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KNEE OSTEOARTHRITIS: Consider Intervening BEFORE Joint Replacement is Necessary

*By Colleen Whiteford, PT, DPT, OCS, CMTPT**

It's no secret that the population of individuals all over the world experiencing knee pain is increasing. Crepitus (cracking /popping), pain, stiffness, instability, and decline in function are all considered hallmark signs of knee osteoarthritis (OA). In this newsletter we wanted to take a deeper look at this common problem, the factors driving it, and options for prevention and management that you may never have considered.

WHAT IS OSTEOARTHRITIS (OA)?

OA is also known as degenerative joint disease or "wear and tear" arthritis. It is the most commonly diagnosed form of arthritis and is associated with degeneration of the cartilage lining a joint, resulting in "bone on bone." Symptoms commonly attributed to OA of the knee include stiffness, swelling, pain, loss of mobility, and difficulty with walking, kneeling, squatting, and stairs. In advanced stages there may be joint enlargement and deformity.

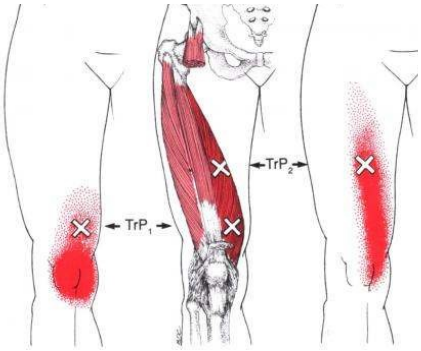

Figure 1: *Symptom referral pattern for the Vastus Medialis muscle located along the front / inner thigh. Problems in this soft tissue region can reproduce all the symptoms of OA. Issues here can also disrupt normal movement of the joint and cause OA.*

WHAT CAUSES OA?

There is growing evidence that OA of the knee (or anywhere) may be influenced by biomechanical stresses arising from outside the joint. Abnormalities in the soft tissues (fascial densifications, myofascial trigger points , see **Figure 1**) can alter movements in the limb. Habitual patterns of movement (standing on one leg) can also lead to altered movement patterns. Surrounding segments (foot, hip, back) may be driving the abnormal movement patterns that are wearing out the knee. The body, like anything else subject to the forces of gravity and physics, takes the path of least resistance. So, in the presence of soft tissue dysfunction, the leg will continue to move but not in an ideal manner. The knee, caught in the middle of these abnormal movement patterns, may initially develop cracking and popping without pain - a common finding in people of all ages. Left unresolved over time, these issues are believed to be very influential in the development of knee OA. Meniscal tears and spurring, both influenced by biomechanical problems, are also associated with the development of OA .

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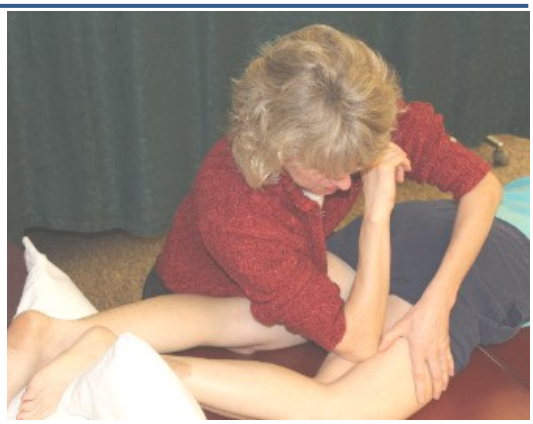
HOW IS OA DIAGNOSED?

Symptoms serve as a starting point, and OA is typically the go-to diagnosis. However, it really must be considered that other problems can cause similar complaints of pain, popping, locking, and instability. Diagnosis also seems to be largely influenced by age. An adolescent presenting with these symptoms is more likely to be diagnosed with "growing pains" than OA. The same symptoms in a young adult might be attributed to early OA, and with advancing age the likelihood of an OA diagnosis increases.

Radiologic studies (X-rays) are often utilized to confirm the presence of this "bone on bone" condition. While they have their role, the consistent utilization of imaging is being called into question for several very sound reasons: 1) Many individuals, regardless of their status, present with positive findings on imaging; 2) There is a very low correlation between findings on X-ray and level of pain and disability; 3) Imaging does not reveal WHY a joint is degenerating; 4) Imaging may actually misdirect an ideal course of care. *(For additional information on the topic of imaging see our article on Imaging available on our website or in our office.)*

CAN ANYTHING BE DONE?

Traditional interventions include medications, injections, heat, ice, weight loss, exercise, bracing, and surgery. While these options have their place and appropriate use, we would like to suggest ***prevention*** as being the ideal. Popping and cracking knees are telling a story of incorrect movement that precedes joint degeneration – even in the absence of pain. Mild, low level signs and symptoms warrant attention before they escalate. Early intervention in the management of practically any issue typically minimizes damage and improves results with less effort. The longer a problem persists the more deeply entrenched and expansive (and perhaps expensive) it becomes.



Colleen Whiteford performs Fascial Manipulation ® in the region of the biceps femoris short head, part of the hamstring group. When densified, this fascial site exerts tremendous force on the knee and may prevent full lengthening of the muscle even with efforts at stretching. Lack of full knee extension is a major problem in OA.

Whether a knee is only mildly symptomatic, well advanced into OA, or even post-operative, there are basic tenets to intervention that work best:

1. Identify the problematic movements and tissues that are putting stress on the knee (using history and physical with an emphasis on movement assessment and palpation from a skilled clinician)

2. Resolve the dysfunctions found (using any combination of Fascial Manipulation ®, dry needling, Postural Restoration Institute ® exercises, joint mobilization, or traditional exercise).

3. Address perpetuating factors (with activity modification, education, influence arising from other body segments).

A lot can be done. The sooner the better.

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