

PHYSIOTRENDS

HAMSTRING TIGHTNESS AND LOW BACK PAIN

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Low back pain is defined as pain and discomfort, localized below the costal margin and above the inferior gluteal folds, with or without leg pain. This profoundly affects daily activities and frequently impairs functional tasks. Low back pain (LBP) affects nearly 60-80% of people throughout their lifetime. One of the suspected etiologies of LBP is lack of hamstring flexibility. Sitting at a desk all day can cause tightness and a shortening of hamstring muscles, and therefore leads to back pain.

The hamstring group refers to the posterior thigh muscles and act as strong flexors of the knee and weak extensors of the hip.

Hamstring group of muscles includes **semitendinosus**, **semimembranosus**, and **long and short heads of the biceps femoris**. All together flex the knee but the short head of biceps femoris alone extends the hip. Blood supply from the perforating branches of the deep femoral artery, also known as the profunda femoris artery.

We might be wondering how hamstring tightness could result in back pain. The body is interconnected, and prolonged sitting without stretching can cause the hamstrings to constrict and shorten. These muscles originate from the ischial tuberosity of the pelvis. The pelvis tilts posteriorly as a result of tight hamstrings. As the pelvis and the lumbar vertebrae work together, when the pelvis tilts posteriorly, the lumbar vertebrae are forced to flex forward. The pelvis, lumbar spine, and surrounding muscles are put under more tension and strain as a result of this.

Blood supply to the hamstrings will be reduced if they are tight. Therefore, muscles are working with less capacity, which results in low back pain.

The predominance of tightness is greater in female 96% than in male 4%. Its incidence is high in university students from 18-25 years.

Stretch to reduce the pain .The stretches can gradually lengthen and reduce tension in the hamstring muscle, and in turn reduce stress felt in the lower