

UNIVERSITY OF LIMERICK EHS RESEARCH ETHICS COMMITTEE

PROCEDURES INVOLVING HUMAN SUBJECTS

Procedure No **SS 010**

Title of Procedure **3D Motion Analysis (Normal Activity)**

Name of Assessor **Dr. Drew Harrison** Assessment date **November 2018**

Does this procedure already have ethical approval ? **Yes**

If so, enter ethical number and expiry date **Approval No: SS010**  
**End Date: December 2028**

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

In this procedure physically fit and healthy adult subjects or athletes will be filmed whilst performing normal exercise such as normal walking or running gait at moderate speed. Up to 5 video cameras will be used to obtain movement sequences. Light-weight retroreflective passive markers will be placed on the subjects joint centres and other major anatomical landmarks to aid computer construction of segmental models during analysis. The video sequences will be stored and analysed using proprietary motion analysis software (i.e. Peak Motus, APAS, or HuMan). Since the procedure only involves collection of movement on video the data capture can be carried out equally well within the University Laboratory or at another site.

As part of GDPR compliance, participants will be fully informed and made aware that they are being videoed as part of the procedure. Participants must consent to being videoed as part of the procedure. Where raw video capture is being used for research, participants will be fully informed as to how long the data will be stored for, for what purposes it is being stored and who has access to the data.

Raw video capture will be stored on password protected computers until data analysis is complete. Raw video data will be deleted at the end of the project and the anonymised non-identifiable data will be retained.

**Note:** Online motion capture does not store raw video data, it only tracks marker trajectories and stores non-identifiable data.

Standard Operating Procedure for Montion Analysis Corporation – Cortex 3D Motion Capture Software is available on the [PESS Sharepoint \(see here\)](#)

<b>2</b>	<b>Location in which the procedure may take place</b>
<input checked="" type="checkbox"/>	PESS Teaching Laboratory (PG040)
<input checked="" type="checkbox"/>	PESS Research Laboratory (PG043)
Others, please specify	
<input checked="" type="checkbox"/>	Appropriate locations such as PESS sports halls
<input checked="" type="checkbox"/>	Track or playing fields

<b>3</b>	<b>Eligibility of subject(s) to be used</b>
<input checked="" type="checkbox"/>	PESS student (U.G. or P.G.)
<input checked="" type="checkbox"/>	University of Limerick staff or campus personnel
Others, please specify	
<input checked="" type="checkbox"/>	Fit & healthy adults or athlete volunteers engaged in research projects granted ethical approval
<input type="checkbox"/>	

<b>4</b>	<b>Potential risks. To be explained <u>before</u> obtaining consent</b>
<input checked="" type="checkbox"/>	Low Risk

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 retroflective 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.

Raw video data can identify a participant. As part of GDPR compliance, participants will be fully informed and made aware that they are being videoed as part of the procedure. Participants must consent to being videoed as part of the procedure. Where raw video capture is being used for research, participants will be fully informed as to how long the data will be stored for, for what purposes it is being stored and who has access to the data.

Raw video capture will be stored on password protected computers until data analysis is complete. Raw video data will be deleted at the end of the project and the anonymised non-identifiable data will be retained.

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**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. 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>

If an emergency or incident occurs offsite, follow the local procedures for dealing with such an event. **Ensure you are aware of the offsite local safety procedures in the event of a foreseeable emergency.**

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**Level of supervision required for procedure**

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

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**Other documentation required for this assessment ?**

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

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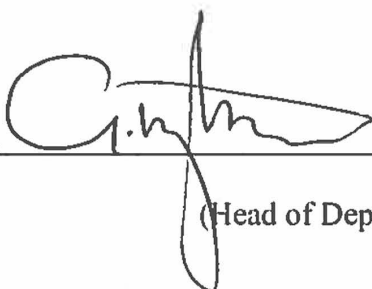
Name of Assessor

Assessment date

End Date: December 2028

Others, please specify

Comments/conditions

Signed  Date 11/1/19  
(Head of Department)