New Study Shows Glyphosate Does Cause Tumors and Birth Defects, and More

Exposure to relatively small amounts of a glyphosate-based herbicide has been found to impair fertility in rats and cause birth defects including retardation and malformation in second generation offspring, according to a new study from Argentina.

Argentinian researchers added glyphosate to the rat's food. They administered the herbicide in two doses. The lower dose was 2 mg per kg of body weight daily, which is supposed to be safe to ingest on a daily basis over a lifetime.

> *A reference dose (RfD), or estimate of daily exposure that would not cause adverse effects throughout a lifetime, of 2 mg/kg/day has been proposed for glyphosate, based on the developmental toxicity studies described above." – EPA*

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The higher dose of glyphosate was 200 mg per kg of body weight daily. Industry reports claim that up to 100mg per kg daily have no adverse effects. At the studied dosages, the rats in either category should not have come under any harm. But as GM Watch reports,

> *Exposure to environmentally relevant doses of a glyphosate-based herbicide during pregnancy has been found not only to impair female fertility in rats…Argentinian researchers tested the glyphosate-based herbicide – one commonly used in Argentina – in pregnant female rats at two doses, which were added to their food. The rats were mated and dosed from the 9th day after conception until their pups were weaned. This first generation of offspring and their offspring in turn*

(second generation) were followed and monitored for reproductive effects."

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Glyphosate-based herbicides did seem to damage the embryo or cause abnormal maternal or nursing behaviors. It did not alter weight gain for the first generation offspring. All glyphosate-exposed first generation female rats were impregnated, but they had fewer "implantation sites of fertilized eggs," compared with the non-glyphosate-fed control rats. The subsequent generation of offspring from both the low-dose and the higher-dose glyphosate exposed groups had delayed growth and abnormally small fetuses.

But that's not all.

Malformations occurred within the higher-dose population in the second generation of offspring, including conjoined fetuses and abnormally developed limbs.

> *F2 offspring from both GBH groups showed delayed growth, evidenced by lower fetal weight and length, associated with a higher incidence of small for gestational age fetuses. In addition, higher placental weight and placental index were found in F2 offspring from GBH-HD dams. Surprisingly, structural congenital anomalies (conjoined fetuses and abnormally developed limbs) were detected in the F2 offspring from GBH-HD group. In conclusion, perinatal exposure to low doses of a GBH impaired female reproductive performance and induced fetal growth retardation and structural congenital anomalies in F2 offspring." – Study: Perinatal exposure to a glyphosate-based herbicide impairs female reproductive outcomes and induces second-generation adverse effects in Wistar rats*