

**Hazard to children:**  
carcinogenic;  
neurotoxicant; endocrine  
disruptor;  
bioaccumulative;  
reproductive damage.

A PANAP Factsheet Series  
**Highly Hazardous  
Pesticides**  
**DDT**



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**Uses:** Organochlorine insecticide, was used during WWII to control disease vectors. Post WWII, use was expanded to agriculture. Continued use in several countries for control of mosquitoes that spread malaria. Related breakdown products: DDE; *p,p'*-DDE; *p,p'*-DDT; *o,p'*-DDT.

**Residues:** in cord blood, placenta, blood serum, amniotic fluid, newborn's meconium, breast milk, house dust, and food.<sup>1</sup>

**Acute toxicity:** Neurotoxicant<sup>2</sup>, acetylcholinesterase inhibitor. High to moderate level of toxicity in most animals and insects. Relatively non-toxic to birds, though note that eggshell thinning is frequently cited as an adverse effect.<sup>3</sup> Reported to have caused acute poisoning of children in Nicaragua.<sup>4</sup>

**Chronic toxicity:** Concerns around developmental health effects (i.e., neurodevelopment, reproductive development, immunotoxicity; see below).

**Neurological:** Prenatal exposure to breakdown product DDE is associated with neurodevelopmental delays; association with reduced cognitive functioning.<sup>5-7</sup>

**Cancer:** Causes liver cancer and rated as "probable carcinogen" by U.S. EPA.<sup>8</sup> Rated "possibly carcinogenic" to humans by International Agency for Research on Cancer.<sup>9</sup> Girls who have pre-pubertal exposure to DDT are five times more likely to develop breast cancer in middle age.<sup>10</sup>

**Genotoxicity:** Documented in female rats.<sup>11</sup>

**Endocrine disruption:** Is an endocrine disruptor,<sup>3</sup> evidence for effect on pubertal timing<sup>12</sup> and associations with type 2 diabetes and obesity.<sup>13,14</sup>

**Reproduction:** Reduces reproductive success, damages the reproductive system.<sup>8</sup>

**Immune:** Concerns around immunotoxicity.<sup>15</sup>

**Environmental effects:**  
*Aquatic:* Highly toxic to aquatic animals.

*Terrestrial:* Moderately toxic to amphibians.<sup>16</sup>

**Environmental fate:** Low aqueous solubility, highly persistent in soil.<sup>3</sup> Long-range transport, bioaccumulates. Listed as a persistent organic pollutant under the Stockholm Convention.<sup>17</sup>

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