

Les Mills Lab: Running and CXWORX Study



Introduction

Running's widespread popularity isn't showing any signs of slowing down which isn't surprising given the numerous health benefits a regular running program provides. It is, however, associated with a high injury risk; most commonly at the hip and knee.

Our Aim

The aim of this study was to assess how an integrated, functional, core training intervention could affect running performance and symmetry.

Method

The 12 healthy adults (8 women, 4 men) who took part were recreationally active; running at least three miles, three times per week. They didn't engage in any type of strength training. Six participants were assigned to the integrated, functional core protocol, attending three, 30 minute CXWORX™ classes per week for six weeks. The remaining six maintained their usual, weekly running routine.

Heart rate data was collected with a Polar M400 during a treadmill test as well as an outdoor maximal 5-k run to evaluate economy and performance respectively. Joint range of motion data were captured with high speed motion tracking cameras to assess stride symmetry. These measurements were completed both before and after the participants attended 18 CXWORX classes in a six week period while maintaining their existing running program.

Results

All participants who completed the six week training intervention increased their economy and decreased their five kilometre maximal run time by an average of 66 seconds. Running symmetry also improved at the hip, knee, and ankle, indicating that injury risk may have been reduced. This data demonstrates the effectiveness of a three dimensional core training approach to reduce the potential for injury and boost performance.

Recommendation

Lead researcher, Associate Professor Jinger Gottschall says "To maximize your running results my recommendation is to take an integrated approach. Don't just increase your miles each week; incorporate three dimensional core exercises into your training program to optimize your running performance for the long-term.

"Doing CXWORX, at least twice per week, is my ultimate recommendation. It can be extremely beneficial for deep hip muscle training for knee alignment and abdominal training for efficient force transmission."

A link to the published abstract in The Journal of Sports Medicine and Physical Fitness is available [here](#).