

PRENATAL AND CHILDHOOD EXPOSURE TO PESTICIDES AND NEUROBEHAVIORAL DEVELOPMENT: REVIEW OF EPIDEMIOLOGICAL STUDIES

J. Jurewicz, *Nofer Institute of Occupational Medicine, Department of Environmental Epidemiology, Lodz, Poland*
W. Hanke, *Nofer Institute of Occupational Medicine, Department of Environmental Epidemiology, Lodz, Poland*

Background: Conventional pesticides comprise a diverse group of substances intended to destroy, repel or control organisms identified as pests. Compared to studies of lead, mercury and PCBs few epidemiological studies have assessed the developmental neurotoxicity of pesticides.

Methods: Epidemiological studies focused on the neurobehavioural development of children exposed to pesticides were identified by a search of the PUBMED, MEDLINE, EBSCO, AGRICOLA and TOXNET literature bases.

Results: The results from the presented studies suggest that children exposure to pesticides may impaired development. Exposure to organophosphorus pesticides (OP) in children can caused difficulties with tasks involving short-term memory, increased reaction time, mental development and pervasive development problems. In neonates increased number of abnormal reflexes and mental and emotional symptoms in adolesescents. The results of the studies investigated the association between exposure to organochlorine pesticides and neurodevelopmental problems display inconsistent results. Whereas some studies found reduction in mental and psychomotor function the other studies did not confirmed that.

Conclusions: Information derived from epidemiological studies so far indicate the need to increase awareness among people and children exposed to pesticides about the association between use of pesticides and neurodevelopmental impairment. We should simply apply the principle of prudence, just in case.