A PANAP Factsheet Series

Highly Hazardous Pesticides

Methyl parathion

**Bans:** e.g. EU, Laos, Cambodia, Indonesia, Sri Lanka, Philippines, China, Thailand, Malaysia, Myanmar, South Korea, Vanuatu, Vietnam. Some formulations on PIC list.

**Use:** organophosphate insecticide.

**Residues:** cord blood, newborn’s blood, breast milk, children’s urine; house dust, drinking water, food.

**Acute toxicity:** WHO Class 1a extremely hazardous neurotoxin; children more sensitive than adults. Symptoms include breathing difficulties, nausea, vomiting, diarrhoea, abdominal cramps, headache, dizziness, blurred vision, sweating, salivation, confusion, slurred speech, tremors, unconsciousness, convulsions, coma, cardiac arrest. Deaths from oral dermal and inhalation exposures, including occupational, and children from contaminated food and houses.

**Chronic:** heart abnormalities (rats).

**Neurotoxicity:** in children: impaired short-term memory and attention, motor skill and behavioural problems including anger, sadness, impulsiveness, shyness, and difficulty relating to other children. Adult neuro-psychiatric disorders.

**Cancer:** breast cancer risk.

**Genotoxicity:** mutagenicity in some cell systems.

**Endocrine disruption:** oestrogenic; increased testosterone, decreased luteinizing hormone in testes.

**Reproduction:** embryotoxicity; retarded growth (birds). Degeneration of placental cells, endometrial damage, changes in oestrous cycle, decreased healthy follicles, degenerative changes in ovaries (rats). Damage to male rat reproductive organs; abnormal sperm, decreased sperm count.

**Immune:** immunotoxic (humans); allergic dermatitis.

**Environmental effects:** Aquatic: highly toxic. Terrestrial: highly toxic to birds, beneficials, bees.

**Environmental fate:** very persistent inside. Residues in fog, air, rain sediment, surface and ground waters and Arctic.

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**Hazard to Children:** acute poisoning, memory, motor skill and behavioural problems; affects endocrine and immune functions; later in life reproductive problems, breast cancer potential.

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References:


