

Malathion

Hazard to children: acute poisoning, birth defects, developmental effects, endocrine disruption, immune suppression; later in life cancer and reproductive problems



Pesticide Action Network Asia and the Pacific

P.O. Box 1170
10850 Penang, Malaysia
Tel: (604) 657 0271 / 656 0381
Fax: (604) 658 3960
Email: panap@panap.net
Homepage:
www.panap.net

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Meriel Watts, PhD
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Use: organophosphate insecticide; uses include public health vector control, and for lice and scabies.

Bans: Israel; initially banned in EU but allowed back in 2010.

Residues: in cord blood, meconium, neonate blood, breast milk, children's urine;¹ food, water.

Acute toxicity: moderately toxic, but metabolite malaoxon is 61 times more toxic;² neurotoxic. Symptoms include headache, sweating, stomach cramps, vomiting, respiratory problems, muscle weakness, diarrhoea, seizures, coma, death;² burns and skin rashes in Pakistan.³ Numerous poisonings and suicides, including in India⁴, Pakistan⁵, and Tanzania⁶.

Chronic toxicity: Damage to heart, liver, kidneys, lungs, and stomach (animals).³

Neurotoxicity: brain congestion, nerve degeneration, decreased learning,³ behaviour changes at low doses⁷ (animals); ADHD,⁸ cognitive disorders,⁹ slight association with Parkinson's¹⁰ (humans).

Cancer: liver, nasal, palate, thyroid, and mammary tumours (animals).² Non-Hodgkin's lymphoma,¹¹⁻¹⁴ multiple myeloma,¹⁵ leukaemia,¹⁶ prostate cancer;¹⁷ breast cancer risk¹⁸.

Genotoxicity: genotoxic and mutagenic in human cells.^{3 19}

Endocrine disruption: affects testosterone, progesterone, oestrogen, thyroid hormones.^{3 20-22}

Reproduction: birth defects in animals and humans; damage to testes, ovaries, sperm (animals); reduced live foetuses, foetal weight, body length, growth (animals).^{3 22-25}

Immune: immunotoxic.²

Metabolic: increased risk of diabetes and obesity.^{3 22 26}

Environmental effects: *Aquatic:* very highly toxic to aquatic organisms; many fish kills.²

Terrestrial: highly toxic to bees and beneficial insects.²

Environmental fate: marine pollutant;³ detected in air, rain, snow, fog, water.^{2 22}

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