World Chronic Obstructive Pulmonary Disease Day

On 18th November 2015 the Respiratory Biomedical Research Unit at Glenfield Hospital held a coffee morning in recognition of world Chronic Obstructive Pulmonary Disease (COPD) day. People attended to enjoy an informal coffee and listen to talks given by Dr Lena George and Dr Linzy Houchen-Wolloff on various aspects of the disease and to find out about research studies on COPD here in Leicester.

The National Institute for Health Research (NIHR) Leicester Respiratory Biomedical Research Unit works in partnership with University of Leicester and University Hospitals of Leicester NHS Trust, looking into research in Respiratory diseases such as COPD and Asthma. The research takes place due to the input of specialist research staff and the invaluable contribution of patients that agree to participate in our research studies.

COPD has been recognised to be a common respiratory disease, which for the most part is preventable. Patients with COPD usually present with shortness of breath, cough, and increased production of phlegm, chest tightness and wheeze. Exacerbations of COPD are the worsening of symptoms. Exacerbations can be made worse by viral and bacterial infections.

Current strategies to manage COPD focus on slowing the progression of the disease by encouraging smoking cessation and relieving symptoms with the use of inhalers, mucolytics and oxygen. Exacerbations are treated with nebulisers, antibiotics and steroids and overall health status improvements are done by encouraging physical activity, pulmonary rehabilitation and promoting influenza and pneumococcal vaccinations.

When examining the lung tissue and airways some of the changes seen in patients with COPD are increased inflammatory blood cells.

A number of research studies to identify newer treatments are taking place at the Respiratory BRU, such as the GALATHEA study that involves the use of an interventional product/drug. By using Benralizumab (anti IL5 receptor) we hope to decrease eosinophil inflammation and thereby decrease exacerbations in patients with COPD. Another research study being carried out at the Respiratory BRU is GILEAD. GILEAD is a non-drug trial which aims to identify a certain protein called matrix metalloproteinase 9 which is believed to be increased in COPD exacerbations and may contribute to disease severity. If this protein is identified to be higher in exacerbation state or in more severe COPD it can help to guide the future development of drugs that will inhibit this protein’s activity. The main aims of such research studies are to help in the better management of respiratory disease and improve overall quality of life.

If you would like to find out more about COPD research here in Leicester please contact Michelle Bourne 0116 2583277 or email michelle.bourne@uhl-tr.nhs.uk
Rare Diseases Research

As part of Rare Disease Day 2016 film crews from ITV and the British Heart Foundation visited Leicester’s Cardiovascular Biomedical Research Unit (LCBRU) to film a piece on SCAD, a rare heart condition which primarily affects young women.

Filming took place in the LCBRU labs, MRI scanners, and clinical and vascular phenotyping suites, to show the range of tests SCAD survivors take part in to support research into the condition.

SCAD - Spontaneous Coronary Artery Dissection - is an unpredictable event in which patients suffer a sudden, unexpected heart attack. It mainly affects young, healthy women and in some it can occur during later stages of pregnancy or after giving birth. Sadly some cases of SCAD are fatal. SCAD results from an acute bleed into the vessel wall of a coronary artery creating a false lumen (a lumen is the term for the inside of a blood vessel, the ‘tube’ down which the blood is supposed to flow). This accumulation of blood compresses the true lumen, restricting or preventing blood flow to the heart muscle and causing a heart attack.

The SCAD Study UK is being led by Dr David Adlam and Dr Abtehale Al-Hussaini from 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 400 people have registered their interest in taking part in the study and to date, more than 70 people have participated in tests to help researchers try to better understand the condition.

The study aims to find the underlying causes of SCAD and long-term impacts for survivors, such as the risk of recurrent SCAD and how to best manage the condition. The LCBRU also aims to become an information point for patients, both nationally and internationally.

Rare Disease Day takes place on the last day of February each year. Its main objective is to raise awareness amongst the general public and decision-makers about rare diseases and their impact on patients’ lives.

Rare Diseases Day was launched by Eurodis in 2008 as a European initiative. In 2015 over 80 countries throughout the world took part.

For more information on SCAD see the charity BeatSCADs website www.beatscad.org.uk and information on SCAD research at Leicester’s LCBRU site http://www2.le.ac.uk/research/current-research/bru/our-research/research-themes/genetics-and-biomarkers/scad.
Sitting Time and Health

Leicester Diabetes Centre researcher Kishan Bakrania challenges the view that the health risks of sitting for long periods of time cannot be counteracted with exercise in his article in the BMC Public Health journal.


Office workers can stave off health problems associated with sitting down all day by regularly exercising, a new study has found.

Being physically active may offset some of the deleterious consequences of spending large amounts of time not being active, the paper published in BMC Public Health has concluded.

The study further emphasises the importance of physical activity in the promotion and maintenance of health.

In contrast, people described as ‘couch potatoes’ are putting their health at risk by spending too much time sat down and not exercising, the paper said. Low sedentary (sitting) time in the absence of physical activity is associated with higher HDL (good) cholesterol levels.

Sedentary behaviour is defined as habitual sitting time. Higher levels of sedentary behaviour are associated with worse health, whereas higher levels of physical activity are associated with better health. However, the extent to which the combinations of these behaviours influence health is less well-known.

The aim of this study was to examine the associations of four categories of physical activity and sedentary time compared with markers of diabetes and heart disease.

The researchers used data from the 2008 Health Survey to paint a nationally representative sample of English adults.

They grouped people into the following categories, including the physically active (those meeting the recommended guidelines for physical activity) and low sedentary ‘busy bees’, the physically active and high sedentary ‘sedentary exercisers’, the physically inactive (those not meeting the recommended guidelines for physical activity) and low sedentary ‘light movers’ and physically inactive and high sedentary ‘couch potatoes’.

Lead researcher Dr Thomas Yates, from the Leicester Diabetes Centre and the University of Leicester, concluded: “We demonstrate that in comparison to adults who are physically inactive with high sedentary time, those who are physically active have a more desirable health profile across multiple cardiometabolic markers even when combined with high sedentary time. In contrast, low sedentary time in the absence of physical activity is associated with higher HDL-cholesterol levels.”

“By suggesting that being physically active may offset some of the deleterious consequences of routinely engaging in high levels of sedentary behaviour, this study further emphasises the importance of physical activity in the promotion and maintenance of health.”

“However, given the observational design, the relative magnitude of effect of physical activity and sedentary behaviour on health needs further examination through experimental or intervention level research.”

University of Leicester researcher Kishan Bakrania, who also worked on the study, added: “This research is significant because it demonstrates yet again why physical activity and exercise is so important. It shows that people who spend large amounts of time not moving either through work, leisure or lifestyle can counteract some of the negative effects of sedentary behaviour by regularly exercising.”

The Leicester Diabetes Centre is an international centre of excellence in diabetes research, education and innovation led by Professor Melanie Davies and Professor Kamlesh Khunti. The centre is a partnership between the University Hospitals of Leicester NHS Trust and the University of Leicester.

Lifesavers Needed!

New Project Looking at People Aged 18-30 with Type 2 Diabetes

Typically a disease associated with older age, Type 2 diabetes is increasingly diagnosed in younger people. We desperately need to develop approaches that help people aged 18-30 with type 2 diabetes live as healthy a life as possible.

You are the experts! If you’re aged 18-30 and have Type 2 diabetes please help us work out what will work for people like you. There are lots of ways to help, from completing a quick survey to being a co-applicant on a bid. We know you’re busy, so if you’re keen to help but can’t come to one of our focus groups, you can still get involved through our website at http://www.leicesterdiabetescentre.org.uk/ or our Facebook page ‘changing care for young people aged thirty or less with type 2 diabetes what they think of our ideas.’

Take Heart Leicester and Research

Take Heart Leicester is a charity which has about 200 members, all of whom have an interest in the heart research programmes that are run in Leicester’s Hospitals.

Most people recognise that whilst they may not benefit directly from the research they will be helping others in the future.

Two of the objectives of the charity are:-
- the furtherance of health education
- the support of medical research.

The participation of members in achieving these objectives takes many forms, including participation in a number of Patient and Public Involvement Groups, and sitting on Steering Committees.

A number of the members also are trained to act as Ward Assistants and Patient Visitors, when they can help patients to deal with the trauma of heart operations and procedures.

In January Take Heart Leicester supported the Diet, Lifestyle and Physical Activity BRU by considering what types of information and education would be useful for people who live with more than one medical condition. Many of the members themselves live with several medical conditions so they were able to offer valuable insights. In small groups they considered the following questions:

• What barriers would prevent people attending education sessions to help with multiple conditions and what would encourage them to attend?
• Sessions will focus on lifestyle. What issues do you think we should discuss?

What support should we provide before and after people take part in education sessions?
• What do you think about having people with different medical conditions in the same sessions?
• How many sessions would people be willing to attend and how often?

The group’s conclusions will be included in an application for funding to develop and research the usefulness of an education package for people with more than one medical condition.

If you would like to help us develop research applications in the areas of diet, lifestyle, physical activity, hearts, lungs, kidneys or diabetes please telephone 0116 258 8686 and ask to speak to Rebecca.

Public Lecture Series

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

May 24th Can obesity be good for you?
June 14th Fat, fit and healthy: is weight loss the wrong goal?
Sept 13th Judging, nudging or fudging: can wearable technologies help us with lifestyle behaviour change?
Oct 11th Diet and lifestyle through the ages: our past, present and future.
Nov 8th Sport and exercise with a kidney transplant: celebrating the gift of life

Refreshments available at 6pm Lecture start 6.20pm
To book email a.stanley@lboro.ac.uk

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Watch our video’s on Vimeo
NIHR Leicester Respiratory BRU