



# Newsletter

## 2013

### Welcome to the 2013 Hertfordshire Cohort Study Newsletter

2013 will be an exciting year for HCS. The study of sarcopenia, led by Dr Harnish Patel, will be recruiting a new group of participants who will visit the research facilities down in Southampton for a day, and there is also an opportunity to get involved with a project that will focus on the history of public health in Hertfordshire. Please read on to find out more about these, as well as learn about some of the results of recent studies you may have been involved in.

2013 also marks the Centenary anniversary of the Medical Research Council (the main funder of the Hertfordshire Cohort Study). There is a full article about the history and the work of the Medical Research Council in this edition of the Newsletter.

This just leaves us to say a heartfelt thank you once again for all your help and participation in HCS; we hope 2013 is a full and happy year for you.



The Hertfordshire Cohort Study Team

### Results from the recent bone studies



Results are now available from the osteoarthritis study carried out in 2011-12, in which our nurses visited almost 450 participants from the east of Hertfordshire at home. During the visit the participants had a general

health examination, completed a questionnaire and carried out some physical performance tests. The aim of this study was to find out the effects of osteoarthritis – a condition caused by wear and tear of joint cartilage – on the lives of the individuals that have it.

We found that an individual's physical performance (i.e. their ability to stand from a chair, maintain balance, and walk) tends to be poorer if they have knee or hip osteoarthritis, and even poorer if they have both conditions. Similarly, individuals with osteoarthritis in their hands tend to have poorer grip strength. It is known that osteoarthritis can cause pain but this study has highlighted how arthritis can also affect people's ability to carry out normal daily functional tasks. Understanding these effects will allow doctors to target treatments to try to prevent these problems occurring.

376 men and women also kindly attended a session at the MRC Human Nutrition Research unit in Cambridge. At this visit they took part in several scans, including a session in a new "high-resolution" CT scanner. Since then we have been carefully analysing the scan images and have so far found that there are differences in the structure of the bones at a microscopic scale between men and women, such that men tend to have bigger and more densely packed bones. We have also begun to describe how bone changes throughout the eighth decade of life, as well as look at the differences between people of different birth weights. Investigations are ongoing and we hope to have more results for you in the next newsletter.

### Hertfordshire Sarcopenia Study - inviting more recruits

When people get older, they lose some of their muscle bulk, most noticeably in the arms and legs. As a consequence, they also become weaker. This phenomenon happens even if we maintain a reasonably active life. This loss of muscle mass and strength, known as sarcopenia, is a growing problem for older people because it may result in decreased mobility, falls and fractures. Research into sarcopenia has grown over the last 10 years and here at Southampton, we are leading the way both nationally and internationally in sarcopenia research. With your help, we have been able to examine muscle in detail using simple grip strength testing as well as

specialised scanning technology. We have shown that low weight at birth is linked to poor muscle strength in later life and that this may be related to the way muscle fibres develop in the early years of life.

We have examined muscle fibres and their genetics by testing muscle taken from the thigh by a simple biopsy procedure. So far, this has been carried out successfully and safely on 99 men from Hertfordshire who travelled down to Southampton to spend an enjoyable day performing various tests of muscle function. We would like to continue this piece of research and need your help. We

are inviting men and women to take part in this study which will involve an initial home visit by the study team followed by a trip down to Southampton General Hospital for the day. At Southampton, we will examine muscle function in more detail using a grip strength test, x-ray scanning and simple performance tests. We will also carry out a small biopsy of the thigh muscle. All transport and meals will be provided.

If you are interested please contact **Dr Harnish Patel** on 02380 777 624.

For those who have already agreed to take part, thank you.

## Celebrating 100 years of Medical Research in the UK

This year we'll be celebrating one hundred years of life-changing discoveries as the Medical Research Council turns 100. This gives us an opportunity to reflect on the achievements of the Council, both nationally and more locally in our own Unit's research, as well as to look back to where it all began...

The Medical Research Council was formed in 1913 in response to the tuberculosis epidemic. At the time 50,000 people were dying annually in the UK as a result of TB and there was no effective treatment or prevention. The government took action by using a proportion of national insurance contributions to fund sanatoria and initiate medical research in a bid to find a cure, and the MRC first convened in June 1913 to decide how the government funds should be spent. While TB was a key focus, early research projects were quite diverse and included the study of rickets and diseases of the nervous system, among others.

Since then, the MRC has provided the financial support and scientific expertise behind a number of medical breakthroughs, including the development of penicillin, the linkage of lung cancer to tobacco smoking and the discovery of the structure of DNA.

Over 40 MRC Units and Centres have been set up in the UK as well as several abroad. Our very own Unit in Southampton, the Lifecourse Epidemiology Unit, was established in 1979. It was from here that the Hertfordshire Cohort Studies were started in the late 1980s following the discovery of the Health Visitor ledgers.

Thanks to the help of our study members in Hertfordshire, we have discovered that the early life environment in the womb and the first few years has important lasting influences on health right through life. For example, bigger babies tend to have stronger bones and muscle even into late adulthood. Ongoing research

includes how diet and physical activity in older age can bring about benefits to bones and muscle as well as to other aspects of healthy ageing.

We hope that the "Hertfordshire babies" will enjoy the national celebrations taking place this year, knowing that they have played an important part in medical research in the UK. Look out for details of Centenary Celebration events taking place near you. If you have access to the internet, information can be found at [www.centenary.mrc.ac.uk](http://www.centenary.mrc.ac.uk).



## History of Public Health in Hertfordshire



A group of researchers from the University of Hertfordshire have been awarded a small grant to celebrate the Jubilee Year of the university (previously Hatfield Polytechnic). Professor Sally Kendall is Director of the Centre for Research in Primary and Community Care and is working with Dr Julie Moore from the University's oral history unit and the MRC Lifecourse Epidemiology Unit in Southampton to carry out an oral history project on the history of public health in Hertfordshire between 1932 and 2012. Public Health in Hertfordshire has

an interesting history that has been documented in some respects but there are many gaps, particularly the perspectives of the people of Hertfordshire themselves, their oral histories. One of the earliest protagonists of public health and particularly maternal and child health was Margaret Burnside. Many of you will already be aware of the vital role Margaret's meticulous record-keeping of births in Hertfordshire had in establishing the Hertfordshire Cohort Studies (HCS).

We would like to hear from the HCS members about their memories or experiences of public health in Hertfordshire, such as what it was like to be a child with measles, or to take children to the health clinic, or to be a mother in childbirth. We'd like to explore these and other questions in more depth. They provide a rich source of information about Hertfordshire's public health history in which the people of Hertfordshire have played a major part.

If you would be interested and willing to take part in this project, we invite you to contact us directly by email or phone. We will provide further information, explaining in more detail how a researcher will come to you and have a recorded conversation with you about your experiences and memories of health whilst growing up in Hertfordshire. We plan eventually to put these conversations together in book form and to publish the oral history of public health in Hertfordshire. Recorded information will be treated in strict confidence and people will only be identified in the final publication if they choose to be. The project has been approved by the University of Hertfordshire Ethics Committee.

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Visit the Hertfordshire Cohort Study website to read more about the study's findings-to-date, see staff profiles and download copies of past newsletters and booklets

If you have any questions or comments we would love to hear from you, and if you are moving house or changing your telephone number, please let us know so we can keep in touch!

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