



## Muscle Weakness and Pain ... The Relationship Explained

As summer approaches most of us spend an increased amount of time pounding the pavements in aid of charity, playing touch rugby against rival offices, smashing tennis balls around the court, and walking along the river. As we blow the winter cob webs out, we put our bodies through a reconditioning phase. Some of us fly through this phase, while others pick up some little niggles along the way.

### Complaining of back, buttock, knee, or ankle pain?

All of these pains are common when we start back into any exercise programme, but if they continue, then they can lead to more serious injuries. Recently published research has again brought into the limelight, the important of good lower limb strength and biomechanics to help prevent injury to the body. This is particularly important now, that we enjoying the longer nights and warmer weather (I am hoping the man upstairs was listening on the warmer weather topic).

### Weak Buttocks?

Weak Gluteal (Buttock) muscles are often linked to injuries such as knee pain, ACL injuries (Major stabilising ligament of knee), Achilles injuries, and even back pain. Now I know a lot of people will have heard of Gluteus Maximus (the big bum muscle), but this research was aimed at its sister muscle - Gluteus Medius. This muscle is situated to the side of the hip joint and provides stability directly to the hip joint and affects stability between your pelvis and the lower limb. If weakness occurs in this muscle it will affect the way your whole lower limb moves, or alter your biomechanics. These altered biomechanics can lead to the injuries when you walk, run, jump or dance.

Two completely independent studies, one from a Sports Institute in Brazil and one from a South African University have recently shown that weakness in gluteus medius is a predictor to lower limb pain, especially knee pain. Researchers have shown that by using combined Quadriceps (Thigh) and gluteus medius strengthening programme that their perceived pain can improve more quickly. So that's a big thumbs up for specific gluteus medius conditioning.

## Why does this muscle weaken?

Several factors that can contribute:

- Lifestyle-standing predominantly on one leg with the pelvis swayed sideways and hip joint pushed to the side.
- Simply sleeping on side with top leg dropping to the bed can elongate muscle which can lead to weakness.
- Long hours sitting at desk/computer can lead to disuse of muscle and weakness.
- Medical-hip muscles tears and dislocation of hips.

## How can Physiotherapy help?

All the physiotherapists at London City Physiotherapy are well trained at identifying these (some times small) biomechanical abnormalities. Once these have been identified then we have a few options available.

- Soft tissue massage and trigger point release (the more painful brother of soft tissue massage) can help release tension in muscles that are causing dysfunction.
- Stretching of tight muscles, again can allow normal return to lower limb biomechanics.
- Strengthening of weak muscles that have been identified in assessment.



This is Paul White physiotherapist from London City Physiotherapy signing off. Hoping you're all starting to enjoy the 'joys of spring.'

Paul is available for physiotherapy treatments at the City Bow Lane site Monday to Friday and Canary Wharf Docklands site Tuesday and Thursdays.