of all carpal bone fractures.

Mayo classification of scaphoid fractures divides them into three types according to anatomic location of the fracture line:

- Middle (70%)
- Distal (20%)
- Proximal (10%)

Articulations

Proximal surface: radius

Distal surface: laterally with the trapezoid and trapezium; medially with the capitate

Ulnar surface: lunate

Blood supply

Approximately 75% of the arterial supply is from branches of the radial artery.

Clinical tests

Classically there can be pain in anatomical snuffbox which is thought to have a sensitivity of ~90% and a specificity ~40%.

Rehab

Management options can broadly be divided into:

- Immobilisation with cast application
- Internal fixation for displaced fragments, usually with a headless self-compressing screw
- Non-union can be managed with internal fixation and bone grafting.

A number of other specific complications are encountered from time to time:

-*Avascular necrosis* in ~30%.

-*SNAC wrist*: scaphoid non-union advanced collapse

The proximal scaphoid fragment usually remains attached to the lunate -which rotate together during extension. The distal scaphoid fragment rotates into flexion. This results in abnormal contact in the radioscaphoid compartment, characterised by early styloid osteoarthritis between the distal scaphoid fragment and the radial styloid process.

-*SLAC wrist*: scapholunate advanced collapse

Injury of the scaphoid or its supportive ligaments can cause radial-sided collapse with flexion of the scaphoid, thus resulting in incongruence of the radioscaphoid joint.

Both cause significant OA and limit function over time. Four-corner fusion is a partial fusion technique used in some patients with advanced degenerative change in the wrist. Partial fusion reduces pain from the joint while still preserving some motion as opposed to a total wrist fusion.

Resources

<http://bit.ly/2vMl7sl>

<http://bit.ly/2wL3JKi>

<http://bit.ly/2x9s1fx>

<http://bit.ly/2elOeh1>

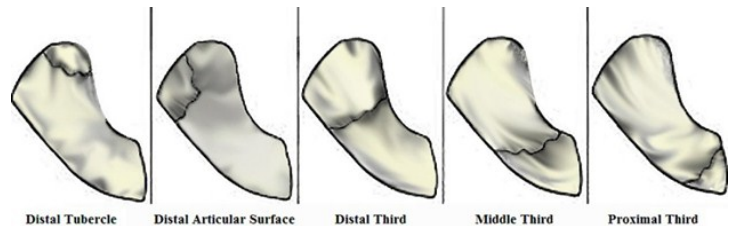
<http://bit.ly/2grnZdr>

<http://bit.ly/2glt666>

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

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

<http://bit.ly/2w1aDQo>



Mechanism of injury

Falling on an outstretched hand with resultant hyper-extension of the wrist or purely compressive force.

Population

-Adolescents and young adults are most commonly affected.

-Older patients falling in a similar manner are more likely to sustain a distal radial fracture (usually a Colles fracture).



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