

## Reproductive Outcome in Medical Radiographers

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The idea that work exposure of parents to potentially hazardous agents may affect the health of their unborn children continues to be a topic of public concern and scientific interest. Although there is much speculation about such prenatal effects, relatively few investigations have been carried out in groups who may have been occupationally exposed to specific substances before and during pregnancy.

The findings from an investigation into the health of children of medical radiographers will be described here. The study was set up with two main objectives in mind: firstly to develop a reliable method for collecting data on reproductive outcome and child health; and secondly to determine whether radiographer's children were at increased risk of chromosomal anomalies or cancer.

The postal method developed proved to be reliable, with around 87% of questionnaires being returned. The observed frequencies of reproductive events were broadly in line with findings from other studies: of the 9208 pregnancies reported, 83% were livebirths, 12% were miscarriages (gestational age < 20 weeks), 1% were stillbirths (gestational \* 20 weeks), and 1% were other rarer spontaneous adverse events (ectopic pregnancy, blighted ovum, and hydatidiform mole). There was little difference between men and women in the frequency of adverse reproductive events reported, with the exception that male radiographers reported fewer medical terminations, the proportions being 3.1% and 1.4% for women and men respectively. Among children, the overall risks of major congenital malformation (RR 1.0, 95%CI 0.9-1.2), chromosomal anomaly (RR 1.4, 95%CI 0.8-2.3), and cancer (RR 1.2 95%CI

0.7-2.0) were as expected based on general population rates. Borderline excesses of chromosomal anomalies other than Down's syndrome in the children of female radiographers (RR 3.9, 95%CI 1.3-9.0, based on five observations), and cancer in the children of male radiographers (RR 2.7, 95%CI 0.9-6.5, based on five observations) were noted. The numbers on which these risks are based are small and the findings should be interpreted cautiously.