

VOLUNTEER *TIMES*

Autumn 2014

About the MRC Epidemiology Unit

The MRC Epidemiology Unit is a department within the University of Cambridge. Our aim is to understand the genetic, developmental and environmental factors that influence the development of obesity, diabetes and related metabolic disorders, and to translate this understanding into measures to prevent them.

The Unit has a number of inter-linked research programmes that are supported by a core set of large scale epidemiological studies of broad strategic importance, and by a larger number of studies which have a more specific focus on particular factors that influence behavior and health.

The Unit hosts the Centre for Diet and Activity Research (CEDAR), one of five UKCRC funded centres of excellence in public health research, which has enabled the Unit to develop its work on the study of the wider factors that affect dietary and physical activity related behaviours and the evaluation of population-level interventions.

Underpinning all MRC Epidemiology Unit scientific programmes are specialist research support teams which are primarily involved in data collection, measurement and providing core scientific infrastructure. The use of a common set of studies supported by a shared infrastructure is key to the success of our research.

Lifestyle matters!

A decade ago Unit researchers joined colleagues in Denmark and the Netherlands to investigate the benefit of combining lifestyle changes and medication in managing type 2 diabetes.

Two recent publications from the ADDITION study show that making several small changes to lifestyle can substantially reduce the risk of heart disease following a type 2 diabetes diagnosis, over and above the benefits seen with medication alone.

www.mrc-epid.cam.ac.uk/blog/lifestyle-and-type-2-diabetes-insight



Everybody Active, Every Day: From research to policy

In October Public Health England launched "Everybody Active, Every Day", a new national, evidence-based approach to embedding physical activity into the fabric of daily life and make it an easy, cost-effective and 'normal' choice in every community.

The report cited recent results from the iConnect study led by MRC Epidemiology Unit & CEDAR Programme leader Dr David Ogilvie in cooperation with the charity Sustrans, which demonstrated that the provision of new, high-quality, traffic-free cycling and walking routes in local communities has encouraged more people to get about by foot and by bike.

www.gov.uk/government/publications/everybody-active-every-day-a-framework-to-embed-physical-activity-into-daily-life

Find us online! We've relaunched our website with a new layout to keep you informed about all our latest research and study news: www.mrc-epid.cam.ac.uk

We're also on [Twitter](#), follow us [@MRC_Epid](#)

EPIC Norfolk: A new chapter begins



For 20 years, the people of Norfolk have been contributing to one of the largest European research studies- the European Prospective Investigation of Cancer and Nutrition (EPIC). This study is a well established observational study looking at the relationships between diet and lifestyle and how these affect health. Between 1993 and 1997, EPIC cohorts in Britain and across Europe recruited over half a million men and women in ten countries, including 30,000 in Norfolk (EPIC-Norfolk).

The participants from Norfolk have led the way in helping scientists to understand what can be done to improve health through a better understanding of the role of lifestyle and biological factors.

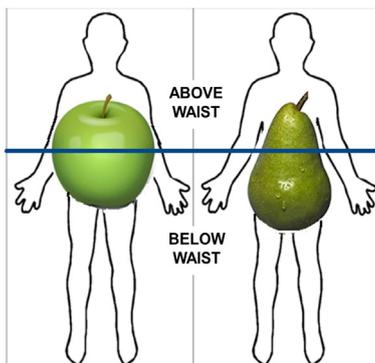
Each of the three previous phases of EPIC-Norfolk has seen the study broadened to ask new questions, while remaining true to the overall aim of uncovering the mechanisms which determine why some people age more healthily than others.

4HC - the Fourth Health Check

This latest phase of the EPIC-Norfolk study is being sponsored by the University of Cambridge and is funded by the Medical Research Council. Prof. Nick Wareham, Director of the MRC Epidemiology Unit, is leading this phase in collaboration with Prof. Kay-Tee Khaw of the Clinical Gerontology Unit.

The aim of the 4HC is to investigate how levels and patterns of physical activity undertaken by participants relate to body composition. We hope that this research will contribute to developing interventions aimed at keeping people more active as they get older.

There is also a lot of interest in where fat is located within the body. Some people collect fat around their hips and buttocks, giving them a "pear" shape. Others build up fat around their waist, giving them more of an "apple" shape. Current research indicates that if fat is carried mainly around the waist, a person is more at risk of developing obesity-related health concerns such as diabetes. This research has the potential to help in the prevention of these common diseases.



The Family Study: A Future Direction for EPIC-Norfolk?

Most human population studies focus on recruiting individuals who are not related, but there is a growing appreciation of the value of studying closely related individuals in understanding the biological underpinnings of health-related traits. The EPIC-Norfolk cohort provides a unique opportunity to establish a family study as we know that many participants lived in a household with another EPIC-Norfolk participant at baseline, and that many women taking part in the study have children.

We have designed a questionnaire to ask EPIC-Norfolk participants if they would be willing and able to forward study invitations to their children, grandchildren and potentially, great-grandchildren, which we are sending to a sample of EPIC study participants. If you receive the questionnaire, we would be very grateful if you could complete and return it to us using the address provided.

EPIC-Norfolk Website: www.epic-norfolk.org.uk

...and introducing: Understanding Active Living in Older Age

We are currently conducting an interview study to understand more about active living in older age with a small group of participants from the **EPIC 4th Health Check**. There is a limit to what we can find out using questionnaires and health checks, so we will be using so-called qualitative research methods to find out about people's experiences with physical activity in their daily lives.

Our researchers are visiting people who agree to take part in their homes and interview them about the more and less active ways in which they spend their time. We are also joining some of them during activities such as walking the dog, gardening, sports and exercise classes, or going shopping. We are grateful to all those who have agreed to take part and are kindly supporting this new study.





Say Hello to our 500th Participant!

In July members of the Baby Milk Study team welcomed Jessica and her mother as she became the 500th participant. In the following weeks ITV News Anglia and BBC Radio Cambridgeshire broadcast interviews with mums and their babies who are participating in the study, members of the study team, and Baby Milk Study Chief Investigator Dr Raj Lakshman.



How babies are fed and grow during the first year of life can have important effects on their health in later life. While exclusive breastfeeding is recommended for around the first six months of a baby's life, this is not possible for all mothers, so many babies receive formula milk feeds, either exclusively or in combination with breast feeding.

The aim of the study is to evaluate a package of support for parents who are bottle-feeding, as previous studies by the

team have shown that many parents who give their babies formula-milk are asking for more information and support.

On enrolment parents receive either the new feeding programme that we have developed or standard advice about bottle-feeding and weaning, and both sets of parents and babies have regular face-to-face and phone meetings with trained facilitators so that any effect can be attributed to the intervention and not just the extra attention.

"The recruitment of the 500th participant is a major milestone for the Baby Milk study, which seeks to improve our understanding of infant feeding, appetite, behaviour and growth, and inform future infant feeding guidelines" - Dr Ken Ong, paediatrician and programme leader at the MRC Epidemiology Unit

Dr Lakshman encourages more babies and their parents to join the study in order to help them meet their target of 700 participants by May 2015. If you or somebody you know would like more information about participating in the Baby Milk Study, please see our web page at:

www.mrc-epid.cam.ac.uk/research/studies/babymilk/

or email: babymilkstudy@mrc-epid.cam.ac.uk

How do we get our kids more active?

We know that movement is good for us but that levels of physical activity are currently insufficient in our children. The Families Reporting Every Step to Health (FRESH) research team, led by Dr Helen Elizabeth Brown at the **Centre for Diet and Activity Research (CEDAR)** have been talking to children aged between 8 and 11 and their families, asking them what they think would work to get kids more active.

We would like to thank all of the families that have been involved with this research so far by taking part in one of our family focus groups.

Our next step is to bring together information from the families interviewed with the results of a scientific literature review to build an effective intervention to encourage the whole family to sit less and move more. Once we have a draft intervention we will be asking families for their opinions once again, by joining our testing panel.

We will be asking you for your advice on:

- **Whether you think the intervention is likely to work with children aged between 8 and 11.**
- **How we might improve the intervention to make it more family-friendly and effective.**
- **How we might evaluate the intervention (test if it works).**

If you would like to be part of our testing panel or if you would like to know more about the work of FRESH we'd love to hear from you:

email: fresh@mrc-epid.cam.ac.uk



THE FENLAND *Study* Phase 2 launches

The Fenland Study is a population-based study designed to investigate the interaction between genetic and lifestyle factors in determining diabetes, obesity, and related metabolic disorders. The Fenland Study is unique in the level of detail it collects about the health and lifestyle of participants, and the objective measurement techniques used in the screening.

In September we launched Phase 2 of the Fenland Study, with volunteers who participated in the first phase of the Fenland study returning to our testing centres in Cambridge, Ely and Wisbech for a second visit.

The launch was covered by BBC Look East and Radio Cambridgeshire, who sent reporters to our testing centres in Cambridge and Ely to talk with study volunteers, members of the Fenland Study team, and the scientists who are leading the study.

The information we collect in Phase 2 will be used to define how changes in lifestyle, environmental, genetic and metabolic factors interact over time to influence the risk of diabetes, obesity and other relevant health conditions. By improving our understanding of how these factors influence the risk over time, this study will help to inform health information, advice, and policy.

Participants who attended an initial Fenland Study visit between 2005 and 2014 and who agreed to be re-contacted will be sent invitations to join Phase 2, but it is entirely up to them to decide whether or not they wish to take part.

Participants will not all be invited back for a 2nd visit immediately, as at least 4 years need to elapse between the first and second visits. The study visit will

be a single morning visit of 3 1/2 hours, and will repeat the measurements that were carried out during their first visit.

In Phase 2 we will also invite some participants to donate a blood sample for the generation of induced pluripotent stem cells (iPSCs) for research purposes. Pluripotent stem cells are cells early in a chain of development which have the potential to become different cell types, such as those in the liver, pancreas or other organs. We can then use these iPSC derived cell types to investigate pathways that link our genetic profiles with metabolic disease. The iPSCs will not be of direct benefit to participants or anyone else in the treatment of disease, and will only be used for experimental research purposes.

We would like to take this opportunity to thank the more than 12,000 volunteers who participated in the Fenland Study over the past decade. Through their participation they have already made a huge contribution to medical research, and we hope to see as many of them as possible again over the next few years as Phase 2 gathers pace.

For more information see:
www.mrc-epid.cam.ac.uk/blog/phase-2-of-fenland-study-launches



propels

The PROMotion Of Physical activity through structured Education with differing Levels of ongoing Support for those with prediabetes (PROPELS): *randomised controlled trial in a diverse multi-ethnic community*

Research suggests that type 2 diabetes can be prevented or delayed in people with impaired glucose regulation (IGR) through changes in lifestyle such as increasing physical activity.

We are working in collaboration with the University of Leicester to run a randomised controlled trial called PROPELS assessing the effectiveness of 3 different physical activity promotion strategies:

- 1) Control group – who receive an advice booklet
- 2) Intervention group – who receive annual group education sessions for 4 years
- 3) Intervention PLUS group – who receive the same group sessions plus on going telephone and text support.

The study started in February 2014 and we have recruited 182 of our target of 440 volunteers so far. The study is continuing to recruit through local GP surgeries until the end of the year.

Thanks to all who have volunteered so far – we cannot do this important research without your help.



As the intervention phase of this study is long term (over 4 years) it will be some time until we can report the results. We will keep you posted!

For more information on the study and the team's contact details, please see:

www.mrc-epid.cam.ac.uk/research/studies/propels

GLiNT

Glucose Lowering In Non-diabetic hyperglycaemia Trial

In collaboration with the University of Oxford and the University of Leicester, the MRC Epidemiology Unit is setting up a clinical trial - GLiNT - to examine the effects of metformin, a medication to reduce blood sugar levels, in people at risk of diabetes.

There is increasing interest in the possible health benefits of metformin in preventing heart disease and stroke. In our clinical trial, we want to find out whether giving metformin to people who do not have diabetes but who have higher than normal blood sugar levels might also benefit in this way.

Initially, we plan to recruit 500 male and female participants aged 40 years or older who do not have diabetes but do have raised blood sugar levels, to a feasibility study. Participants will be recruited from the NHS Health Checks Programme, GP practices and databases held at the MRC Epidemiology Unit. As the study develops we hope to extend it to involve a further 12,500 volunteers from around Britain.

Participants will be randomly allocated to receive either metformin or placebo (dummy pill) at the beginning of the study. They will be asked to attend three appointments during the first six months and to complete questionnaires annually for 5 to 7 years. Information collected as part of the study will help improve treatment for people with higher than normal levels of blood sugar and risk of cardiovascular disease.

For further information please visit: www.mrc-epid.cam.ac.uk/research/studies/glint

Traffic and Health in Glasgow



Centre for Diet and Activity Research
A UKCRC Public Health Research Centre of Excellence

As part of a wider initiative in urban regeneration, a new five-mile section of the M74 motorway has recently been opened in Glasgow. This development provides an opportunity to evaluate a major change in the urban environment, which may have positive or negative effects on the health and wellbeing of those living nearby. The aim of this study is to increase our understanding of how and why changing characteristics of the urban environment affect the way people feel about living in their neighbourhoods, where they go in those neighbourhoods, and how active they are.

This is important because there is currently little clear public health evidence to guide decisions about investing in expensive urban regeneration projects of this kind. Indeed, an independent public local inquiry advised the government of the day not to proceed with this particular motorway because it 'would be very likely to have very serious undesirable results' for local communities. Our research will test the competing claims for and against the motorway, and will therefore help inform future policy and planning in other parts of the UK where population growth is anticipated or urban redesign is proposed.

We are now building on our previous baseline study (conducted in 2005) by investigating changes in travel behaviour, physical activity, perceptions of the neighbourhood environment, wellbeing, and road traffic casualties in a follow-up study. In 2013, we completed a postal survey of adults living close to the new motorway, as well as adults living in two matched comparison areas of the city: one where there has been a motorway since the 1960s, and one that has no motorway.

In 2014 we are inviting some participants to spend a week wearing unobtrusive monitors (accelerometers and GPS receivers) to provide objective data about their activity patterns. We will also interview a smaller number face-to-face to explore their experiences, and audit the study areas to ascertain exactly how the environment has changed. This will allow us to examine how people move through their neighbourhoods, and how this has been affected by the changes in their environment.

More information: www.cedar.iph.cam.ac.uk/research/directory/traffic-health-glasgow/



Contact us

For enquiries about studies or to let us know of a change to your contact details please get in touch using the number or email below:

Telephone: 01223 330315

Email: studyhelp@mrc-epid.cam.ac.uk

For specific studies please use the following contact details on the webpage:

www.mrc-epid.cam.ac.uk/take-part/study-contacts

For general information about our studies please see:

www.mrc-epid.cam.ac.uk/research/studies