



The University of
Nottingham

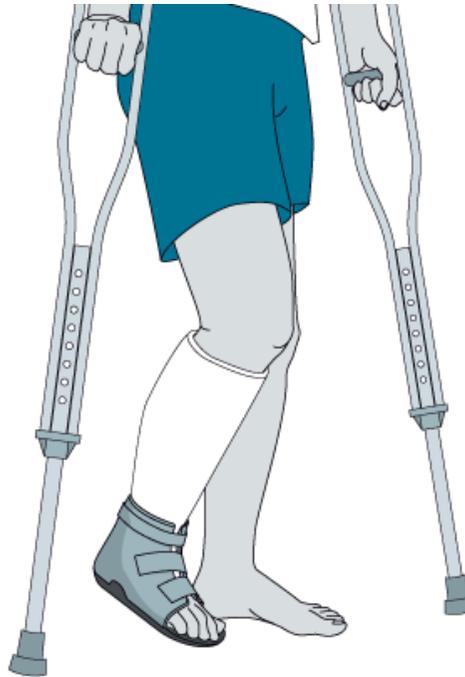
UNITED KINGDOM • CHINA • MALAYSIA

Three day leg cast study



Study information

Our research team is interested in calf muscle changes to inactivity/disuse in young and older volunteers. To investigate this we will be placing a below knee cast on volunteers and measuring the changes which happen to the muscle.



We are looking for young (18-40 yrs) and older (65+) volunteers to have a cast applied on one of their legs for 3 days.

Number of study visits

The study involves a total of 4 visits to the David Greenfield Unit which is located on B floor in the Medical school, Queens Medical Centre.



Visit 1: Medical screening
approx. 9:00AM-10:30AM

Visit 2: Heavy water visit
approx. 9:00AM-14:00AM
Lunch provided

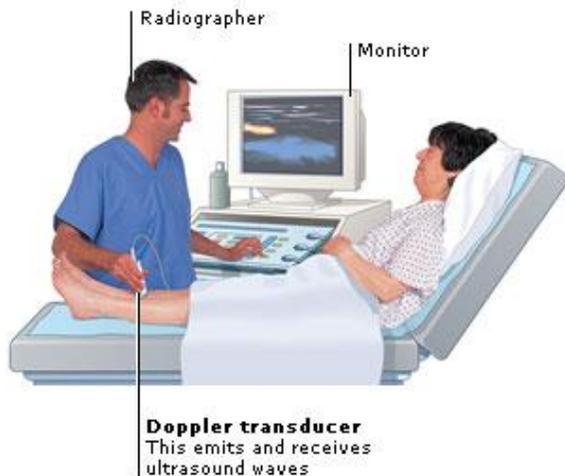
Visit 3: Pre-cast visit
approx. 9:00AM-16:00AM
Lunch provided & taxi to take you home.

Visit 4: Post-cast visit
approx. 9:00AM-16:00AM
Taxi to pick you up from home and lunch provided

What does the study involve?

Drinking heavy water: Heavy water is physically and chemically the same as normal water but is around 11% heavier. Because the water is slightly heavier, we can measure new molecules made by the body.

Ultrasound scan: This is the same scan that is performed during pregnancy to produce images of the baby. In this case an ultrasound scan will be performed to produce an image of your calf muscle



Muscle sample: Using a small needle we will take a small amount of muscle from your calf. We will use local anaesthetic (numb the area) which will make the procedure painless.

Oral glucose tolerance test:

Some people have this test when they visit their GP. You are asked to fast overnight and attend the GP. A blood sample will be taken and you will be asked to drink a sugary drink. Two hours after having the sugary drink you will provide another blood sample to see how your body handles sugar. We will do the same test during the study but with more blood samples to be taken from a cannula (only one needle will be inserted for all the blood samples)

DEXA scan: DEXA stands for 'Dual Energy X-ray Absorptiometry' and it is a test used to measure the quality of your bone. The machine also measures the amount of fat and muscle you have in your body.



This research will help understand why people lose muscle after an injury and help them recovery quicker.



If you are interested in the study please contact

Mr Arfan Ali
David Greenfield Human Physiology Unit,
School of Life Sciences
University of Nottingham
Medical School, Derby Road
Nottingham, NG7 2UH

Tel: 0115 8231412

Study Phone: 07422562380

Email: msxaa20@nottingham.ac.uk

An inconvenience allowance will be paid once the study is completed