

One week of bed rest lowers muscle mass, insulin sensitivity

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"One week of [bed rest](#) substantially reduces [skeletal muscle](#) mass and lowers whole-body insulin sensitivity, without affecting mechanisms implicated in high-fat diet-induced insulin resistance," the authors write.

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(HealthDay)—One week of bed rest is associated with a substantial reduction in skeletal muscle mass and decreased whole-body insulin sensitivity, according to a study published online June 29 in *Diabetes*.

Marlou L. Dirks, from Maastricht University Medical Center in the Netherlands, and colleagues examined mechanisms underlying disuse-induced insulin resistance in a study involving 10 healthy young males who were subjected to one week of bed rest. Lean body mass and quadriceps cross-sectional area (CSA) were assessed before and after bed rest and VO_2 peak and leg strength were measured. Whole-body [insulin sensitivity](#) was also measured. In addition, [muscle biopsies](#) were obtained to assess muscle lipid fraction and markers of mitochondrial and vascular content.

The researchers observed a 1.4 ± 0.2 kg loss in lean tissue and a 3.2 ± 0.9 percent decrease in quadriceps CSA after bed rest (both $P < 0.05$).

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