UNIVERSITY OF LIMERICK
OLLSCOIL LUIMNIGH

UNIVERSITY OF LIMERICK RESEARCH ETHICS COMMITTEE

RISK ASSESSMENT FORM – PROCEDURES INVOLVING HUMAN SUBJECTS

		Procedure No	**SS 03**
Title of Procedure	Isometric strength testing		
Name of Assessor	Alan Donnelly	Assessment date	November 2018
Does this procedure already have ethical approval ?			**Yes**
If so, enter ethical number and expiry date	**Approval No: 2019_11_SS003 _RA** **End Date: December 2028**		

1 **Please provide a brief description of the procedure**

This procedure involves healthy human volunteers performing maximal isometric (ie fixed length) contractions of muscle. This measurement would primarily be made using the knee extensor or knee flexor muscles of one leg. To measure maximal voluntary isometric contraction force, the volunteer is asked to forcibly contract their muscle against a strain gauge or load cell device. The contraction would normally last for 3-5 seconds, with a minimum 1-minute's recovery between each contraction. The volunteers will be strapped into a chair device using a waist belt or a standard seat belt whilst performing the contraction, to prevent lateral movement. Additionally, volunteers may be asked to maintain a fixed submaximal force for as long as possible, to gain some measure of endurance. These procedures are carried out as part of teaching classes or research.

2 **Location in which the procedure may take place**

x	PESS Teaching Facilities
x	PESS Research Facilities
Others, please specify	

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

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

x	University of Limerick staff or campus personnel

Others, please specify

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

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

x	None, or minimal discomfort only

All exercise carries risk of cardiovascular accident in those who are susceptible. The subjects will complete a standard pre-screen questionnaire prior to participation, and no one with a history of cardiovascular disease would be asked to undertake this procedure. Additionally, all labs and research will utilise an **informed consent document** prior to participation, which will explain the risks and will encourage all participants with a recent knee injury to withdraw from the procedure.

High force isometric contractions also carry a small risk of injury to the knee joint. Subjects who respond on the questionnaire that they have recently injured their knee will not be allowed to proceed with the test. If anyone complains of excessive joint pain during the test, the procedure will be stopped.

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 **061-20**2534
   - 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. If in PESS, 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**

x	PESS lecturers, teaching assistants or research staff
x	PESS postgraduate researcher

Others, please specify

x	Trained undergraduate researcer

7	**Other documentation required for this assessment ?**

x	PESS standard pre-test volunteer questionnaire
x	Detailed protocol

Others, please specify

x	Participant Informed Information Sheet
x	Participant Consent Form

For office use only

PROCEDURES INVOLVING HUMAN SUBJECTS

Procedure No SS 003

Title of Procedure I Isometric strength testing

Name of Assessor | Alan Donnelly

Assessment date November 2018

W

I **Committee approval for experiment**

fg Granted

D

Others, pte ase s]ecify

1

D

Comments/conditions

Signed \. 4 !A1} 1,C:::-,,,, :::::::-

(Head of Department)

Date /I L { f L