

Channel Islands Occupation Birth Cohort Study

RESEARCH NEWS UPDATE (Spring 2001)

Health in later life of Channel Islanders born on Guernsey, Sark and Alderney between 1939 and 1946 - preliminary findings on men undergoing health examinations at the Guernsey Chest and Heart LBG.

Since 1998, the Channel Islands Occupation Birth Cohort Study has been investigating the short- and longer-term health effects of the 1940-45 German Occupation. To this end, researchers based at the University of Cambridge, and latterly at the University of London, have been collaborating with the Guernsey Chest and Heart LBG to establish whether there is any evidence that men and women born on the Islands during this period have any increased risk of ill-health in later life.

The rationale for this investigation comes from research conducted in the Netherlands, which suggest that children conceived and/or born in those parts of the country experiencing severe food shortages following the Allied invasion in 1944, appear to have an increased risk of raised blood pressure and "glucose intolerance" - both of which are implicated in cardiovascular disease. Similar food shortages occurred on the Channel Islands, since the Allied liberation of France imposed a siege on the German forces there. However, the absolute level of food available on the Channel Islands appears, by all accounts, to have been substantively better than that in the most isolated regions of Holland, while expectant and nursing mothers together with young children received additional rations throughout this period, augmented by red cross parcels.

To establish whether these, more modest, food shortages in the Channel Islands may have had any long-term effect on the health of Channel Islanders conceived and/or born during this period, we compared blood pressure measurements and blood glucose concentrations of individuals undergoing health screens at the Guernsey Chest and Heart LBG. To protect the confidentiality of medical records linked to births registered on Guernsey during this period, the Guernsey Chest and Heart LBG undertook to match the records involved and only released anonymised and un-traceable data for analysis by our researchers. Matching records for women has proved particularly difficult and will take some time to complete, because those who got married were usually screened under their married as opposed to the (maiden sur)names recorded in the birth registers. However, it has been possible to conduct a preliminary analysis of screening data for men born on the Islands between 1939 through 1946 - comparing those conceived, born and growing up before, during and after the Occupation. After taking into account a number of factors (such as age and weight, smoking behaviour and stress) which also affect blood pressure and blood glucose concentrations, we were delighted to find no significant increase in the risk of high blood pressure or "glucose intolerance" (the latter a marker for late-onset diabetes) amongst those conceived or born during the worst period of food shortage (i.e. mid-1944 through mid-1945). To the contrary, our preliminary findings suggest that, if anything, those born before the Occupation or early in the Occupation displayed marginally worse health. By "marginally worse", we mean very slight differences that do not indicate any effect of clinical concern. Indeed, these results are not altogether surprising, as it is well known that raised blood pressure and glucose intolerance tend to increase as people get older (all other things being equal), and those born in 1939, before the Occupation, are 7 years older than those born afterwards.

These preliminary findings confirm our earlier work which found no evidence of any increased rate of premature mortality (i.e. before the age of 55) from the sorts of chronic diseases thought to be more prevalent amongst people born in the worst affected regions of Holland around the same time (i.e. 1944-45). We are therefore increasingly confident that the ill-effects observed by the Dutch research are unlikely to have occurred amongst the better-nourished Channel Islands population. Nonetheless, to confirm these results, we are continuing our research: first, by including women in our analyses of the Guernsey Chest and Heart LBG's screening data; second by extending our work to people born off the Islands during the same period; third by encouraging all Channel Islanders born between 1939 and 1946, on or off the Islands to complete a supplementary health questionnaire.

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Since 1999, the Channel Islands Occupation Birth Cohort Study (CIOBCS) has been examining the short- and long-term effects of the 1940-45 wartime occupation of the Channel Islands. Prior to the occupation approximately half of the islanders evacuated to the mainland, and over the next 5 years conditions on the islands gradually deteriorated, culminating in severe shortages of food and fuel from September 1944 through May 1945 when the German garrison and the civilian population were cut off from mainland France and the islands were under siege until they were liberated (the day after VE day).

Over the past 5 years, following clearance from the Local Research Ethics Committees on Jersey and Guernsey, the CIOBCS has collected data from:

1. statutory sources
 - (i) birth registration documents;
 - (ii) death registration documents;
 - (iii) the 1940 and 1942 'population registration files' [effectively a census of adults and their dependents compiled by the German authorities]; and
 - (iv) the 1944 register of evacuees and their dependents [who were intending to return];
2. volunteer participants who were born between 1939 and 1946 on or off the islands (600 of whom have returned detailed lifecourse and health questionnaires);
3. perinatal data (including some birth weight data) for cohort members on Guernsey whose mothers went on to have additional children in the 1950s (and recorded perinatal information on previous births in their antenatal files);
4. Hospital Episode Statistics (HES) including diagnosis and operation codes obtained from the Princess Elizabeth Hospital on Guernsey; and
5. health screening data (including blood pressure and blood glucose measurements) from the Guernsey Chest and Heart LBG.

As part of its data collection activities, the CIOBCS has also located the midwife records of 1808 Guernsey islanders born from 1923-1937, containing birth weights and gestational age. Some of these individuals would have spent much of their childhood on Guernsey during the occupation while others would have been evacuated.

Finally, the CIOBCS has also collected extensive qualitative data from retired healthcare professionals who worked on Jersey and Guernsey during the wartime years, and from mothers of children born on and off the islands during this period – these data, alongside documentary content analyses, have been used to assess conditions prevailing on the islands. Collection and linkage of these data have been cleared by the Local Research Ethics Committees in both Jersey and Guernsey.

The current project aims to explore the impact of exposure to the Channel Islands occupation during early life on the subsequent risk of 'chronic disease' in later life. For this purpose the project will draw on the cohort of 1808 Guernsey islanders described above born from 1923-1937, who have been matched to birth records. Some of this cohort will have died, some will have been evacuated from the island and some will have remained on the island during the war above. Some will appear in HES data due to having experienced an acute cardiovascular event and some will have subsequently attended the Guernsey Chest and Heart LBG for a screening examination.

Using this cohort it is hoped to compare the possible impact of adverse exposures in prenatal life (represented by the data on birth weight) with exposures in childhood and adolescence (represented by the location of cohort members on or off the island during the occupation) on cardiovascular health outcomes. Since there is some controversy surrounding whether exposures in fetal and early postnatal life of exposures in later childhood have a greater impact on later health, this study may provide valuable insight into these questions from the perspective of a Guernsey cohort.