



The **Physiotherapy** Clinic
www.physiotherapyclinic.com.au



When Hip Pain Is Not Just About Hip Pain

Here at The Physiotherapy Clinic we have been reviewing our treatment paradigm of how we manage hip pain.

The hip is a curious joint, in that it should be mechanically sound. We have a great big ball and socket joint, reinforced with a huge amount of ligamentous attachments, blending into a massive capsule and supported by a great web of thick, fat stabilisers – buffering the front, the back and the side of the joint; with even bigger prime movers (the biggest in the body!) further wrapping round the joint, reinforcing it!

So how does it come unstuck? How come we are seeing more and more anterior hip pain?

Thanks to the growth of research in the last 10 years, we are all familiar with the pain generators of the hip. More sensitive imaging and the emergence of some intricate arthroscopic techniques, means we know that most pathology happens in the anterior, superior joint, where the delicate structures of the joint margin can become inflamed, torn, displaced, eroded, synovitic, and eventually so compressed that the whole joint starts to become angry. We are also much more informed about abnormal hip morphology, about hip dysplasia, about FAI, and about the different types of labral pathology. And who knew that the intra-articular ligament, Ligamentum Teres, could be such a pathological pain generator until recently!

... Suddenly the hip isn't just about trochanteric bursitis....

Interesting, here at The Physiotherapy Clinic, we keep seeing the same pain phenomena; but in all types of hips. We see anterior hip pain in

hypermobile hips, as much as we do with FAI. We see anterior instability in sports people who twist and pivot, but we see an equal amount in the weekend warrior who runs in a straight line. We see varying pain responses in all degrees of joint space change, sub chondral changes, cyst formation and, we see pain not directly proportional to the damage we find on an MRI. So we can't just blame abnormal hip morphology on type of sport or arthritic changes. We have worked out, we need to not only assess the hip, but look a bit beyond!

Real Time Ultrasound

We can use real time ultrasound to assess deep motor control and activation patterns of the muscles which centralise the hip in the acetabulum. With thanks to Dr Alison Grimaldi's work, we can assess Iliacus, Gluteus Minimus, and Quadratus Femoris, which we now know



get inhibited when those afferent impulses start shouting pain signals. With the use of real-time ultrasound, we are able to identify inhibition and poor activation patterns

early, and can then retrain these muscle to prevent those huge big compressive muscles from overtaking. With all this, we are confident we know we can centralise the femoral head in the acetabulum.

Lumbopelvic stability and the deep stabilising system

One big conundrum we always face is when it's not just the femoral head that's not stable. Just like the importance of scapula stabilisation in managing anterior shoulder impingement, we know that pelvic stability is essential to stabilising any hip joint. And when you look at the enormity of muscular attachments which cross the pelvis, we open our eyes to see how this delicate load transfer at the hip can be easily compromised if we fail to transfer loads appropriately, and dissipate forces evenly across the body.

So we have to expect that we need to stabilise the acetabulum to ensure adequate femoral head position as much as we need to think about femoral head centralisation.

It's not a new thing that the pelvic stabilisers have a role in anterior hip pain. Numerous studies have shown delayed TA activation in patients with groin pain. Interestingly, though, is recent interest into muscles like obturator

internus, which we all know is a short hip external rotator, with a good moment arm for stability, BUT also takes its origin from the ishiopubic rami, with fascial connections to the levator ani.

The Women's Health community is teaching us a lot about appropriate pelvic floor muscle coordination and at The Physiotherapy Clinic we are seeing a connection between poor pelvic floor muscle control and poor posterior hip stability. To us, this seems intuitive that the pelvic stabilisers, are so closely linked to posterior hip stability.

So we of course, we look at the local pelvic stabilisers.

Here's a good place to talk about the hard work of Barb Hungerford, who taught us how we can assess for innominate fixations and sacral torsions, which might be the cause of altered muscle control in the pelvic floor and transverse abdominus. But if we are happy with the pelvic position, then we start to look at bigger muscles slings, following what Trish Wisbey-Roth has paved for us; assessing for global muscle

imbalances which can disrupt the force coupling across the pelvis.

The Integrated System

And, this leads us to the more recent work of Diane Lee and Dr LJ Lee, who asks us to keep looking... To look at all the big axis of rotation, which might contribute to abnormal load transfer throughout the body.

It blows our minds to think about how much extra rotation we ask our hips to absorb when our thoracic rotation is so dismal. Watching patients squat and reproduce their anterior hip impingement pain, because they have movement dysfunction of the thorax... it's like performing a dynamic supine FADIR test where the thorax actually forces the body into internal rotation at the hip, and as the patient flexes – BANG – not surprising, there's the anterior hip pain, and as you drop into deeper flexion, the pain gets worse. And even better is the fact that we can do something about it if we sort the thorax out. How have we not seen this so clearly before?

So there you have it! We love that it's as simple as it is complex, and we know there is a lot more to anterior joint hip pain. We are putting it all together ... we are assessing our hips for over- compression, we are looking at the local muscle control.

We definitely aren't forgetting the pelvis and we are watching the new Women's Health research about new pelvic floor insights.

We look at load transfer and we are enjoying the new light in the thorax. What we don't know, (until we assess someone) is what the driving factor might be, what muscles patterns might exist, what muscles might be inhibited, what might be over-compressed or under-compressed... but we love to treat it and we just want you to know we are always re- evaluating what we do, how we do it.... And why!

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