

Building muscle without heavy weights

April 26 2012

Weight training at a lower intensity but with more repetitions may be as effective for building muscle as lifting heavy weights says a new opinion piece in *Applied Physiology, Nutrition, and Metabolism*.

"The perspective provided in this review highlights that other resistance protocols, beyond the often discussed high-intensity training, can be effective in stimulating a muscle building response that may translate into bigger muscles after [resistance training](#)," says lead author Nicholas Burd. "These findings have important implications from a public health standpoint because skeletal muscle mass is a large contributor to daily energy expenditure and it assists in weight management. Additionally, skeletal muscle mass, because of its overall size, is the primary site of blood sugar disposal and thus will likely play a role in reducing the risk for development of [type II diabetes](#)."

The authors from McMaster University conducted a series of experiments that manipulated various resistance exercise variables (e.g., intensity, volume, and muscle time under tension). They found that high-intensity muscle contractions derived from lifting heavy loads were not the only drivers of exercise-induced muscle development. In resistance-trained young men a lower workout intensity and a higher volume of repetitions of [resistance exercise](#), performed until failure, was equally effective in stimulating muscle proteins as a heavy workout intensity at lower repetition rates. An additional benefit of the low-intensity workout is that the higher repetitions required to achieve fatigue will also be beneficial for sustaining the muscle building response for days.

More information: Burd, N.A., Mitchell, C.J., Churchward-Venne, T.A., Phillips, S.M. Bigger weights may not beget bigger muscles: evidence from acute muscle protein synthetic responses after resistance exercise. *Applied Physiology, Nutrition, and Metabolism*, 37(3): 551-554, doi: 10.1139/ H2012-022

Provided by Canadian Science Publishing (NRC Research Press)

Citation: Building muscle without heavy weights (2012, April 26) retrieved 27 April 2024 from <https://medicalxpress.com/news/2012-04-muscle-heavy-weights.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.