



Report on Pre-Fortification Study

The *purpose* of this study is to determine levels of blood folate and vitamin B12 among relatives in families where a child has been born with a neural tube defect. To reduce the number of new cases of neural tube defects at birth, the Irish government plans to fortify flour with folic acid (that is, to add folic acid to flour). Our study will compare blood folate levels before fortification with levels after fortification to ensure that the level goes up as expected. If relatives do not benefit from the government's programme (if their blood folate levels do not increase significantly), then we should consider other ways to prevent birth defects in this vulnerable group.

Here's what we did so far. We invited relatives to attend a clinic on one of five Saturdays in June and July in Drogheda. So far, 275 relatives have attended and have given a blood sample. Of these, 39% were men and 61% were women. Individual results will be sent to all participants and to their GPs. As a group, 2.2% were below the normal range on blood folate and 0.4 % were below the normal range on vitamin B12.

The *final clinic session of the summer* will be on August 14th, for relatives who could not come earlier. *Another two final sessions* will take place later in the year or early next year. The final sessions will include groups of relatives who have not been contacted: these are first cousins once removed, nieces and nephews and offspring of the affected individuals. Others who could not attend a previous session are welcome to a future session: just contact us (information below).

All of us on the BRI staff (Julie, Rebecca and Sharon, and our Summer Students, Ciara and Christina) were delighted with the response to this study, and very pleased to meet everyone in person, and grateful to all who participated. We very much appreciate our volunteers on the day – Patricia, Oyinkansola, Ruth, Breige, Declan, Katerina, Fiona, Noreen, Sinead, and Rosaleen Allen of the Drogheda Volunteer Service. The HSE allowed us to use the Phlebotomy Clinic, and the phlebotomy nurses – Meabh, Geraldine, Michelle and Dolly – were especially skilful.

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Article from the Irish Times' Health Supplement, 31 July 2007.

Study to track fortified flour benefits

Claire O'Connell

A new study will evaluate the impact of Ireland's forthcoming programme to fortify flour with folic acid. The vitamin is known to reduce the risk of neural tube defects, such as spina bifida, in the developing embryo and the project will focus on families with increased likelihood of having children with such conditions.

About one in 1,000 babies born in Ireland has a neural tube defect, according to epidemiologist Dr Julianne Byrne, director of the Boyne Research Institute (BRI) in Drogheda, a privately funded institute that conducts research on birth defects. Relatives of those children, including the wider family, are at a higher risk than the general population of themselves having a child with a neural tube defect, according to Dr Byrne. "Certain

groups of relatives seem to be more affected than others. I'm not talking about a very high risk, but it is higher than we'd expect." Folic acid is involved in building DNA which is necessary for healthy cells, explained Dr Byrne. She added that in addition to reducing the risk of neural tube defects, folic acid can also help protect against stroke. Fortification has been approved and folic acid will be added to flour to increase intake

in much of the population. The Food Safety Authority of Ireland (FSAI) is looking at legislation, and fortification is estimated to start in about a year, deputy chief executive Alan Reilly told *The Irish Times*. The FSAI is also looking at baseline levels of folic acid in the general population, he added. However, the BRI study is the first of its kind to zone in on the extended family of people with neural tube defects.

Mission The Boyne Research Institute is a community-based research facility that conducts research for the community and in the community directed towards a better understanding of the origins of birth defects, and methods of prevention.

<p>2007 Staff of the Boyne Research Institute</p> <p><i>Rebecca Scott</i>, our administrator/researcher, works part-time, whilst being a full-time mum to 1-year old Eve.</p> <p><i>Sharon McGinty</i>, our research nurse, previously worked as a Practice Nurse in London and Drogheda before joining us. Sharon has 3 children aged between 7 and 15 years.</p> <p><i>Julianne Byrne</i>, an epidemiologist, directs the activities of the Boyne Research Institute.</p>	<p>Your donations to assist the work of the Boyne Research Institute are gratefully appreciated</p> <p style="text-align: center;">In Ireland: Boyne Research Institute Duke House, Duke Street, Drogheda, IRELAND Tel: +353 (0)41-9836041 Email: admin@boyneresearch.ie An Irish-registered charity (no. 10275)</p> <p style="text-align: center;">In the USA: Boyne Research Foundation 1656 Newton Street, NW, Washington, DC 20010, USA Tel: +1 202-234-8719 Email: boyne_research@verizon.net</p>
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