UNIVERSITY OF LIMERICK
OLLSCOIL LUIMNIGH

UNIVERSITY OF LIMERICK RESEARCH ETHICS COMMITTEE

RISK ASSESSMENT FORM – PROCEDURES INVOLVING HUMAN SUBJECTS

		Procedure No	**SS 001**
Title of Procedure	Blood pressure measurement (Sphygmomanometry)		
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_SS 001_RA** **End Date: December 2028**

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

Blood pressure is the force exerted by the blood on the wall of a blood vessel (arteries) as the heart pumps (contracts) and relaxes. This procedure involves the measurement of brachial arterial blood pressure using a standard cuff sphygmomanometer with a stethoscope/and or automated sphygmomanometer. The participant should be seated with their back against chair and with feet flat on the floor. Relax and breathe normally for a 3-4 minutes. The recorder should place the cuff on the upper left arm, with the tube facing out. Ensure the participant is comfortable. The participants arm should be supported on a table at elbow height with the arm in a horizontal position at heart level. The cuff shouldn't be too tight before starting the test.

Briefly, the cuff is inflated to a pressure above systolic pressure, and the pressure is slowly reduced until both systolic pressure and diastolic pressure have been recorded using a stethoscope to listen for Korotkoff sounds (or the automated device detects these sounds). After a period of approximately 10 seconds, the cuff will then slowly deflate (automatic) or should be deflated. Both the systolic (higher number) and diastolic (lower number) should be recorded. Two measures should be taken, allowing a minimum of 3 minutes rest between recordings.

This procedure is used in UG and PG teaching and in student and faculty research. The individual measuring BP will have received appropriate training in BP measurement technique. BP recordings are made at rest, during and after exercise. In between measurements, the cuff will be deflated.

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

x	PESS Teaching Facilities
x	PESS Research Facilities

Others, please specify

x	University of Limerick Facilities
x	Offsite locations, e.g. schools, clubs

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 (adolescents age 13+, adults) engaged in research projects granted ethical approval.

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

X	None, or minimal discomfort only

There is a slight risk that ischaemic damage to the arm could occur if the cuff remains inflated for a very long period. Additionally, it is theoretically possible that over-inflation of the cuff could result in soft tissue injury. Students will be instructed on use of the technique, and will be cautioned about over-inflation and about the potential for ischaemic injury if the cuff is left inflated for too long.

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

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.**

6	**Level of supervision required for procedure**

x	PESS lecturing, research staff and teaching assistants
x	PESS postgraduate researcher

Others, please specify

x	Trained postgraduate student
x	Trained undergraduate student
x	Physical Education Teacher

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

	PESS standard pre-test questionnaire
	Consent from parents/guardians for minors (under 18)

Others, please specify

x	Participant Information Sheet
x	Participant Consent Form

For office use only

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Title of Procedure I Blood pressure measurement (Sphygmomanometry)

Name of Assessor | Alan Donnelly | Assessment date | Nov 2018

IT] I **Committee approval for experiment**

[D | Granted

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Others, pletse s]ecify . ----------

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Comments/conditions

Signe •v:iv vv'-- Date 11/ I *lt'J*

(Head of Department)