

Highly Hazardous Pesticides

Diazinon

Hazard to Children: acute poisoning, brain cancer, developmental neurotoxin, endocrine disruptor, reduced foetal growth, immunotoxic; later in life Parkinson's disease, cancer, diabetes



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Bans: EU – very toxic impurities; risks to workers, bystanders, consumers, environment. India – for agriculture but allowed in houses.

Use: organophosphate insecticide.

Residues: maternal and cord blood, meconium, breast milk; child and adult urine; house dust.¹

Acute toxicity: moderately toxic, neurotoxin. Symptoms include vomiting, diarrhoea, abdominal cramps, headache, confusion, anxiety, twitching, depression, memory loss, death. Children poisoned in Kuwait,² Nicaragua.¹ Newborns 65-164 times more vulnerable than adults.³ Used for suicide (India).⁴

Neurotoxicity: delayed neurobehavioral development, reduced cognitive function and ability to learn;⁵ alters sexual differentiation of the brain.⁶ Delayed neuropathy⁷. Prenatal exposure associated with Parkinson's disease.⁸

Cancer: associated with childhood brain cancer,⁹ lung cancer, leukaemia,¹⁰ non-Hodgkin's lymphoma,¹¹ soft-tissue sarcoma,¹² prostate and¹⁴ breast cancers¹⁵.

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Genotoxicity: mutagenic in some studies.^{16 17}

Endocrine disruption: alters oestrogen-regulated gene expression in MCF-7 human breast cancer cells, disrupting ability to repair DNA damage;¹⁸ decreases testosterone,¹⁹ pituitary hormone,²⁰ luteinizing and follicle stimulating hormones²¹; increases oestrogen, prolactin.²¹

Reproduction: impairs foetal growth (human),²² prenatal exposure reduces sperm count in adults (rats);²⁰ damages testes (mice).²³

Immune: immunotoxic^{24 25}

Metabolic: increased risk of diabetes in adulthood from neonate exposure.²⁶

Environmental effects:
Aquatic: highly toxic.⁷
Terrestrial: very highly toxic to birds; highly toxic to bees and beneficials.⁷

Environmental fate: moderately persistent in soil, and mobile; residues in surface and ground waters, air.⁷

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