**Hazard to children:**
brain cancer, endocrine disruption, immune suppression, allergies; later in life other cancers, reproductive problems

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**Use:** carbamate insecticide.

**Residues:** in food, drinking water.

**Bans:** EU - because of toxic breakdown products, carcinogenic, high risk to birds, mammals, aquatic organisms, beneficial insects.

**Manufacture:** made from methyl isocyanate, the chemical responsible for the Bhopal tragedy.

**Acute toxicity:**
moderate toxicity, neurotoxin at low levels of exposure. Symptoms include nausea, sweating, stomach cramps, headache, muscle weakness, diarrhoea, seizures, coma, death. Also causes acute rhinitis.

**Chronic toxicity:**
damage to lungs, liver, kidney.

**Cancer:**
US EPA - likely human carcinogen; childhood brain cancer; melanoma; non-Hodgkin’s lymphoma; multiple myeloma; prostate cancer; non-Hodgkin’s lymphoma.

**Endocrine disruption:**
endocrine disruptor (EU); oestrogenic; affects thyroid hormone receptors; stimulates breakdown of testosterone in males.

**Reproduction:**
birth defects at high doses in animals; reduced sperm count and mobility, increased abnormal sperm (mice); and DNA damage in carbaryl-exposed workers.

**Immune:**
Immunotoxic, and can enhance allergic responses.

**Environmental effects:**
Aquatic: very highly toxic to invertebrates and fish.

**Terrestrial:**
highly toxic to bees and beneficial insects; extremely toxic to earthworms.

**Environmental fate:**
Detected in rain and well water in US.

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**Carbaryl**

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