The University of Sydney  
Faculty of Health Sciences

Informed Consent Form for Non-pregnant Subjects

I _______________________________ hereby voluntarily consent to participate in the research entitled:

Kinematics, Kinetics and Patterns of Muscle Activity for the Sit-to-stand Movement During Pregnancy and the Immediate Post-birth Period.

Conducted by Wendy Gilleard, (935 19528), Richard Smith (935 19462) and Jack Croosbie (935 19549).

I understand that the information obtained from the research may be used in future research, and may be published. However, my right to privacy will be retained, ie: personal details will not be revealed.

The procedures as set out in the attached information sheet have been explained to me and I understand what is expected of me and the benefits and risks involved. My participation in the project is entirely voluntary.

I acknowledge I have the right to question any part of the procedure and can withdraw at any time without this affecting my relationship with the researchers, the Faculty or the University.

I have been familiarised with the procedure.

Signed by the Subject __________________________________
Date: __________________

Witness _____________________ (Name)
_____________________ (Signature)
_____________________ (Date)
Informed Consent Form for Maternal Subjects

I _______________________________ hereby voluntarily consent to participate in the research entitled:

Kinematics, Kinetics and Patterns of Muscle Activity for the Sit-to-stand Movement During Pregnancy and the Immediate Post-birth Period.

Conducted by Wendy Gilleard, (935 19528), Richard Smith (935 19462) and Jack Crosbie (935 19549).

I understand that the information obtained from the research may be used in future research, and may be published. However, my right to privacy will be retained, ie: personal details will not be revealed.

The procedures as set out in the attached information sheet have been explained to me and I understand what is expected of me and the benefits and risks involved. My participation in the project is entirely voluntary.

I acknowledge I have the right to question any part of the procedure and can withdraw at any time without this affecting my relationship with the researchers, the Faculty or the University.

I have been familiarised with the procedure.

Signed by the Subject __________________________________

Date: __________________

Witness _____________________ (Name)
_____________________ (Signature)
_____________________ (Date)

Consulting Physician

I_________________________________ have read the subject information sheet and give my permission for ________________________ to participate in the project. I am aware that I may withdraw my consent for the subject's participation at any time during this project.

Signed by the Consulting Physician

_______________________ Witness_____________________ (Name)

Date: __________________

_____________________ (Signature)
_____________________ (Date)
Project Title: Kinematics, Kinetics and Patterns of Muscle Activity for the Sit-to-stand Movement During Pregnancy and the Immediate Post-birth Period.

Project Supervisors:
Ms Wendy Gilleard, School of Physiotherapy 935 19528
Dr Jack Crosbie, School of Physiotherapy 935 19549
Mr Richard Smith, Dept of Biomedical Science 935 19462

Thank for volunteering to participate in this research project.

Pregnancy is not considered a 'illness' for the average female, therefore daily living activities and, possibly, paid employment are a part of normal lifestyle at this time. However, knowledge of relationship between the mother's adaptations to her pregnancy and their effects on movements used in daily living are limited. The purpose of this project is to investigate the trunk movements of pregnant women while seated and standing including the manner in which she rises from a chair. Although you are not pregnant, you as a subject are contributing important information related to the reliability of the protocol and allowing us to determine how pregnancy does affect activities of daily life.

The project involves measuring the movements of your head, back, arm and leg segments in relation to each other during trunk movements of bending forward, back, to the side and turning. Also the movements of these segments and the force you place on the ground as you rise from a chair will be measured. In addition, the activity of some of your muscles will be investigating using the technique of electromyography. When a muscle contracts it gives off a small electrical signal. This signal can be detected by electrodes, similar to those used in heart monitoring, placed on the skin over the muscle.

Description of Experiment:

This project will include three (3) test sessions spread over thirty two (32) weeks. After an initial test session, you will be asked to repeat the session at sixteen (16) and thirty two (32) weeks later. During testing, subjects will use firm fitting underwear for clothing. All testing will be at Faculty of Health Sciences, East St Lidcombe.

At the beginning of each test session you will be asked your height, weight, exercise habits, and backpain history. Any midline gap between your stomach muscles will be measured.

You will have a pair of skin electrodes attached to eight (8) muscle locations on your back, bottom, abdomen and legs and one (1) to the knee cap. Before the electrodes are attached, the
skin will be prepared by shaving, light sandpapering and wiping with alcohol to improve the measurement of the signal. Your hair will be restrained in a bathing cap.

You will have thirty seven (37) small lightweight spheres attached to your trunk and legs with adhesive tape. You will then be asked to first practise and then perform four (4) trials of trunk movements at your preferred speed as follows;

A. Standing:
   i) Bending forward and back
   ii) Bending to the right and left side

B. Seated on a height adjustable backless stool, feet remaining flat on the floor:
   i) Bending forward and back
   ii) Bending to the right and left side
   iii) Turning side to side

You will then be asked to first practise and then perform three (3) trials of rising from a stool as follows;

You will be initially seated on a height adjustable backless stool, feet flat on the floor. Two (2) foot positions will be used.

For one foot position you will be asked to rise with your arms crossed and held against your chest. For the other foot position (your preferred placement) you will be asked to rise with your arms loosely by your sides but free to move at the shoulder as you wish. A total of eight (8) trials of rising to stand will be performed.

All movements will start and end in a relaxed upright posture. Rest periods will be given between trials so that you are not tired.

You should feel free to stop any time if you wish.

**Risks:** Skin irritation and aggravation of previous back injuries are a minor risk of this project. If you have any history of skin irritation or any medical condition which may be aggravated by bending the trunk, you must not participate.

Any person with concerns or complaints about the conduct of a research study can contact the Secretary of the Human Ethics Committee, University of Sydney on (02) 935 14811
Project Title: Kinematics, Kinetics and Patterns of Muscle Activity for the Sit-to-stand Movement During Pregnancy and the Immediate Post-birth Period.

Project Supervisors:
Ms Wendy Gilleard, School of Physiotherapy 935 19528
Dr Jack Crosbie, School of Physiotherapy 935 19549
Mr Richard Smith, Dept of Biomedical Science 935 19462

Thank for volunteering to participate in this research project.

Pregnancy is not considered a 'illness' for the average female, therefore daily living activities and, possibly, paid employment are a part of normal lifestyle at this time. However, knowledge of relationship between the mother's adaptations to her pregnancy and their effects on movements used in daily living are limited. The purpose of this project is to investigate the trunk movements of pregnant women while seated and standing, including the manner in which she rises from a chair.

The project involves measuring the movements of your head, back, arm and leg segments in relation to each other during trunk movements of bending forward, back, to the side and turning. Also the movements of these segments and the force you place on the ground as you rise from a chair will be measured. In addition, the activity of some of your muscles will be investigating using the technique of electromyography. When a muscle contracts it gives off a small electrical signal. This signal can be detected by electrodes, similar to those used in heart monitoring, placed on the skin over the muscle.

Description of Experiment:
This project will include five (5) test sessions spread over your pregnancy. The test sessions will be held at less than fourteen (14) weeks, twenty four (24) weeks, thirty two (32) weeks and thirty eight (38) weeks gestation, and eight (8) weeks post-birth. During testing, subjects will use firm fitting underwear for clothing. All testing will be at Faculty of Health Sciences, East St Lidcombe.

At the beginning of each test session you will be asked your height, weight, exercise habits, backpain history and if you are pregnant, the length of your pregnancy in weeks. Any midline gap between your stomach muscles will be measured.

You will have a pair of skin electrodes attached to eight (8) muscle locations on your back, bottom, abdomen and legs and one (1) to the knee cap. Before the electrodes are attached, the
skin will be prepared by shaving, light sandpapering and wiping with alcohol to improve the measurement of the signal. Your hair will be restrained in a bathing cap.

You will have thirty seven (37) small lightweight spheres attached to your trunk, arms and legs with adhesive tape. You will then be asked to first practise and then perform four (4) trials of trunk movements at your preferred speed as follows;

A. Standing:
   i) Bending forward and back
   ii) Bending to the right and left side

B. Seated on a height adjustable backless stool, feet remaining flat on the floor:
   i) Bending forward and back
   ii) Bending to the right and left side
   iii) Turning side to side

You will then be asked to first practise and then perform three (3) trials of rising from a stool as follows;

You will be initially seated on a height adjustable backless stool, feet flat on the floor. Two (2) foot positions will be used.

For one foot position you will be asked to rise with your arms crossed and held against your chest. For the other foot position (your preferred placement) you will be asked to rise with your arms loosely by your sides but free to move at the shoulder as you wish. A total of eight (8) trials of rising to stand will be performed.

All movements will start and end in a relaxed upright posture. Rest periods will be given between trials so that you are not tired.

You should feel free to stop any time if you wish.

Risks: Skin irritation and aggravation of previous back injuries are a minor risk of this project. If you have any history of skin irritation or any medical condition which may be aggravated by bending the trunk, you must not participate.

Any person with concerns or complaints about the conduct of a research study can contact the Secretary of the Human Ethics Committee, University of Sydney on (02) 935 14811