

Pesticide Information

The Michigan Department of Community Health (MDCH) gathers reports of pesticide exposures that result in acute illnesses and injuries. MDCH receives support from the National Institute for Occupational Safety and Health (NIOSH) to investigate and track cases of Michigan workers who have an acute illness from having been exposed to pesticides on the job. We talk to workers, find out how they were exposed and how the pesticides affected their health. MDCH uses this information to help prevent future pesticide exposure incidents through education and improved workplace practices. For information about MDCH's pesticide illness and injury surveillance contact Abby Schwartz at schwartza@michigan.gov or call the toxic hotline 1-800-MI-TOXIC (1-800-648-6942).

As part of MDCH's pesticide illness and injury surveillance program, we want to provide Michigan citizens with reliable information to understand and safely use pesticides. The following resources provide a wide variety of information about pesticides themselves; proper handling, storage, and disposal of pesticides; the pests they are used to eliminate; and ways to prevent pesticide-related illnesses and injuries.

For assistance with poisoning emergencies, call poison control at 1-800-222-1222

Resources on Pesticides

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General Pesticide Information

A pesticide is any substance or mixture of substances used to prevent, destroy, repel, or reduce pests and the damage caused by pests. Pests are living organisms that occur where they are not wanted or that cause damage to crops, humans, or other animals. Pests can include insects, weeds, fungi, rodents, and germs. The term pesticide can refer to insecticides, herbicides, fungicides, rodenticides, disinfectants, and various other substances used to control pests.

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Pesticides are used on a daily basis in all sorts of environments – in our homes and gardens, on our bodies, in schools and other public and private buildings, and on farms to help protect crops. While pesticides are extremely helpful to us in many ways, they can also be harmful to human health when improperly used.

Links to Resources:

“What You Need to Know About Pesticides and Your Health” (MDCH)

The MDCH pesticide illness and injury surveillance program prepared this 20-page booklet with general information about different types of pesticides and their uses, possible health effects, suggested safety precautions, disposal, and Michigan resources.

http://www.michigan.gov/documents/mdch_Pesticide_Booklet_97200_7.pdf

“Citizen's Guide to Pest Control and Pesticide Safety” (Environmental Protection Agency [EPA])

A comprehensive consumer booklet from the EPA, including sections on pest management, preventing pests, non-chemical pest management, how to choose, use and dispose of a chemical pesticide, how to reduce exposure, how to deal with a pesticide emergency, and choosing a pest control company.

http://www.epa.gov/oppfead1/Publications/Cit_Guide/citguide.pdf

Pesticides (National Safety Council)

http://www.nsc.org/news_resources/Resources/Documents/Pesticides.pdf

“What is a Pesticide?” (State of CA)*

<http://www.cdpr.ca.gov/docs/factsheets/what2.pdf>

The National Pesticide Information Center (NPIC) answers questions about pesticides 9:30 am to 7:30 pm Eastern Time seven days a week except holidays at 1-800-858-7378.

<http://www.npic.orst.edu/>

The National Pesticide Information Retrieval System lists all pesticides currently registered in Michigan. The system is searchable on Active ingredient, Site of application, Pest to be controlled, EPA registration number, Product name, and Company name. (Purdue University /MDARD) (<http://state.ceris.purdue.edu/>)

Using Insecticides (Michigan State University [MSU] Extension)

http://www.msue.msu.edu/objects/content_revision/download.cfm/revision_id.496061/workspace_id.-4/01500536.html/

MDARD Pesticide Notification Registry (Michigan Department of Agriculture and Rural Development [MDARD]) MDARD maintains a pesticide notification registry for Michigan; a database of people who, due to a medical condition, need to be notified before pesticide applications on their property. The web page includes instruction on how to register.

http://www.michigan.gov/mda/0%2C1607%2C7-125-1566_2405_2447---%2C00.html

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Pesticides: Regulating Pesticides. A pesticide cannot be legally used if the EPA's Office of Pesticide Programs has not registered it. (EPA)

<http://www.epa.gov/pesticides/regulating/registering/index.htm>

Illegal Pesticide Products (EPA)

<http://www.epa.gov/pesticides/health/illegalproducts/index.htm>

The Pesticide Product Information System allows you to search for information about specific products by product name, active ingredient, or company name. (EPA)

<http://www.epa.gov/pesticides/PPIsdata/>

"Integrated Pest Management: Legal Requirements for Pesticide Use in Schools, Health Care Facilities, and Public Buildings" (MDARD)

http://www.michigan.gov/documents/MDA_IntegratedPestManagement_79995_7.pdf

Integrated Pest Management (IPM) information <http://whatisipm.org/>

"Información Para Emergencias Relacionadas con Pesticidas" Worksheet in Spanish with numbers to call in case of a pesticide emergency. (MSU)

<http://www.pested.msu.edu/Resources/Espanol/pdf/Pest.%20Emrg.%20Info%20sph.pdf>

"Recognition and Management of Pesticide Poisonings". A book available for physicians in English and Spanish. (EPA)

<http://www.epa.gov/oppfead1/safety/healthcare/handbook/handbook.htm>

Managing the Risk of Pesticide Poisoning and Understanding the Signs and Symptoms (University of Nebraska Extension)

<http://www.ianrpubs.unl.edu/epublic/live/ec2505/build/ec2505.pdf>

"Reducing Low-Dose Pesticide Exposures in Infants and Children". (Physicians for Social Responsibility)

http://www.psr.org/site/DocServer/Reducing_Low-Dose_Pesticide_Exposures.pdf?docID=663

Information about the Environmental Protection Agency pesticides program (EPA)

<http://www.epa.gov/pesticides/>

National Ag Safety Database. Information on pesticides and agricultural safety, including environmental concerns, occupational health hazards, and labeling information. (Centers for Disease Control and Prevention [CDC])

<http://nasdonline.org/browse/178/chemicals-pesticides.html>

Listing of all EPA pesticide fact sheets (EPA)

http://www.epa.gov/pesticides/factsheets/alpha_fs.htm

"CDC's Fourth National Report on Human Exposure to Environmental Chemicals"

<http://www.cdc.gov/exposurereport>

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The Extension Toxicology Network search function allows access to pesticide information profiles, toxicology and environmental chemistry information, fact sheets and technical information on pesticide toxicology. (ExToxNet)

<http://extoxnet.orst.edu/>

Toxic Substances Information Directory (MDCH)

The Toxic Substances Information Directory provides an easy-to-use, quick reference document for looking up information on an environmental or occupational health topic, including a chapter on pesticide resources.

https://michigan.gov/mdch/0,1607,7-132-2945_5105_29181-80557--,00.html

Toxtown (National Institutes of Health [NIH])

Toxtown is an interactive guide to commonly encountered toxic substances, your health, and the environment. It uses color, graphics, sounds and animation to convey connections between chemicals, the environment, and the public's health.

<http://toxtown.nlm.nih.gov/>

ToxFAQs™ are a series of summaries about hazardous substances developed by the Agency for Toxic Substances and Disease Registry (ATSDR).

<http://www.atsdr.cdc.gov/toxfaqs/index.asp>

(Spanish) http://www.atsdr.cdc.gov/es/toxfaqs/es_toxfaqs.html

Pesticide Safety Fact Sheet - Pennsylvania State University, College of Agricultural Sciences, Agricultural Research and Cooperative Extension, Pesticide Education Program

<http://pubs.cas.psu.edu/freepubs/pdfs/uo198.pdf>

Pesticides at Work

MDCH Occupational Pesticide Illness and Injury Surveillance Project Brochures

http://www.michigan.gov/documents/Pesticide3_87825_7.pdf

(Spanish) http://www.michigan.gov/documents/mdch_OccPesticidesSpanish_97225_7.pdf

“Occupational Pesticide Illness and Injury Surveillance in Michigan 2010” Results of the Michigan surveillance program for 2010. (MDCH)

http://www.michigan.gov/documents/mdch/Pesticide_Annual_report_2010_379463_7.pdf

The National Institute for Occupational Safety and Health pesticide illness and injury surveillance program. (NIOSH)

<http://www.cdc.gov/niosh/topics/pesticides/>

Michigan State University's (MSU) occupational and environmental medicine division compiles Michigan occupational health data. Click on "Submit Occupational Disease Report" for the form to report a case of work-related pesticide illness or injury online.

<http://www.oem.msu.edu/>

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“Recognition and Management of Pesticide Poisonings”. A book available for physicians in English and Spanish. (EPA)

<http://www.epa.gov/oppfead1/safety/healthcare/handbook/handbook.htm>

MDARD's Plant and Pest Management Division is responsible for the implementation of programs and enforcement of laws concerning agricultural products, export commodities, pesticide sale and use, pest management and groundwater protection.

http://www.michigan.gov/mda/0%2C1607%2C7-125-1572_2875-8324--%2C00.html

MDARD information on the licensing for pesticide application businesses, credentialing for registered and certified applicators, and current laws and regulations for pesticide application.

http://www.michigan.gov/mda/0%2C1607%2C7-125-1569_16988---%2C00.html

Worker Safety and Training and Worker Protection Standards (EPA)

<http://www.epa.gov/pesticides/health/worker.htm>

National Ag Safety Database. Information on pesticides and agricultural safety, including environmental concerns, occupational health hazards, and labeling information. (CDC)

<http://nasdonline.org/browse/178/chemicals-pesticides.html>

West Nile Virus Information for Outdoor Workers (MDCH)

http://www.michigan.gov/documents/WNV/OutdoorWorkers_73650_7.doc

The National Pesticide Information Retrieval System website includes all pesticides registered for use in Michigan.

<http://state.ceris.purdue.edu/>

General information about the Environmental Protection Agency pesticides program (EPA)

<http://www.epa.gov/pesticides/>

The Extension Toxicology Network search function allows access to pesticide information profiles, toxicology and environmental chemistry information, fact sheets and technical information on pesticide toxicology. (ExToxNet)

<http://ace.orst.edu/info/extoxnet/>

Agriculture

National Ag Safety Database. Information on pesticides and agricultural safety, including environmental concerns, occupational health hazards, and labeling information. (Centers for Disease Control and Prevention [CDC])

<http://nasdonline.org/browse/178/chemicals-pesticides.html>

Worker Safety and Training and Worker Protection Standards (EPA)

<http://www.epa.gov/pesticides/health/worker.htm>

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Listing of all EPA pesticide fact sheets (EPA)
http://www.epa.gov/pesticides/factsheets/alpha_fs.htm

Pesticide and Plant Pest Management (MDARD)
http://www.michigan.gov/mdard/0,4610,7-125-1572_2875_31953-8324--,00.html

Working Safely with Pesticides on Farms (California EPA)*
<http://www.cdpr.ca.gov/docs/whs/pdf/hs2.pdf>

National Organic Program (USDA)
<http://www.ams.usda.gov/AMSV1.0/nop>

Handling, Safety, Storage and Disposal

“What Does a Pesticide Label Say?” (MSU)
<http://www.pested.msu.edu/Resources/pdf/WhatDoesLabelSay.pdf>

“Entendiendo una Etiqueta de Pesticidas” Reading a Pesticide Label (MSU)
<http://www.pested.msu.edu/Resources/Espanol/pdf/Pestspanish1.pdf>

Pesticide Protection (MSU Extension)
http://www.msue.msu.edu/objects/content_revision/download.cfm/revision_id.499648/workspace_id.-4/01500586.html/

Michigan Clean Sweep helps protect natural resources and prevent pollution by ensuring the safe and proper disposal of outdated, unused or unwanted pesticides in Michigan.
http://michigan.gov/mdard/0,4610,7-125-1568_2390_45388-11759--,00.html

Using Pesticides Safely. Includes links to other EPA consumer-oriented brochures regarding pesticide safety for both children and adults. (EPA)
<http://www.epa.gov/pesticides/health/safely.htm>

Reading a Pesticide Label (MSU Extension)
http://www.msue.msu.edu/objects/content_revision/download.cfm/item_id.498919/workspace_id.-4/01500584.html/

Interactive Label Display (EPA)
<http://www.epa.gov/pesticides/label/>

How to Use Insect Repellents Safely (EPA)
<http://www.epa.gov/pesticides/factsheets/insectrp.htm>

“Bug Bombs – Overkill Can Be Dangerous” (State of WA)
http://www3.doh.wa.gov/here/materials/PDFs/24_BugBombs_E04L.pdf

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Pesticide Storage and Container Disposal (MSU Extension)

http://www.msue.msu.edu/objects/content_revision/download.cfm/revision_id.496099/workspac_e_id.-4/01500537.html/

“Información Para Emergencias Relacionadas con Pesticidas” Worksheet in Spanish with numbers to call in case of a pesticide emergency. (MSU)

<http://www.pested.msu.edu/Resources/Espanol/pdf/Pest.%20Emrg.%20Info%20sph.pdf>

“Buy less, lock it away, and dispose with care” (State of CA)*

<http://www.cdpr.ca.gov/docs/factshts/storage.pdf>

“A Guide on Laundering Pesticide Contaminated Clothing” (CDC)

<http://www.nasdonline.org/document/932/d000772/a-guide-on-laundering-pesticide-contaminated-clothing.html>

Mosquitoes and West Nile Virus

Pesticides and Mosquito Control (MDCH)

http://www.michigan.gov/emergingdiseases/0,4579,7-186-25805_25824---,00.html

Information on West Nile Virus and Mosquito Repellent (CDC)

<http://www.cdc.gov/ncidod/dvbid/westnile/mosquitorepellent.htm>

Mosquito Control Projects - Information on regulations about applying pesticides to Michigan's surface waters (Michigan Department of Environmental Quality [DEQ])

http://www.michigan.gov/deq/0%2C1607%2C7-135-3313_24554-68318--%2C00.html

“Community Spray Programs” (MSU)

<http://www.pested.msu.edu/Resources/Home&Garden/index.html>

Other Particular Pests

Michigan Bed Bug Resources

http://michigan.gov/emergingdiseases/0,1607,7-186-26346_25949_55522---,00.html

“Bed Bugs are Back! An IPM Answer” (Cornell University)

http://www.hgic.umd.edu/content/documents/bed_bug.pdf

Bed Bug Product Search Tool (EPA)

<http://cfpub.epa.gov/oppref/bedbug/>

Termite Control Manual for Homeowners

<http://lancaster.unl.edu/pest/termite.shtml>

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“Bug Bombs – Overkill Can Be Dangerous” (State of WA)
http://here.doh.wa.gov/materials/bug-bombs-overkill-can-be-dangerous/24_BugBombs_E07L.pdf

“What’s Hot With Emerald Ash Borer?” (MDARD)
http://michigan.gov/mdard/0,1607,7-125-1568_2390_18298---,00.html

Bee Colony Collapse disorder (EPA)
<http://www.epa.gov/opp00001/about/intheworks/honeybee.htm>

Lawn and Garden Care

“Choosing a Lawn Care Company” (MSU)
<http://www.pested.msu.edu/Resources/Home&Garden/index.html>

“Read the Label *First!* Protect Your Garden” (EPA)
<http://www.docstoc.com/docs/594984/Read-the-Label-First-Protect-Your-Garden>

Green Landscaping with Native Plants (EPA)
<http://www.epa.gov/greenacres/>

“Greenscaping Your Lawn and Garden” An 8-page booklet about composting and ‘greenscaping’. (EPA)
<http://www.epa.gov/epaoswer/non-hw/green/pubs/home-gs.pdf>

Disinfectants and Sanitizers

The Ubiquitous Triclosan (Beyond Pesticides)
www.beyondpesticides.org/pesticides/factsheets/Triclosan%20cited.pdf

Common Cleaning Products Can Be Dangerous When Mixed (Utah Department of Health)
<http://health.utah.gov/epi/enviroepi/activities/hsees/Common%20Cleaning%20Products%20Can%20Be%20Dangerous%20When%20Mixed.pdf>

Chlorine Fact Sheet (MDCH)
www.michigan.gov/documents/Chlorine_fact_sheet_4-2-04_162866_7.pdf
(Spanish) www.michigan.gov/documents/Chlorine_Fact_Sheet_in_Spanish_143688_7.pdf

Information for Homeowners

Pesticide Application Businesses Licensed to do Business in Michigan (MDARD)
Check to see if a pest control company is licensed to do business in Michigan.
http://michigan.gov/documents/mdard/2-13-12_2012rptWebAlphaState-Wide_376530_7.pdf

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“Choosing a Pest-Control Company” (MSU)

<http://www.pested.msu.edu/Resources/Home&Garden/index.html>

Preventing Pests at Home (EPA)

<http://www.epa.gov/oppfead1/Publications/preventpest.pdf>

(Spanish) <http://www.epa.gov/oppfead1/Publications/prevpest-spanish.pdf>

Prevent Poisonings in Your Home (EPA)

<http://www.epa.gov/pesticides/health/poisonprevention.htm>

Integrated pest management and related information for the home (MSU)

<http://www.ipm.msu.edu/homepest.htm>

“Integrated Pest Management (IPM) in the Home” (MSU)

<http://www.pested.msu.edu/Resources/Home&Garden/index.html>

Selection and Use of Household Insecticides, if Needed (MSU Extension)

http://www.msue.msu.edu/objects/content_revision/download.cfm/revision_id.496095/workspace_id.-4/01500539.html/

Insect Repellents: Use and Effectiveness (EPA)

<http://www.epa.gov/pesticides/health/mosquitoes/insectrp.htm>

Pesticides and the Home, Lawn, and Garden (Purdue Pesticide Programs)

<http://www.btny.purdue.edu/Pubs/PPP/PPP29.html>

Household Products Database from the National Library of Medicine (NIH)

Find information about household disinfectants, cleaners, personal hygiene products and more, including pesticides.

<http://householdproducts.nlm.nih.gov/index.htm>

“Read the Label *First!* Protect Your Household” (EPA)

www.epa.gov/pesticides/regulating/labels/pdf/home.pdf

“Read the Label *First!* Protect Your Pet” (EPA)

http://www.epa.gov/pesticides/factsheets/read_label_protect_pets.htm

Things to Know About Pet Grooming and Pesticides (State of CA)*

<http://www.cdpr.ca.gov/docs/enforce/bulletins/petgroom.pdf>

Healthy Homes and Gardens (Washington Toxics Coalition)

<http://www.watoxics.org/homes-and-gardens/fastfacts/fastfacts-indoor-pests>

Household Toxins - links to information about common household products, their toxicity, alternatives to their use, and disposal suggestions (Oregon Toxics Alliance)

<http://oregontoxics.org/household/toxicreductionguide/alternatives.html>

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Chromated Copper Arsenate (CCA) and Its Use as a Wood Preservative (EPA).
CCA, also known as Wolmanized wood, is used to prevent wood decay in items such as decks, fences and playground equipment.
<http://www.epa.gov/oppad001/reregistration/cca/>

Pesticides and Children

Ten Tips to Protect Children from Pesticide and Lead Poisoning (EPA)
<http://www.epa.gov/pesticides/factsheets/child-ten-tips.htm>
(Spanish) <http://www.epa.gov/pesticides/factsheets/child-ten-tips-esp.htm>

“Join Our Pest Patrol: A Backyard Activity Book for Kids on Integrated Pest Management (EPA)
<http://www.epa.gov/pesticides/kids/pestpatrol/>

Play It Safe: Reduce Your Child’s Chances of Pesticide Poisoning (EPA)
<http://www.epa.gov/oppfead1/Publications/playitsafe.pdf>
(Spanish) <http://www.epa.gov/oppfead1/Publications/playitsafe-spanish.pdf>

“Exploring Urban Integrated Pest Management: Activities and Resources for Teaching K-6”
(MSU)
<http://www.pested.msu.edu/CommunitySchoolIpm/curriculum.htm>

Alternatives to Chemical Pesticides

Pest Management Using Natural Enemies (MDARD)
<http://grapes.msu.edu/pestInteract.htm>

Pesticide Alternatives for Specific Pests (Northwest Coalition for Alternatives to Pesticides)
<http://www.pesticide.org/solutions/home-and-garden-toolbox/home-and-garden-toolbox>

Homemade Cleaners (MSU Extension)
http://www.msue.msu.edu/objects/content_revision/download.cfm/revision_id.499694/workspac_e_id.-4/01500631.html/

Non-Toxic Home Cleaning
http://www.eartheasy.com/live_nontoxic_solutions.htm

INFORM Inc. is an independent research organization that examines the effects of business practices on the environment and on human health.
<http://www.informinc.org/about.php>

*All fact sheets from the CA Department of Pesticide Regulation (DPR) available in English and Spanish at: <http://www.cdpr.ca.gov/docs/factshts/factmenu.htm>

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