Dichlorvos (DDVP)

**Hazard to children:** acute poisoning, brain cancer, leukaemia, potential developmental toxin, impaired immune function, endocrine disruption; later in life other cancers, diabetes

**Uses:** organophosphate insecticide; also formed as a degradation product of naled and trichlorfon.

**Bans:** EU - very toxic by inhalation; dangerous for the environment.

**Residues:** breast milk and neonate plasma;¹

**Acute toxicity:** highly toxic neurotoxin. Fatal if inhaled, swallowed or absorbed through skin; skin and eye irritant. Causes depressed motor function and respiration; nausea, headaches, seizures, coma, death. Poisonings in many countries, including China, India, Korea,²-⁴ residues in food have caused poisoning in Turkey.⁵ Used for suicide, e.g. in Nepal.⁶ Second most common cause of pesticide poisoning in some parts of Turkey.⁷

**Chronic toxicity:** causes oxidative stress; effects on blood cells; damage to liver, heart.

**Neurological:** potential developmental neurotoxin (decreased brain weight in animals);⁸ may cause delayed neuropathy;⁹ increased risk of Parkinson’s disease.¹⁰

**Cancer:** known animal carcinogen causing forestomach tumours, leukaemia, pancreatic adenomas, mammary gland tumours in rats.⁸ In humans linked to childhood brain cancer¹¹ and leukaemia,¹² non-Hodgkin’s lymphoma,¹³ and breast cancer.¹⁴

**Genotoxicity:** known mutagen.¹⁵

**Endocrine disruption:** decreased testosterone, follicle stimulating and luteinizing hormones (rats).¹⁶

**Reproduction:** reproductive toxicity; decreased sperm motility, damage to endometrium and testicles (rats).¹⁶ ¹⁷ ¹⁸

**Immune:** toxic to immune system.¹⁹ ²⁰

**Metabolic:** increased risk of diabetes.²¹ ²²

**Environmental effects:**

**Aquatic:** highly toxic to aquatic organisms.²³

**Terrestrial:** highly toxic to birds, bees and beneficial insects;²³ wildlife poisonings reported in Africa.²⁴

**Environmental fate:** volatile and likely to drift; residues inside houses do not break down easily; found in water and sediment in river in Thailand.²⁵
References:


