"Effect of Spine Surgery on Energy Expenditure of Walking"

NORTHWESTERN UNIVERSITY PROSTHETICS ORTHOTICS CENTER
&
VA CHICAGO MOTION ANALYSIS RESEARCH LABORATORY

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INFORMATION SHEET
Please refer to the consent form (available from the Investigators listed above) to obtain complete information about this research study.

INTRODUCTION/PURPOSE
The purpose of this study is to evaluate the impact of surgery on the effort and efficiency of walking in patients with degenerative spine disease. You are being considered as a participant in this study because you have been diagnosed with a spinal deformity and surgery is required.

PARTICIPANT CRITERIA
We are recruiting people between 18 and 80 years who have been diagnosed with a spinal pathology and require surgery.

PROCEDURES
As a participant in this study, you will be asked to schedule an appointment with the VA Chicago Motion Analysis Research Laboratory (VACMARL) for energy expenditure data collection pre-operatively and 12 months post-operatively. For the experiment, you will need to dress comfortably, as you would for the gym, and wear a pair of gym shoes. You should avoid eating for 2 hours prior to testing.

You will be asked to complete a questionnaire regarding your functional status and mark on a scale the degree of pain you are experiencing, if any, at the time of testing. Your height and weight will also be recorded.

Initially, your comfortable walking speed will be determined while you walk over level ground. You will then be asked to walk on the treadmill at the same comfortable walking speed. The treadmill will subsequently be set at this speed for the energy expenditure test.

Energy expenditure data collection will take about 30 minutes. It is collected using a mask that covers your nose and mouth to analyze the air you exhale while walking. The mask will not restrict your breathing of regular room air. Photographs and/or video recordings will be made of you during the test. These pictures and video recordings are considered an integral part of the data record.

The energy expenditure data collection will consist of four stages: (1) pre-exercise resting energy expenditure, (2) standing energy expenditure, (3) walking energy expenditure, and (4) post-exercise

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resting energy expenditure. After being fitted with the equipment, you will be seated comfortably and asked to remain quiet until a steady heart rate and constant oxygen uptake are established (at least five minutes). Then you will be asked to stand quietly for three minutes and then walk for ten minutes at a self-selected speed on a treadmill. After walking, you will again be asked to sit quietly and data will be recorded until a return to steady resting state is achieved (again, at least five minutes). To ensure minimal fluctuations in data, you will be discouraged from speaking during the test and laboratory conditions will be kept quiet and uninterrupted.

The test described above will be repeated 12 months after spine surgery.

CONFIDENTIALITY
Participation in this research study may result in loss of privacy. All personnel authorized to view your records are required to maintain confidentiality regarding your identity. Records of your participation in this study will be kept confidential in the VA Chicago Motion Analysis Research Laboratory. Information derived from this study will be used for research purposes, which may involve publication, presentation, and teaching. Your identity will be kept confidential. If you agree to participate in this study, you will be videotaped and photographed during the sessions as part of our data records.

RISKS
Your involvement in this study involves minimal risk to you. Although you may not be familiar with walking on a treadmill, the treadmill that we use has a number of safety features including a large belt surface, safety harness and adjustable handrails. Walking speed is determined by you to ensure comfort. You will be given time to practice walking on the treadmill before the test begins. The mask worn during the energy expenditure test will not restrict your breathing of regular room air.

BENEFITS
There may be no direct benefit to you by your participation in this research study. However, your involvement in this study will help scientists and surgeons better understand the effect that spine deformity and surgery have on the effort and efficiency of walking.

FINANCIAL INFORMATION
You will be compensated in cash at the completion of each session. If you drive and park at the Huron-St Clair Parking Garage (222 E. Huron Street) your parking ticket will be validated to allow for reduced rate parking.

You have the option to withdraw from this study at any time.

CONTACT DETAILS
If you are interested in participating in this project, please contact the Project Director, Stefania Fatone, Ph.D., at (312) 503-5700, Monday through Friday, between 8:30 am and 5:00 pm.

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through 2/19/11

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