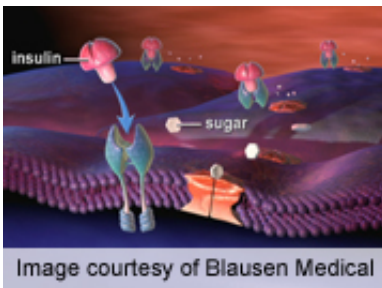


Endurance training cuts lipid-induced insulin resistance

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(HealthDay) -- Endurance training seems to lessen the effect of lipid-induced insulin resistance, specifically by preventing lipid-induced reduction in nonoxidative glucose disposal (NOGD), according to a study published online July 10 in *Diabetes*.

In a study involving nine endurance-trained and 10 untrained subjects, Esther Phielix, from the Maastricht University Medical Center in the Netherlands, and colleagues examined whether high oxidative capacity, seen in endurance-trained athletes, could attenuate lipid-induced insulin resistance. Participants underwent a clamp with infusion of glycerol or intralipid.

The researchers found that trained athletes had significantly higher mitochondrial capacity and [insulin sensitivity](#) (~32 and ~22 percent, respectively). Insulin-stimulated [glucose uptake](#) was reduced by lipid infusion by 63 percent in untrained subjects, and this effect was attenuated in trained subjects (29 percent). Lipid infusion reduced oxidative and NOGD in untrained subjects, while trained subjects were protected from lipid-induced reduction in NOGD.

"Overall, from the current study, we conclude that chronic exercise training attenuates lipid-induced [insulin resistance](#) by preventing a reduction in NOGD," the authors write. "In the future, more mechanistic studies are needed to fully understand the mechanism by which [endurance training](#) affects lipid-induced NOGD."

More information: [Abstract](#)
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