



Clinical Weekly - 186th Edition

#JOURNALTUESDAY - by Abi Peck

Are corticosteroid injections more beneficial than anaesthetic injections alone in the management of rotator cuff-related shoulder pain? A

systematic review [Download here](#)

1. Did the review address a clearly focused question?
2. Did the authors look for the right type of papers?
3. Do you think all the important, relevant studies were included?
4. Did the review's authors do enough to assess the quality of the included studies?
5. If the results of the review have been combined, was it reasonable to do so?
6. What are the overall results of the review?
7. How precise are the results?
8. Can the results be applied to the local population?
9. Were all important outcomes considered?
10. Are the benefits worth the harms and costs?

#NEWSOFTHEWEEK - by Liz Wright

1. Running does not increase symptoms or structural progression in people with knee osteoarthritis: data from the osteoarthritis initiative

The association of self-selected running on OA symptoms and structure progression was evaluated. Participants were at least 50 years old, with OA in at least 1 knee. Runners were defined using a self-administered questionnaire. Among individuals 50 years old and older with knee OA, self-selected running is associated with improved knee pain and not with worsening knee pain or radiographically defined structural progression.

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#NEWSOFTHEWEEK - by Liz Wright

2. Selection of Strengthening Exercises to Prevent Hamstring Injury: It's not only about Activation

Strength training is a valuable component of hamstring strain injury prevention programmes. In recent years a significant amount of research has emerged to suggest that the acute responses and chronic adaptations to training with different exercises are mixed. This review's aim was to provide the practitioner with an evidence-base from which to prescribe strengthening exercises to alleviate the risk of hamstring injury.

- Several studies have established that eccentric knee flexor conditioning reduces the risk of hamstring strain injury (likely to be at least partly mediated by increases in biceps femoris long head fascicle length and improvements in eccentric knee flexor strength).
- Growing body of work suggests that the patterns of hamstring muscle activation deviate significantly between different exercises. Typically, relatively higher levels of biceps femoris long head and semimembranosus activity have been observed during hip extension-oriented movements, whereas preferential semitendinosus and biceps femoris short head activation have been reported during knee flexion-oriented movements.

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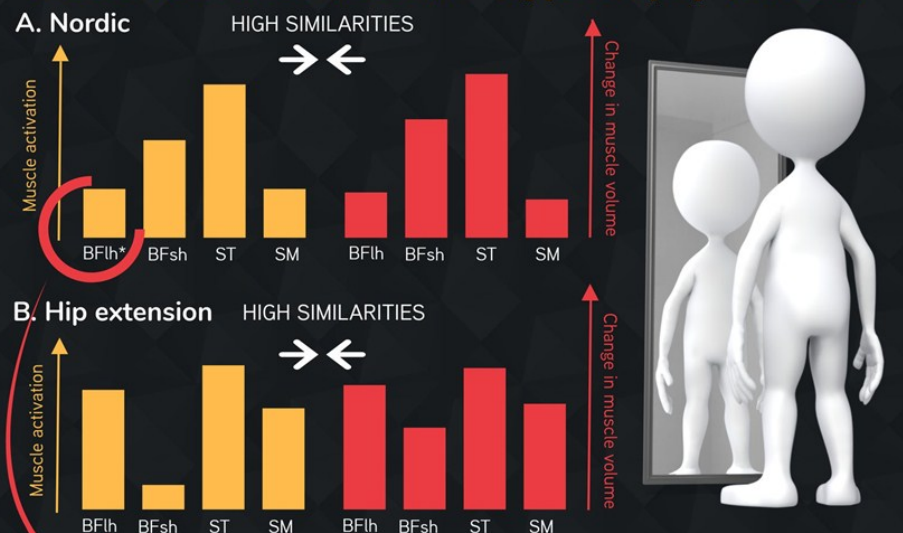
SELECTION OF STRENGTHENING EXERCISES TO PREVENT HAMSTRING INJURY

It's not only about activation

Reference: by Bourne et al. Sports Med 2017

Previously published observations demonstrated similarities between the acute pattern of muscle activation in different tasks and the hypertrophic adaptations experienced after 10 weeks of training (A. Nordic hamstring exercise, B. Hip extension exercise)

Muscle activation (acute) ► Hypertrophy (chronic)



Several studies have shown that the Nordic hamstring exercise may reduce the risk of hamstring strain injury. The benefits of this form of exercise are likely to be mediated at least partly by increases in biceps femoris long head fascicle length, possibly a rightward shift in the angle of peak knee flexor torque, and improvements in eccentric knee flexor strength

Muscle activation may be an important determinant of training-induced hypertrophy, however contraction mode appears to be the largest driver of architectural changes within the hamstrings

Designed by @YLMSSportScience

*BFh, biceps femoris long head; BFsh, biceps femoris short head; ST, semitendinosus; SM, semimembranosus





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#FRACTUREFRIDAY BY SCOTT ROWBOTHAM

March Fracture

A fracture of the metatarsal bone; normally the distal third of the second metatarsal but can be any. It is often called a stress or fatigue fracture and gets its name from soldiers who are standing on walking long distances repetitively.

Signs and Symptoms

Symptoms will be of gradual and insidious onset. When footwear is removed there is a cramp-like pain in the affected forefoot with mild to moderate local oedema on the dorsal aspect of the foot.

Active and passive toe movement of the affected metatarsal will cause pain, and there is normally a palpable point of tenderness of the fracture on the dorsal surface.

Imaging

X-ray imaging is rarely able to diagnose particularly in the early stages of a stress fracture. CT imaging and MRI may help in diagnosis.

If clinically reasoned a dual energy X-ray absorptiometry (DEXA) scan is useful to rule out any osteoporotic causes for the fracture.



Rehabilitation

Conservative treatment is normally very effective for March Fracture. Movement and often immobilisation should be considered for 6 to 12 weeks dependent on severity and improvement in pain. The earlier a diagnosis and treatment the better the prognosis and response to therapy.

<https://radiopaedia.org/articles/march-fracture>

