

# Reduction in proximal, distal leg muscle strength in T2DM

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(HealthDay)—For patients with type 2 diabetes mellitus (T2DM),

proximal and distal leg muscle strength is reduced, and proximal but not distal muscle volume is also reduced, according to a study published online Jan. 6 in *Diabetes Care*.

Monirah M. Almurthi, from the Manchester Academic Health Science Center in the United Kingdom, and colleagues matched 20 [patients](#) with T2DM and 20 healthy controls by age, sex, and body mass index. The authors examined the strength and size of knee extensor, flexor, and ankle plantar and dorsiflexor muscles in relation to the severity of [diabetes](#) sensorimotor polyneuropathy, amount of intramuscular noncontractile tissue (IMNCT), and serum 25-hydroxyvitamin D levels.

The researchers found that patients with T2DM had significantly reduced knee extensor strength ( $P = 0.003$ ) and reduced muscle volume of [knee](#) extensors and flexors ( $P = 0.045$  and  $0.019$ , respectively) compared with controls. They also had a reduction in ankle plantar flexor strength ( $P = 0.001$ ), but no reduction in ankle plantar flexor and dorsiflexor muscle volumes ( $P = 0.23$  and  $0.45$ , respectively). There was a significant increase in IMNCT in the ankle plantar and dorsiflexors ( $P = 0.006$  and  $0.005$ , respectively).

"Patients with T2DM have a significant reduction in proximal and distal leg muscle [strength](#) and a proximal but not distal reduction in muscle volume possibly due to greater intramuscular fat accumulation in distal muscles," the authors write.

**More information:** [Abstract](#)  
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