

UNIVERSITY OF LIMERICK EHS RESEARCH ETHICS COMMITTEE

PROCEDURES INVOLVING HUMAN SUBJECTS

Procedure No

Title of Procedure

Name of Assessor  Assessment date

Does this procedure already have ethical approval ?

If so, enter ethical number and expiry date

**1**

This procedure involves testing muscle contractile properties on the con-trex isokinetic system. The con-trex machine allows eccentric, concentric or isometric movement around a joint for a number of joint systems : these include knee, elbow and ankle. In all cases, the volunteer is secured on the con-trex by a seatbelt system which prevents lateral movement, so that the volunteer can safely activate the muscles required for the particular movement being assessed. Where concentric and eccentric contractions are undertaken, the machine requires a range of motion to be set before forces are measured, to allow testing to be undertaken through a comfortable and safe range of movement.

An additional level of protection is given by an abort switch which the volunteer holds whilst testing is undertaken : this switch will cut the power to the motor which moves the limb, allowing the volunteer to terminate any unpleasant testing. Volunteers will be fully informed about the emergency stop procedure and the abort switch.

Volunteers will be given a practice session prior to testing, during which the limb is moved through the same range of motion but volunteers will contract sub-maximally.

Standard Operating Procedures for Contrex available to PESS staff on PESS Sharepoint [here](#)

**2**

Others, please specify

**3****Eligibility of subject(s) to be used**

PESS student (U.G. or P.G.)

University of Limerick staff or campus personnel

Others, please specify

Members of the general public engaged in research projects granted ethical approval.

**4****Potential risks. To be explained before obtaining consent**

Low Risk

Since muscle testing involves forceful muscle contraction, there exists a small risk of muscle injury. To minimise this, volunteers will complete a standard pre-test questionnaire prior to testing to assess their history of muscle or joint injury. Anyone who has had a recent or recurring injury will not be tested. In PESS, participants will have no contraindications to safe participation in exercise / physical activity.

**5****Action to be taken in the event of a foreseeable emergency**

The procedure will be terminated if the volunteer shows any sign of distress.

Standard first aid procedures may be required depending on the severity of the situation. The following standard procedure should be followed in the event of an incident occurring in the PESS building / UL Facility:

1. Stop the procedure. Position the subject to prevent self-injury.
2. If appropriate, raise the subject's lower limbs to improve blood flow. Should the subject fail to respond summon help immediately.
3. Check vital signs airways, breathing and circulation (ABC)
4. If required attempt CPR as soon as possible.
5. Requesting Help: Emergency Contact telephone numbers are listed on laboratory door:
  - During normal working hours 9am-5pm, use lab phone to contact the Student Health Centre on **061-202534**
  - Outside of normal working hours, or if the Student Health Centre number is engaged/busy, use the laboratory phone to dial 3333 for UL security personnel who will then contact the ambulance service. Contact one of the PESS First Aiders – names are listed on the PESS laboratory door.
6. When contacting the above clearly state: Location, Building, Room Number, Nature of Incident/Accident and provide a contact number.
7. Complete the UL 'Accident & Emergency' form (completed by the investigator, not the volunteer). Forms available on UL HR website: <https://www.ul.ie/hr/hr-policies-procedures-and-forms-z>

**6**

**Level of supervision required for procedure**

PESS lecturing, research staff and teaching assistants

PESS postgraduate researcher

Others, please specify

Trained PESS postgraduate student

Trained PESS undergraduate student

**7**

**Other documentation required for this assessment ?**

Pre-test subject questionnaire

Detailed protocol

Others, please specify

Participant Information Sheet

Participant Consent Form

For office use only

## PROCEDURES INVOLVING HUMAN SUBJECTS

Procedure No **SS 008**

Title of Procedure **Muscle testing on an isokinetic dynamometer**

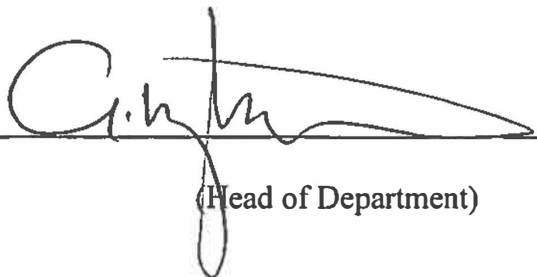
Name of Assessor **Alan Donnelly** Assessment date **November 2018**

**8** **Committee approval for experiment**

**Granted**

**Others, please specify**

Comments/conditions

Signed  Date 11/1/18  
(Head of Department)