The Effects of Static Stretching on Hand Function Across Different Sports

by Katherine Schoen

Our hands play a crucial role when performing everyday tasks such as writing, eating, playing sports, and carrying objects. However, to perform these tasks we need to have proper hand function. The hand must be capable of grasping objects, executing individuated finger movement, performing coordinated multidigit actions, and controlling fine motor skills. The ability of the hand to function correctly can be influenced by many variables, one of which is the range of motion within the hand and wrist joints. Several studies show the benefits of static stretching and the effects of hand function in healthy and diseased populations, but no research investigates whether static stretching has different effects on hand function in athletes compared to non-athletes. The purpose of this study is to investigate the relationship of static stretching on hand function in various athletic populations. Twenty-one participants, ages 18-22 years-old, were recruited for the study. Participants were either non-athletes, or athletes on the basketball, baseball, softball, lacrosse, golf, and tennis teams. In order to determine the effect of stretching on hand function, participants performed three hand-function tests before and after stretching. The hand-function tests performed were the Purdue Pegboard test, a handgrip dynamometer test, and a reaction stick test. These tests provided measurable data on motor dexterity, handgrip strength, and reaction time. Analysis of the results comparing non-athletes versus athletes is currently being performed to see if there is a difference in hand function after static stretching. It is expected that static stretching will improve motor dexterity, while handgrip strength and reaction time will stay the same. The data will help to provide researchers and clinicians valuable information on how to help patients improve hand function while performing activities of daily living as well as sports.