

UNIVERSITY OF LIMERICK RESEARCH ETHICS COMMITTEE

Risk Assessment Form – Procedures Involving Human Subjects

Procedure No SS 016

Title of Procedure Analysis of Motion using Accelerometry

Name of Assessor(s) Ian Kenny Assessment Date November 2018

Does this procedure already have ethical approval ? Yes

If so, enter ethical number and expiry date **Approval No: SS016**
End Date: December 2028

1 Please provide a brief description of the procedure

Accelerometers will be attached to several body sites on the individual (for example the knee joint), and the subsequent data recorded by a PC based system or an ambulatory data logger. The accelerometers will be supplied by Analog Devices (Part # - ADXL05 or ADXL202), Shimmer, Delsys Trigno, or similar type devices both wired or wireless.

Where direct application of accelerometers to the skin surface is required all research will be undertaken using isolated circuitry. The data acquisition module/procedure used during these sections will either be optically isolated to <5000V in combination with an ELC (earth leakage circuit breaker) and a surge protector (if a mains powered PC is used) or carried out using battery operated equipment (battery powered laptop PC). These procedures offer the best protection from electric shock currently available. The accelerometers will be encapsulated to further enhance the safety of the system.

This procedure will usually be done in conjunction with 3D analysis of motion (Procedure Nos. SS 010/SS 011)

Note: SOP for Delsys EMG System (wireless) is available on [PESS Sharepoint](#).

2 Location in which the procedure may take place

- Teaching Laboratory (PG-040)
- Research Laboratory (PG-043)

3 Eligibility of subject(s) to be used

- PESS student (U.G. or P.G.)
- University of Limerick staff or campus personnel
- Members of the general public engaged in research projects granted ethical approval.

4 Potential risks. To be explained before obtaining consent

- None, or minimal discomfort only

In some trials, subjects may be required to wear exercise clothing or swimming costumes so that anatomical landmarks can be easily identified and marked with retroreflective markers or tape.

A third party, preferably of the same sex as the subject, will be present during periods of physical contact between experimenter and subject.

Video recordings will be kept safe and secure and destroyed if necessary at the end of the teaching programme or research project.

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
----------	--

- | | | |
|--------------------------|---|--|
| <input type="checkbox"/> | x | PESS lecturing, research staff and teaching assistants |
| <input type="checkbox"/> | x | PESS postgraduate researcher |
| <input type="checkbox"/> | x | Trained undergraduate or postgraduate student |

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

- | | | |
|--------------------------|---|--------------------------------------|
| <input type="checkbox"/> | x | PESS standard pre-test questionnaire |
| <input type="checkbox"/> | x | Participant Information Sheet |
| <input type="checkbox"/> | x | Participant Consent Form |
| <input type="checkbox"/> | | |
- Others, please specify

UNIVERSITY OF LIMERICK RESEARCH ETHICS COMMITTEE

Risk Assessment Form – Procedures Involving Human Subjects

Procedure No

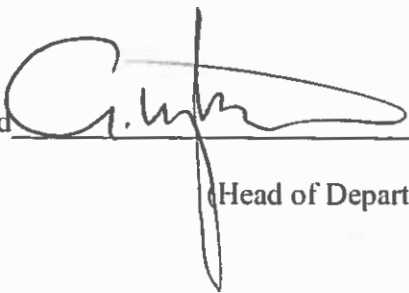
Title of Procedure

Name of Assessor(s) Assessment Date

End Date: December 2028

Others, please specify

Comments/conditions

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