

Radiation and pregnancy

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- The classic effects of radiation exposure on the embryo and fetus are:
 - Letal effects
 - Congenital malformations
 - Growth retardation
 - Childhood cancer

- Published data on exposure to medical irradiation of pregnant woman are:
 - Small number
 - Mostly in the beginning of the last century
 - Mostly therapeutic range
 - Uncertain dosimetry

- The risk of radiation effects on the developing embryo depends of:
 - Dose estimated
 - Gestation stage

- Termination of pregnancy at fetal doses 100 mGy and above (ICRP, Publication 84).

Diagnostic radiation exposures will reach this level in a very rare cases.

- Commission of experts to make decision of pregnancy continuation after radiation exposure based on:
 - Patient information
 - Fetal dose calculation
 - Other information: national law, unwanted pregnancy, emotional maturity of pregnant woman
- No guarantee on the continuation and outcome of the pregnancy

- The relationship between radiation exposure and the effects on developing embryo is difficult to be determined:
 - There are various teratogenic agents
 - Effects are unspecific
 - Spontaneous frequency of congenital malformations is high

- Recommendations for pregnancy termination:
 - 2-3 diagnostic x-ray exposures can reach doses 0,05 Gy to the fetus:
 - CT abdomen
 - Barium enema
 - RvGr
 - Social reasons for therapeutic abortion
 - Unwanted pregnancy

Radiation hazard should not be used to obtain therapeutic abortion