**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;² 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 12 soft-tissue sarcoma,¹³ prostate and¹⁴ breast cancers¹⁵.

**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);²³ 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
References:


7. NPIC. 2009. Diazinon Technical factsheet National Pesticide Information Center, USA.


19. Leong CT1, D’Souza UJ, Iqbal M, Mustapha ZA. 2013. Lipid peroxidation and decline in antioxidant status as one of the toxicity measures of diazinon in the testis. Redox Rep 18(4):155-64.


