

Plutonium Content of Human Fetal and Placental Tissue

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Although a number of studies have been made in animals (Sikov and Mahlum 1968; Weiss, Walburg and McDowell 1980; Morgan, Haines and Harrison 1991; Finkel 1947; Weiss and Walbur 1978), data on human placental transfer and accumulation of plutonium and other actinides is sparse. Overall, these results demonstrate that actinides do cross the placental barrier and enter the fetus and when compared to a reference female value of, ~1.17 mBq/kg for Pu, suggests a concentration factor of about three relative to the mother. However, in a more recent paper (Prosser et al. 1994) using fetal tissues from second trimester terminations, have found placenta and fetus sample concentrations of the same order of magnitude, viz. a few tens of uBq/kg, suggesting the absence of a concentration factor.

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