

## Poster #36

### **Sperm concentration in young men from Nordic-Baltic countries – inversely related to testicular cancer incidence ?**

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There has been a world-wide increase in the incidence of testicular cancer over the last 50 years. In Northern Europe the incidence is high in Denmark and Norway, intermediate in Sweden, and low in Finland and the Baltic countries. Furthermore, a number of studies have suggested a decline in sperm count within the same period.

In this preliminary study, sperm concentration among army conscripts from two of the Nordic countries, Norway and Sweden, was compared to conscripts from two of the Baltic countries, Lithuania and Estonia (average age 18.2 - 20.6 years). The Nordic men had the lowest sperm concentration with mean (SD) and median values of 69.3 (57.3) and 52.0 mill/mL (Norway) and 64.1 (45.1) and 50.5 (Sweden). The Baltic countries had very similar results with mean (SD) and median of 74.2 (55.6) and 63.9 mill/mL in Lithuania and 79.0 (60.3) and 64.0 in Estonia. A previous study has shown that the sperm concentration in Danish conscripts is even lower than in Norway and Sweden (Andersen *et al.* Human Reprod. (2000)15, 366).

Testicular cancer incidence rates from 1996, provided by the respective national cancer registries, were inversely related to median sperm concentration. Furthermore, in Norway, a positive correlation was found between low birth weight and reduced sperm count, as previously observed between low birth weight and testicular cancer, thus suggesting an important role of the intrauterine environment for adult reproductive function. Our findings support the hypothesis of a common etiology behind testicular cancer and reduced sperm quality.