

# 24<sup>th</sup> European Pediatrics Conference

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### **The evidence of congenital malformations and Down's syndrome after Chernobyl: Who cares for radiation protection of the unborn?**

In former times of radiation research the genetically significant dose was regarded as the main measure for protection in diagnostic radiology, because the hereditary effects were considered to be the most dangerous sequelae and also the effects in embryos and fetuses by exposure in uterus. There was established the 10 days rule in order to exclude exposure in the period of possible pregnancy. The International Commission on Radiological Protection (ICRP), however, who is the leading expert board for radiation protection in the developed countries, claims that the genetic radiation risk is nearly negligible and radiation-induced effects after exposure in uterus will not occur below doses of 100 mSv. They refer to reportedly absent effects in the acute exposed Japanese A-bomb survivors and leave out the conditions in cases of low dose chronical exposure as for example by radioactive contaminations. We review findings about increases of stillbirths, congenital malformations and Down's syndrome in a variety of European regions affected by Chernobyl fallout. They confirm former and later observations after occupational exposure and diagnostic X-rays, which show high radiation risks for the descendants of exposed parents. Our conclusion is that medical diagnostic radiation exposure in Germany has contributed to the rising rates of congenital malformations in this country. Minimization of gonadal doses must become again a central aim in radiation diagnostics for children and patients in reproductive ages. Current dose limits for occupational exposure and in pregnancy must be lowered considerably.

#### **Biography**

Inge Schmitz-Feuerhake has completed her Doctorate in Physics at the University of Hannover, Germany in 1966. She did research in Nuclear Medicine for seven years at the Medical University of Hannover where she was also the Manager of a nuclear reactor for research. Since 1973, she is a Professor of Medical Physics at the University of Bremen, Germany, now in the status of retirement. She works in the field of Radiation Dosimetry and Radiation Effects. She has published more than 50 papers in reputed journals.

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