Motional Analysis and Integrative Neurophysiology (MAIN) Lab

Current Research Studies

Human Movement

Human Movement Study (IRB #: 201980)
We are seeking active men and women between 18-30 to participate in this research study. The purpose is to evaluate three different methods that measure how people move during functional tasks like walking, jumping, and squatting. This study will require two 90-minute visits.

Physical Activity and Return to Activity

Lower Extremity Assessment Protocol (IRB #: 201820)
We are seeking men and women ages 15-45 with a history of knee injury (ACL, meniscus, osteoarthritis) to participate in this research study. The purpose of this study is to determine the impact of knee injuries on patients’ function by evaluating strength, balance, movement patterns, and health questionnaires. This study requires one visit lasting 1-1.5 hours. Participants who wish to complete several optional tests that assess muscle activity during movement may be eligible for a $20 gift card.

Neuromuscular Function

Muscle Function After Lower Extremity Injury (IRB #: 202146)
We are seeking men and women ages 15-45 with a history of knee injury (ACL, meniscus, osteoarthritis) to participate in this research study. The purpose of this study is to determine the impact of knee injuries on thigh muscle function by evaluating strength, activation, and brain function. This study requires one visit lasting 1 hour. Participants who qualify may be eligible for a $35 gift card.

Hip Strength Study (IRB #: 202217)
We are seeking healthy active females between 18-45 years old. The purpose of this study is to determine how different hip positions change hip strength and muscle activity. The study will require one visit, lasting approximately 90-minutes.

Interventions

Ankle Bracing and Verbal Biofeedback on Landing Biomechanics (IRB #: 201481)
We are seeking healthy women ages 18-35 to participate in this research study. The purpose of the study is to determine the influence of ankle bracing and verbal biofeedback on lower extremity biomechanics during a drop-landing task. This study requires one visit lasting 1 hour

Hip Strength Training Program (IRB #: 201990)
We are seeking females between 18-40 to participate in this research study. The purpose is to determine if using electrical stimulation to the hip muscles improve strength, muscle activity and movement. The study required two visits that last approximately 40 minutes, and six supervised resistance training sessions that will last 30 minutes each.