PHOTOESSAY

The Hertfordshire Cohort Study: from historical to high-tech studies of musculoskeletal ageing in men and women entering their ninth decade

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The Hertfordshire Cohort Study (HCS) comprises a nationally unique study of 3225 men and women born during the period 1931–39 in the English county of Hertfordshire and still resident there in the late 1990s.

The study has previously been described in detail in an IJE Cohort Profile.1 In brief, from 1911 to 1948, health visitors recorded information on birthweight and weight at 1 year on infants born in Hertfordshire. In 1998, those born between 1931 and 1939 were traced through the National Health Service Central Register and a total of 7106 men and women were identified as alive and still resident in the county. Permission to contact these men and women was obtained from their general practitioners. Between 1999 and 2004, they were invited to participate in studies examining the interactions between early life, diet, adult lifestyle and genetic factors as determinants of adult disease. A total of 3225 men and women, aged 59–73 years, were interviewed at home by a trained research nurse who obtained information on the participants’ medical and social histories. Subsequently, 2997 men and women attended a clinic for further investigations. Since then, cohort-wide postal follow-up questionnaires and face to face detailed clinical studies of subgroups of the cohort have been conducted.

This photoessay describes the history of the HCS across the past 100 years, from instigation of the system that provided us with the historical records that made the study possible to the modern-day high-tech measurement systems that enable us to characterize in detail the health-related outcomes of our cohort members.

**Photo 1** Ethel Margaret Burnside was the Chief Health Visitor and Lady Inspector of Midwives in Hertfordshire from 1906 to 1919

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Medical Research Council; the University of Southampton; Arthritis Research UK; the British Heart Foundation; Wellcome Trust; National Institute for Health Research; the Porticus Foundation.
Miss Burnside set up a system whereby each birth, whether in hospital or at home, was attended by a trained midwife. Records were entered into ledgers that spanned births from 1911 to 1948.

The details included type of milk feeding in infancy, weight at 1 year and health in childhood.

The MRC Lifecourse Epidemiology Unit sought out old records from early life to test the hypothesis that non-communicable diseases have their roots *in utero*. Some were found in the nick of time!
Photo 5 Miss Burnside’s records from almost the entire county were found, and are now housed in a purpose-built archive in Southampton. The records began in 1911, and so have reached their centenary

Photo 6 Babies born between 1931 and 1939 were traced as adults, and were interviewed at home to characterize their health and well-being

Photo 7 Current lifestyle was characterized in detail including assessment of diet using food frequency questionnaires and 24-h food diaries

Photo 8 Study members were invited to attend local clinics, the first of which were held at Hertford County Hospital

Photo 9 Grip strength was measured by dynamometer as a measure of muscle strength
Acknowledgements

We thank the men and women who participated in the Hertfordshire studies, the Hertfordshire general practitioners and the nurses and doctors who conducted the home interviews and clinics. We also wish to thank the Hertfordshire Archives and Local Studies centre for providing us with some of the historical images featured.

Reference