Experimental Protocol

Experiment

Study of temperature oscillations in the peripheral circulation with infrared thermography

Formalities

Date:	17.10.2017 and 18.10.2017
Place:	Regionshospital Nordjylland in Hjørring
Conducted by:	Toby Waterstone, Christian Mortensen, Annabel Bantle, Andrei Ciubotariu

Background

Aim:	The aim of the experiment is to measure vasomotion in the hand in two conditions	
Type of study:	Quantitative research	
Subjects:	Number of subjects:	4
	Inclusion criteria:	• Subjects should have at least one hand to perform the measure on • The cuff should be able to fit the arm circumference • The subject should be able to sit still for a greater extend of time
	Exclusion criteria:	• Health conditions that sets the subject in risk of injury when conducting the experiment like high blood pressure. • Age under 18 years old • Age over 60 years old • Obesity to a greater extend • Diseases that triggers tremors

Test Requirements

Materials:	Xenics Gobi 640 17μm GigE Infrared camera with power cord, Tripod, Cuff, Chair, Computer with recording software and power

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	cord, Vacuum pillow, Vacuum pump, Stopwatch, Ethernet cable, Computer.
Setup:	
Preparation:	1. The camera has to warm up for 15 min. 2. During this laptop, software and all cable connections should be set in operational readiness.
Procedure:	1. Systolic pressure is measured and mean is calculated 2. Pressure to be used in cuff is calculated 3. The cuff is affixed at the subjects dominant arm without tighten it. 4. The subject can take place in the chair. 5. The hand is put on the vacuum pillow. 6. The vacuum pump is attached to the pillow. 7. The camera needs to be positioned 37.5 cm over the hand with the focus adjusted. 8. If the camera is stable, the first measurement can be started for exact 20 min. 9. Save file as subject_number of subject. 10. Tighten the cuff on the arm of the subject with XXX, without moving the subjects hand. 11. The second measurement can be started for exact 20 min. 12. Maintain same pressure for 20 min. 13. Save file as subject_number of subject_cuff