



*Musculoskeletal*

## **Lumbar strengthening in people with a lower limb amputation**

Do strengthening exercises affect back pain similarly in people with a lower limb amputation?

Author : Miranda Asher

People with an amputation are prone to lower back pain, but little research has been done on the effects of strengthening exercises on this population.

Despite the variety of mechanical issues and movement alterations which impact people with an amputation, a positive impact is seen from strengthening of the transversus abdominis, lumbar multifidi, and internal obliques.

Not only was pain reduced, but single event strength, muscular endurance and flexibility was also improved.

In people with an amputation, pain discussions often focus on phantom limb pain, however, pain in the lower back is also a common complaint.

This is due to a number of factors, including altered gait pattern, socket fit, co-morbidities, leg length difference. However, lumbar muscle strength is often ignored.

The current study aimed to address the influence of a program for lumbar muscle strength through an 8-week program, which consisted of 30 minutes of exercise with warm up and cool down, performed under supervision.

The participants included people with bilateral and unilateral amputations at any level of the lower limb, and all had been using a prosthetic limb for at least 6 months, with low back pain for at least 3 months.

With no additional gait or movement training, the strengthening of the deep lumbar muscles reduced the experienced pain. This improvement was consistent through participants regardless of amputation type.

Want to read more about this topic? You can access the full text of the article [here](#), or have a look at [this study!](#)



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