

Is there a cost to participate?

There is no cost to participate in this study. All medical services that are associated with this study are provided at no cost by Shriners Hospitals for Children. Indoor on-site parking and lodging can be provided.



Shriners Hospitals for Children

Shriners Hospitals for Children® is a health care system of 22 hospitals dedicated to improving the lives of children by providing pediatric specialty care, innovative research, and outstanding teaching programs for medical professionals. Children up to age 18 with orthopaedic conditions, burns, spinal cord injuries, and cleft lip and palate are eligible for care and receive all services in a family-centered environment, regardless of the patients' ability to pay.

Information and general questions:

Henry Wright PT, DPT
hwright@shrinenet.org
215-430-4223

Samuel C.K. Lee, PhD, PT
sclee@shrinenet.org
215-430-4083



Shriners Hospitals
for Children®



This information is approved by Temple University for public display and is associated with project 11659.



Shriners Hospitals
for Children®

Philadelphia
Pediatric Specialty Care

Orthopaedics
Spinal Cord Injury

Recumbent Cycling Exercise Study for Adolescents with Cerebral Palsy



Shriners Hospital for Children® -
Philadelphia and University of Delaware
are looking for Research Participants



This study is funded by the Eunice
Kennedy Shriver National Institute of Child
Health and Human Development:
NICHD R01 HD062588

Shriners Hospitals for Children
3551 N. Broad Street
Philadelphia, PA 19140
Tel: 1.800.281.4050
www.shrinershospitals.org



About CP and Exercise

Cerebral Palsy (CP) is a problem with the brain that can cause muscle weakness and spasticity to occur. Children and teens with CP may not be able to exercise without assistance.

Some research has shown that electrical stimulation can be used to help make muscles stronger in children with CP. We would like to find out if this electrical stimulation can help children and teens ride a stationary tricycle. We are trying to develop a better way for children with CP to exercise.



About our study

The University of Delaware is looking for individuals with CP to participate in a randomized, controlled study that examines the effects of assisted cycling (via Functional Electrical Stimulation) vs. unassisted exercise on fitness, strength and walking ability. Cycling is performed using video game feedback.

One group in the study will cycle using functional electrical stimulation to assist leg movement during pedaling. A second group will cycle using only their own leg power. A third group called a control group, will not participate in cycling exercise. Cycling exercise will be done at Shriners Hospital for Children® - Philadelphia or in your own home if equipment and research staff are available.

You will be asked to come to Shriners Hospital four times during the study for testing sessions that last 2-3 days. Indoor on-site parking and lodging can be provided. During the testing sessions, your child will complete cycling exercise tests, questionnaires, strength testing and walking tests to determine the effect of training on these measures.

Who can be in the study?

Eligible subjects must:

- 10-18 years old with a diagnosis of spastic diplegic or spastic quadriplegic CP
- Be able to walk with some impairments, walk with an assistive device (walker, crutches, or a cane), or be a wheelchair that is able to assist with transfers.
- Have not had an orthopedic surgery or lower extremity fracture in the past year and have not had botulinum toxin injections to the leg muscles in the past 6 months
- Be seizure free and have no other neurological or musculoskeletal diagnoses
- Be able to come to Shriners Hospital Children® - Philadelphia

How do I enroll my child?

Please contact us for study information

Your child will be scheduled for a screening appointment to see if he or she is a candidate for this study. This will include taking measurements to see how flexible your child is and assessing the fit of the cycle.