



MRC Lifecourse  
Epidemiology  
Centre



University of  
Southampton

# Newsletter

2026

## A huge thank you from the team – Professor Elaine Dennison

The Hertfordshire Cohort Study began in 1998 – we later made it a family affair with the Hertfordshire Intergenerational Study. Over the years your contribution has supported countless research students, generated over 300 research papers, and over 200 research presentations. The generosity of participants who gave their time (and often blood, and sometimes muscle!) has given us an understanding of many aspects of health, particularly how these are impacted by experiences across the lifecourse. For me this has been a wonderful journey – I was part of the team that started the cohort in 1998, and Hertfordshire has been the central pillar of my career ever since. As we now prepare to close the MRC Lifecourse Epidemiology Centre here at Southampton, I wanted to take this opportunity to say a very personal thank you to everyone who has supported our work – we will continue to publish findings from the studies, so please do watch out on our website for updates!



## East meets West



Over the years that the Hertfordshire Cohort Study has been running, we have been fortunate enough to work with many very well-respected collaborators. One example of this is our collaboration with Professor Noriko Yoshimura based at the University of Tokyo. Through this collaboration we performed a study that considered muscle health in Japan and the UK. This work is important because muscle weakness is linked to important outcomes including disability and risk of death. We compared one measure of poorer muscle health, an assessment of strength of grip in the two countries, with several factors. Poorer muscle health was more common in Japanese participants than here in the UK. In both countries, risk factors for poorer muscle health

included being older and shorter, not drinking any alcohol, leaving education earlier and having other medical conditions. The striking similarities in factors associated with muscle health in both countries led us to suggest that a global approach to age-related muscle weakness prevention may be appropriate.

## Diet in the HCS

As you will all be aware, we have had a longstanding interest in diet – thank you to you all for completing all those questionnaires and diaries! Researchers at the MRC are particularly interested in bone and muscle health, and it has long been recognised that what we eat is very important for maintaining good muscle and bone function into later life. We were interested



✉ MRC Lifecourse Epidemiology Centre Southampton General Hospital Southampton SO16 6YD



023 8077 7624



[hcs@mrc.soton.ac.uk](mailto:hcs@mrc.soton.ac.uk)



[www.mrc.soton.ac.uk/herts/](http://www.mrc.soton.ac.uk/herts/)



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in how diet quality changes as we get a bit older – for this study we used questionnaires from 178 people who had helped us with these food questions at several points over the course of the study (in 1998-2004, 2011 and 2017). We were able to calculate a ‘healthiness’ of food score and look at the factors that tended to place people in certain groups. In general, women tended to follow ‘healthier’ diets than men and people tended to be stable in their dietary patterns - but we did not see strong relationships with bone or muscle health in this group. This study has just been published in the journal *Nutrients* and represents one of very few studies that has considered diet well into later life.

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## Osteoarthritis development and symptoms

Bone and joint health have been a major aspect of our research over the years, including studying the development of osteoarthritis, often called wear and tear arthritis, among our cohort members. This is an important area to research as osteoarthritis is the commonest type of joint arthritis. Many of you have helped us by having x-rays taken and answering questions about your joint symptoms. We previously reported that osteoarthritis appeared to be more common in our study participants who were lighter at birth, and in work that was presented at the World Congress of Osteoarthritis and Osteoporosis in 2025, we showcased work that suggested growing better over the first year of life also protected against the development of joint pain if x-ray changes of arthritis were already present. This was the first study to consider this so it is important to see if other studies show similar results. However, we know that people with joint osteoarthritis benefit from maintaining a healthy weight and staying physically active – it is never too late to reduce risk!



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## Bone health



Having enough calcium in your diet is well recognised as an important contributor to bone health but some previous research has suggested that taking calcium supplements may actually be harmful for your heart. We looked at the relationship between calcium supplements and the risk of bone fracture and heart disease in the HCS. Overall we found that better diet quality was related to a reduced risk of hip fracture and dietary calcium intake was not associated with either any fracture or hip fracture. More people who reported taking calcium supplements had experienced a fracture, and we explained this by likely recommendations for supplements from their doctor. Reassuringly a higher dietary calcium intake was protective against death from heart disease, while taking calcium supplements led to no excess risk.

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## Keeping it in the family: the HCS intergenerational study

Some years ago many of you made it a family affair by inviting your children and grandchildren to take part in our research. We used the information you provided to see if there was any association between how our original Hertfordshire participants grew early in their lives and the adult height of their children and grandchildren. We were able to link the records of 139 of our original Hertfordshire cohort members, 148 children and 198 grandchildren. We found that a 1 kg increase in original cohort member’s birthweight was associated with a 2.04 cm increase in adult height for their child. We also found positive links between cohort member’s weight at one year of age and the height of their children and grandchildren. We have also shown that both body build and dietary habits tend to track across families – these things really do stay in the family!



**THANK YOU FROM ALL OF US HERE IN SOUTHAMPTON**

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