

## **Tendinitis Masquerading as Knee Joint Pain**

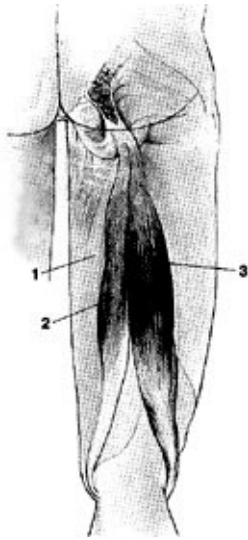
By Ben Benjamin, PhD

**Question:** Which muscle tendon units often masquerade as medial, lateral or posterior knee ligament or joint injuries?

- a. *rectus femoris, vastus lateralis and vastus medialis*
- b. *gastrocnemius, plantaris and adductor magnus*
- c. *semitendinosus, semimembranosus, biceps femoris and gastrocnemius*
- d. all of the above

**Answer:** c - *semitendinosus, semimembranosus, biceps femoris and gastrocnemius*

The semitendinosus, semimembranosus, biceps femoris, popliteus and gastrocnemius are the muscle tendon units responsible for knee flexion. The semitendinosus and semimembranosus are located on the medial aspect of the knee, while the biceps femoris is located at the lateral aspect. Collectively known as the hamstrings, they work together to flex the knee. The superior portion of the gastrocnemius muscle tendon unit, located at the back of the knee, and the popliteus muscle also assist in the initiation of knee flexion.



The semimembranosus (1), semitendinosus (2) and biceps femoris (3). All of these tendinous attachments may become injured and give rise to a confusing type of knee injury. Pain felt medially, just posterior to the medial collateral ligament, may mean injury to the semimembranosus has occurred; pain at the medial upper tibia, or slightly behind the medial aspect of the knee in the tendon body, may indicate hamstring tendinitis of the semitendinosus; and pain at the head of the fibula, or slightly superior, may be caused by tendinitis of the biceps femoris.

Since this tendon attaches to the fibula head (the same bony prominence the lateral collateral ligament is attached to), it can be difficult to differentiate these injuries unless the practitioner is skilled at testing both ligaments and tendons. Superficial pain felt directly behind the knee may be caused by strain of the popliteus muscle or the gastrocnemius muscle at its broad upper tendon attachment.

Bear in mind that when a tendon is injured, no swelling or limitation in flexion and extension of the knee occurs. Swelling at the knee usually indicates a ligament injury, or injury to some structure within the joint capsule, such as the medial or lateral meniscus.

Continuing to educate ourselves in the most current information is vital in helping our profession grow in skill and stature. Identifying if a client has a superficial tendon or ligament injury (which can be treated with myofascial or friction massage techniques) is an important part of a therapist's education. On the other hand, trying to treat a client with knee pain caused by torn cartilage or a cruciate ligament tear (for which hands-on therapy will not help) will leave the client confused, frustrated and disappointed. Treating the wrong structure because of limited knowledge is an all-too-common error.

I continue to learn, and encourage you to do the same.

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Click [here](#) for more information about Ben Benjamin, PhD.



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