### **Public Events and Talks**

A number of talks will be given by Professor Gavin Murphy, British Heart Foundation Chair of Cardiac Surgery in 2016

March 5th February 9th Leicester General Hospital Glenfield Hospital

'Can obesity be good for you?'

**Education Centre** Clinical Education Centre

6.00pm

Link: Leicester's Marvelous Medicine Link: www.takeheartleicester.co.uk

10.30am

Informal talk to Take Heart Leicester

### **Cardiovascular Patient Group Meetings**

#### Would you like to help steer heart research?

The patient and public group meet on the 14th January, 11th February, 10th March, 14th April at Glenfield Hospital at 10am. If you would like more information or to book a place to attend please contact the PPI Manager on 0116 258 4737.

### **Lifestyle Research Public Meetings**

#### Are you interested in research about preventing illness, including diabetes?

The lifestyle research unit holds focus groups several times a month. For information on the current agenda please contact Rebecca Pritchard on 0116 286 8686 or by email rp237@le.ac.uk.





University Hospitals of Leicester



### Public Lecture Series

### Join us for one of our public lectures at Loughborough University.

Brockington Building, Room U020 Veronica Varela-Mato

Sitting at work? Do working lifestyles impact your health 27 January

Brockington Building, Room U005 Professor Eef Hogervorst

Glucose or fats? Which is to blame for increasing risk for age-related morbidity?

16 March

Brockington Building, Room U005 Dr Patrice Carter

Don't believe the hype! Understanding the truth behind the shock headlines in nutrition

Brockington Building, Room U005 Professor Gavin Murphy

Can obesity be good for you? 24 May

Brockington Building, Room U005 Dr Gary O'Donovan

Fat, fit and healthy: is weight loss the wrong goal?

14 June

Full directions are available on: www.lboro.ac.uk/about/findus.html

All lectures start at 6:30pm with refreshments served at 6pm

To book your place please email Alison on a.stanley@lboro.ac.uk. or telephone 01509 226445



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Watch our video's on Vimeo NIHR Leicester Respiratory BRU Leicester Cardiovascular; Leicester Respiratory; Leicester-Loughborough Diet, Lifestyle and Physical Activity; Biomedical Research Units in partnership with CLAHRC (Collaboration for Leadership in Applied Health Research and Care); **University of Leicester and Loughborough University** 



# INform

January 2016 **ISSUE 5** 



### Stand up campaign to boost office health

Office workers at Leicester's three hospitals are being encouraged to stand up more on the job as part of a new research project.

New height-adjustable desks or desk attachments are being made available in a bid to stave off the increased risk of chronic disease, such as Type 2 diabetes, associated with prolonged periods of sitting.

High levels of sitting have been linked to the development of Type 2 diabetes, heart disease and cancer but something as simple as regularly breaking up sitting by standing has been shown to benefit health

Staff at Leicester Royal Infirmary, Leicester General Hospital and Glenfield Hospital are being asked to take part in a new study called SMArT Work.

SMArT Work is providing NHS office

workers with the opportunity to reduce the amount of time they spend sitting at work by providing them with a heightadjustable desk or desk attachment that will allow them to switch between sitting and standing to work. The study will evaluate how this impacts on health over a 12-month time period

The project is a collaborative effort between Loughborough University, University of Leicester and the Leicester Diabetes Centre. The NIHR Leicester-Loughborough Diet, Lifestyle and Physical Activity Biomedical Research Unit has funded the project.

Dr Fehmidah Munir, from Loughborough University's School of Sport, Exercise and Health Sciences, is leading the study. She said: "Prior to the standing desks being installed we will be assessing how much time the staff taking part in the study spend sat down and inactive,

and then reassessing this at the end of the 12-month trial. This project is a real opportunity to help those who sit for long periods of time to change their sitting habits for the better."

Study Co-ordinator Dr Sophie O'Connell said: "Our message is simple; sit less, move more and we're trying to encourage this in office environments. Changes in the demands of work and increased use of computers have led to long, uninterrupted periods of occupational sitting.

"In recent years, studies have emerged demonstrating that sitting is associated with an increased risk of Type 2 diabetes and heart disease, independent of the amount of exercise people do.

"This suggests that even if an individual goes for a 30-minute run every day this may not compensate for the amount of sitting time accumulated throughout the day. This is worrying since data shows that adults spend around 60 to 70 per cent of their waking day sitting, with office workers sitting for 80 per cent of the day."



### **Findings from the** ACUTE **Study**

The number of people diagnosed with Type 2 diabetes is increasing rapidly and about 2.6 million people in the UK currently have diabetes. Having Type 2 diabetes puts people at a high risk of having heart problems, kidney failure and complications resulting from nerve damage in the eyes and feet.

With this in mind, our research team was interested in developing new ways to prevent diabetes. There is emerging evidence suggesting that spending prolonged periods sitting (commonly defined as sedentary time) is unhealthy and may increase the risk of diabetes. We were keen to find out whether reducing the amount of time people spend sitting and replacing it with standing and/or walking reduced the amount of sugar and fat in their blood, therefore reducing the risk of diabetes. This study was designed to answer these questions.

In total, we recruited 34 participants (all women), with 22 going on to complete the study. The study involved visiting the Leicester Diabetes Centre and undergoing two of the following three conditions in a random order (each condition lasted 7.5 hours):

#### 1. Prolonged sitting

- 2. Sitting with 5-minute bouts of standing every 30 minutes
- 3. Sitting with 5-minute bouts of walking every 30 minutes

The day after each condition, participants came back to the department to undergo the prolonged sitting condition, regardless of what they had done on the previous day.

We found that when people broke up sitting time every 30 minutes by standing or walking for 5 minutes they had lower sugar levels in their blood (also called glucose) across the course of the day. When sitting was broken up participants also had lower levels of insulin in their blood. Insulin is produced by the pancreas and it causes sugar to move from the blood into cells where it can be used for energy. This helps to lower sugar levels in the blood.

We also found that these changes carried over into the next day, so the effects lasted at least 24 hours.

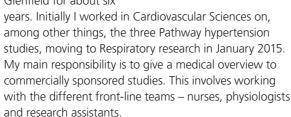
This is the first study in the world to show that both standing and walking reduce sugar and insulin levels. This simple approach could inform future public health programmes aimed at improving the health of individuals like you.

We would like to repeat these tests using slightly different measures to try and understand why standing and walking makes such a difference to sugar and insulin levels and whether similar results occur in men.



Hello, my name is Chris White and I am the Clinical Trials Physician in the Respiratory Biomedical Research Unit [BRU] at the Glenfield Hospital.

I have been asked to write something about myself and my work in the BRU. I am, by training, a general practitioner but have worked in research at the Glenfield for about six



My work involves seeing volunteer patients at all stages of the trials whenever the protocol or the clinical status of the patients demands it. An important part of this at the beginning of a trial is explaining study obligations and taking formal, informed consent. This involves explaining procedures including possible risks and benefits that the trial may have for the patient. As patients have different levels of understanding and experience of clinical trials, this means modulating the information given whilst remaining true to the protocol. In practice it means telling the patients as much about the study as possible before they reach the point of information overload and stop listening! After a patient enters the trial the physicians' job is to make sure he or she remains eligible and evaluating study drug and trial procedures tolerance. All of this has to be recorded both on the trial documents and the hospital medical files. The latter are very important for trial coherence and above all for safety if the patient needs treatment outside of the unit.

One of the most pleasant parts of my job is learning about the monoclonal antibodies [Mabs] that most of the trials are investigating. It is very interesting to observe the effects of these molecules—as yet unlicensed—up close. The effects and side effects are, as yet, only partially defined; the accuracy of our records will ultimately determine these profiles. So no pressure!

Another more immediate pleasure is meeting the volunteers who give their time generously to the studies. Hearing the stories that have brought them to us is both agreeable and stimulating. In fact a major attraction of clinical research is having the time and space to get to know the patients. Being part of a like-minded team is also a great privilege—especially as there are so many expert bakers who demonstrate their talents regularly. Literally the icing on the cake!

### **Spontaneous Coronary Artery Dissection** (SCAD)

Patients who survived the rare condition spontaneous coronary artery dissection and approached the Cardiovascular BRU to set up a patient led research project into the condition have established their own charitable organisation. The charity has been created to raise awareness of the under-diagnosed condition, support those diagnosed with it and their family and friends, and help raise money for research into the condition.

Spontaneous Coronary Artery Dissection (SCAD) is an unpredictable event with patients usually experiencing a sudden, unexpected heart attack. This can be due to a tear or bruise developing in a coronary artery, leading to a loss of blood flow to the heart.

It can affect all age groups and is recognised as a cause of heart attacks in young adults. Both sexes can be affected but it is more common in women, in particular during or soon after pregnancy. This condition cannot be predicted and as yet the cause is unknown.

The SCAD Study UK is being led by Dr David Adlam and Dr Abtehale Al-Hussaini at the Leicester Cardiovascular Biomedical Research Unit and is funded by the British Heart Foundation and the National Institute for Health Research Rare Diseases Translational Research Collaboration. More than 300 people have registered their interest in taking part in the study and so far 50 participants have been recruited and are actively taking part.

The SCAD study is a fantastic example of patient led research with survivors of this condition getting together via social media and then approaching Dr Adlam to investigate this condition in the UK.

The UK SCAD survivors held their first ever conference on the 7th November 2015, at the Leicestershire County Cricket Club. They used this inaugural event to launch their UK charity, Beat SCAD.

More information can be found on their website beatscad.org.

## The **GENVASC** Study

Coronary artery disease (CAD) is one of the most common causes of premature death and disability in the UK and lifestyle factors, such as smoking and poor diet play a huge part in increasing your risk of developing CAD. However, we also know that heart disease can be inherited. There has already been significant progress made in identifying individual genetic differences that can affect your risk of CAD, but further research is being carried out to help us better improve our accuracy of identifying those people who are at higher risk of developing CAD, so that we can better target preventative measures.

The GENVASC study is one of the flagship projects being run by the Leicester Cardiovascular Biomedical Research Unit. It is supported by the National Institute for Health Research and led by Professor Nilesh Samani.

This study is being delivered by GP surgeries across the whole of Leicestershire. GPs recruit patients when they attend for their NHS Health Check. The first GENVASC participant was recruited at the end of September 2012 and to date over 15,000 participants have taken part. The recruitment phase of the study is set to continue until March 2017.



Professor Samani and the GENVASC study team would like to extend their warm thanks for the generous participation of patients across Leicestershire and the continued support from healthcare professionals within recruiting practices and the Leicester City Clinical Commissioning Group, West Leicestershire Clinical Commissioning Group and East Leicestershire & Rutland Clinical Commissioning Group.

If you would like any more information about the GENVASC study, please go to www.le.ac.uk/bru.