Getting the most from your stretching routine

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Credit: Paul Brennan/public domain

The conclusions of a systematic review of hundreds of studies contradict the most common static stretching findings from the last 15 years. This research is available today in *Applied Physiology, Nutrition, and Metabolism* and the findings have been endorsed by the Canadian Society for Exercise Physiology (CSEP), Canada's resource and voice for exercise physiology and health & fitness.

For over 30 years, from the 1960s to the late 1990s, fitness professionals, enthusiasts and athletes were told that static stretching (stretching muscles while the body is at rest) was important for increased flexibility, improved performance and injury reduction. This period was followed by 15 years of being told that static stretching could cause performance impairments and that it does not reduce injury risk, resulting in a dramatic switch to dynamic stretching, where movements are performed through large ranges of motion usually at a fast speed. As a result, many people no longer perform static stretching before exercise or playing sports.

A comprehensive review of the literature published today brings new recommendations to fitness enthusiasts, athletes, coaches and rehabilitation practitioners. Upon reviewing hundreds of studies, researchers found that static stretching, when incorporated into a full warm-up routine that includes an initial aerobic component, static and dynamic stretching and then active and dynamic sport-specific activities should not result in significant performance impairments and may reduce muscle strain injury risk. This systematic review has also highlighted the lack of scientific data regarding the effects of dynamic stretching on injury risk.

"It is important for fitness professionals and enthusiasts, coaches, rehabilitation professionals and other scientists to critically assess the findings of fitness studies" says Dr. David Behm, Memorial University of Newfoundland and lead author of the study. "Many studies over the last 15 years did not include a full warm-up, something that most athletes do regularly. Many studies also tested stretches that were held much longer than what is typically done," continued Dr. Behm. "Before incorporating new findings into your fitness activities, think about how the study applies to your situation and activities".

"CSEP strongly supports promoting physical activity for healthy

outcomes and equally important to that are warm up routines that increase range of motion and decrease muscle injury," says Dr. Phil Chilibeck, CSEP Chair. "The recommendation in the CSEP Position Stand is that all components of a warmup be included with appropriate duration of stretching. The inclusion of static, or Proprioceptive Neuromuscular Facilitation (PNF), stretching is recommended and has the potential to positively influence the standard warmup routines of a large number of athletes."

The paper 'Systematic Review: Acute Effects of Muscle Stretching on Physical Performance, Range of Motion and Injury Incidence in Healthy Active Individuals' by David Behm, Anthony Blazevich, Anthony Kay and Malachy McHugh was published today in Applied Physiology, Nutrition, and Metabolism.

More information: *Applied Physiology, Nutrition, and Metabolism*: dx.doi.org/10.1139/apnm-2015-0235

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