Chemicals found in breast milk adversely affect the foetal testis

A comparison of breast milk samples from Denmark and Finland revealed a significant differenc in environmental chemicals which have previously been implicated in testicular cancer or in adversely affecting development of the foetal testis in humans and animals. This finding is published today in the *International Journal of Andrology*.

In recent years a worldwide increase in testicular cancer has been noticed, but the cause remains unknow In some countries, such as Denmark the prevalence of this disease and other male reproductive disorder including poor semen quality and congenital genital abnormalities is conspicuously high; while in Finland, a similarly industrialized Nordic country, the incidences of these disorders are markedly lower. In the UK, almost 2000 men are diagnosed with testicular cancer every year, and in the US this number is over 8000. There is a wide variation in incidence rates of testicular cancer around the globe, and the reasons behind t observed trends are unexplained.

Sophisticated tools

Environmental endocrine disrupting chemicals (EDCs) are commonly found in fatty foods, paints, plasticizers, pesticides, and the by-products of industrial processes, and in recent studies an association has been shown between some of these agents and male reproductive problems. To investigate whether EDCs could be related to such great differences in reproductive disorders between closely related countries, Konrad Krysiak-Baltyn and colleagues from Denmark, Finland, and Germany measured levels o 121 chemicals in 68 breast milk samples from Denmark and Finland to compare exposure of mothers to EDCs.

With so many chemicals, they used sophisticated, bioinformatics tools to interpret the complex data, and t results showed a clear distinction between the countries.

"We were very surprised to find that some EDC levels, including some dioxins, PCBs and some pesticide were significantly higher in Denmark than in Finland," said Professor Niels Skakkebaek, a senior member the research team, based at the University Department of Growth and Reproduction, Rigshospitalet, Denmark. "Our findings reinforce the view that environmental exposure to EDCs may explain some of the temporal and between-country differences in incidence of male reproductive disorders."

"In spite of the findings, I would strongly urge women, including Danish mothers, to continue with Breastfeeding.aspx">breast feeding, which has many beneficial effects for the child," added Skakkebaek.

www.wiley.com/bw/journal.asp?ref=0105-6263