



A Guide to EPA's Worker Protection Standard

For Migrant-Serving Clinicians

The EPA's Worker Protection Standard (WPS) is a federal regulation aimed at protecting agricultural workers from the health risks associated with pesticides.¹ The WPS requires agricultural employers to comply with minimum safety precautions when using pesticides on farms, and in nurseries, greenhouses or forests. Requirements include training of workers handling pesticides or working in treated areas, provision of adequate personal protective equipment, communication of information about work areas recently treated with pesticides and when it is safe to re-enter these areas, and in case of emergency, availability of decontamination facilities and provision of medical assistance.

Health Effects of Pesticides

Studies show that farmworkers suffer serious short and long-term health risks from pesticide exposure. Short-term acute effects may include stinging eyes, rashes, blisters, blindness, nausea, dizziness, and diarrhea.² Exposure to pesticides over the long term can lead to chronic health effects such as cancer, infertility, birth defects, endocrine disruption, neurological damage and even death. Studies have also found that children exposed to pesticides are at a higher risk for asthma, cancer, and neuro-developmental problems.³

According to the National Institute for Occupational Safety and Health, U.S. farmworkers suffer pesticide poisoning at a rate 39 times higher than workers in all other industries combined.⁴ Workers can become exposed through spills, splashes, defective, missing or inadequate protective equipment, direct spray, drift or contact with pesticide residues on the crops or soil. Families can also be injured when farmworker children play in treated fields, when workers inadvertently take home pesticide residues on their hair, skin or clothing or when pesticides drift onto outdoor play areas and gets tracked into homes, etc.

Basic Protections of the WPS

The WPS was enacted with the goal of providing basic protections to farmworkers in order to minimize the harmful effects of pesticide exposure to both workers and their families. The law applies both to workers who are involved in the production of crops, and to "handlers," who mix, load, or apply pesticides. The WPS requires agricultural employers to take the following steps:

- Provide pesticide safety training and posters
- Inform workers about where and when pesticides have been sprayed
- Keep workers out of pesticide treatment areas during application and until re-entry into these areas is deemed safe
- Provide protective equipment for all workers coming into contact with

pesticides or pesticide-treated areas within the time periods when re-entry is restricted

- Provide facilities for decontamination (including clean water, soap, and towels)
- Facilitate emergency medical treatment if necessary

Pesticide Safety Trainings

Employers must provide training on pesticide safety to all workers and handlers who will enter a field treated with pesticides within the past 30 days or a field that has been under a restricted entry interval (or “REI”) within the last 30 days. An employer must provide this training for his workers at least once every 5 years. Workers must be trained before they have worked six separate days in such a field. All early-entry workers must receive pesticide training before entering affected areas.

Employers must also display in a central location a poster with basic safety information and the name and address of a nearby health facility.

Information about Recent Pesticide Applications

Employers must inform workers about where and when pesticides were sprayed to avoid accidental exposures. The pesticide label will indicate if these notifications must be either written or oral, or both. If both written and oral notification is required, employers must post warning signs around the field, informing people not to enter. Oral notifications should include the location of the treated area, and the length of the REI. The WPS also requires employers to post information about recent pesticide applications (including name of the pesticide, location of field, and REI) in an easily seen central location.

Protections during Applications and during Restricted Entry Intervals

The WPS prohibits application of pesticides in a way that will expose workers or other persons. Workers must be excluded from areas while pesticides are being applied and they cannot enter a pesticide treated area during the REI unless they are given protective equipment. An REI can last anywhere between 4 hours and 30 days, depending on the crop, the pesticide used, and the location. Information about REIs are found on pesticide labels, and employers should also post REIs in a central location accessible to all workers.

Personal Protective Equipment

An employer must provide and maintain personal protective equipment (PPE) for handlers and workers who work in treated areas before the REI has ended. PPE includes clothing and equipment that must be used to protect a worker from contact with pesticides, such as gloves, respirators or coveralls.

Decontamination Supplies

Handlers and workers must have enough water, soap, and towels to wash their hands on a regular basis and to wash themselves in case of an accidental exposure to pesticides. Handlers must be provided with enough water for washing their entire body in case of an emergency and a clean change of clothing to wear after the contaminated clothing has been removed.

Emergency Medical Assistance

If a farmworker becomes ill due to pesticide exposure, the employer must make available transportation (which can include calling an emergency vehicle) to a medical facility and provide information about the pesticide to which the person may have been exposed. This information could include the product name, EPA registration number, active ingredients, antidote or other emergency information from product labeling, description of the way the pesticide was used and the circumstances of the worker's exposure to the pesticide.

Retaliation

No worker may be prevented or even discouraged from complying or attempting to comply with the WPS. Workers who complain or exercise their rights under the WPS cannot be targeted by employers for discipline or termination.

Enforcement

The WPS is enforced by state agencies under cooperative agreements with the federal EPA. Agencies and inspectors responsible for WPS enforcement will conduct routine WPS inspections to monitor employer compliance with the regulations, as well as some "for cause" inspections that are usually initiated in response to a complaint, damage report, referral or tip following a pesticide application.⁵

Important Considerations for Migrant Clinicians

Farmworkers may be unaware that health effects or symptoms they are experiencing may be related to exposure to pesticides. They may not initiate a discussion regarding their occupational exposures with their healthcare provider. For this reason, it is important for clinicians to ask patients about their occupation and to ask farmworkers about pesticide-related symptoms. MCN has a [simple screening tool](#) to quickly ascertain occupational and environmental exposures.

Additionally, workers often do not know the names of the pesticides they have been exposed to at work. Even though the WPS requires that this information be accessible to workers in a central location, workers often do not know where this information is and are reluctant or unable due to language barriers, to ask their employer for the information. And in the case of an emergency, they may not remember to seek out this information before obtaining medical care. Under the WPS, employers have a responsibility to provide clinicians and patients with information on any product whose use they suspect may have led to poisoning. Clinicians can and should call employers to ask for pesticide use information in order to make accurate diagnoses and plan treatment.

Some States Have Additional Protections for Farmworkers and Requirements Regarding Pesticides

- Medical Monitoring

To prevent overexposure to organophosphate and carbamate insecticides by pesticide mixers, loaders and applicators, **California** and **Washington** require employers to pay for blood tests that monitor pesticide handlers' exposure to these types of pesticides.⁶ When the tests show that the worker is overexposed, he/she must be removed from handling activities to prevent injury. In Washington, the handler must be paid while he/she recovers from the pesticide overexposure.

- Incidence Reporting

Currently, thirty states have laws that require healthcare professionals to report suspected or confirmed pesticide-related illnesses and injuries. Twelve states (Arizona, California, Florida, Iowa, Louisiana, Michigan, New Mexico, New York, North Carolina, Oregon, Texas and Washington) participate in the Sentinel Event Notification System for Occupational Risk (SENSOR) program, which establishes formal reporting and investigation systems. MCN has developed a [reporting tool](#) for information on reporting requirements and resources.

EPA relies heavily on clinicians to report possible pesticide poisonings in order to understand and prevent future pesticide misuse. In the past, clinician reporting has led to tighter regulation and even banning of some pesticides.⁷

Notes

¹ The WPS can be found at 40 CFR § 170 et seq. (online at: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title40/40cfr170_main_02.tpl) and FIFRA is at 7 U.S.C. § 136 et seq (summary online at: <http://www.epa.gov/lawsregs/laws/fifra.html>).

² Calvert GM, Karnik J, Mehler L, Beckman J, Morrissey B, Sievert J, Barrett R, Lackovic M, Mabee L, Schwartz A, Mitchell Y, Moraga-McHaley S. 2008. Acute Pesticide Poisoning Among Agricultural Workers in the United States, 1998-2005, *Am. J. Industrial Medicine* 51(12): 883-898; see also Moses M. 1995. *Designer Poisons: How to Protect Your Health and Home from Toxic Pesticides*. San Francisco: Pesticide Education Center.

³ For example, see Mills, P. 2001. Cancer Incidence in the United Farmworkers of America 1987-1997, *Am J. of Ind. Med.* 40:596-603; McCauley LA, Anger KW, Keifer M, Langley R, Robson MG, Rohman D. 2006. Studying Health Outcomes in Farmworker Populations Exposed to Pesticides. *Environmental Health Perspectives* 114(6):953-960. Infante-Rivard, C. & S. Weichenthal. 2007. Pesticides and Childhood Cancer: An Update of Zahm and Ward's 1998 Review. *Journal of Toxicology and Environmental Health, Part B* 10(81). Bouchard MF, Chevrier J, Harley KG, Kogut K, Vedar M, Calderon N, Trujillo C, Johnson C, Bradman A, Barr DB, Eskenazi B. 2011. *Prenatal Exposure to Organophosphate Pesticides and IQ in 7-Year Old Children. Environmental Health Perspectives* 119(8): 1189-1195. For a comprehensive review of academic literature on health risks associated with pesticides, see *Sanborn, et al, Pesticides Literature Review*, Ontario College of Family Physicians (Toronto 2004), online at <http://www.bvsde.paho.org/bvstox/fulltext/rpesticides.pdf>

⁴ Calvert GM, Karnik J, Mehler L, Beckman J, Morrissey B, Sievert J, Barrett R, Lackovic M, Mabee L, Schwartz A, Mitchell Y, Moraga-McHaley S. 2008. Acute Pesticide Poisoning Among Agricultural Workers in the United States, 1998-2005, *American Journal of Industrial Medicine* 51(12): 883-898. See also, Das R, Steege A, Baron S, Beckman J, Harrison R. 2001. Pesticide-related illness among migrant farm workers in the United States, *International Journal of Occupational and Environmental Health* 7:303-312.

⁵ For more information on WPS enforcement, see www.epa.gov/compliance/monitoring/programs/fifra/wps.html. See attached chart for contact information for the enforcement agency in each state.

⁶ These pesticides depress the level of the blood enzyme acetylcholinesterase which plays a vital role in the central and peripheral nervous system. Exposure can be detected through plasma or red blood cell cholinesterase tests taken within 24-48 hours. Without baseline levels, however, the test must be repeated weekly for about 6 weeks to see if levels rise.

⁷ See also the American Public Health Association policy statement "Requiring Clinical Diagnostic Tools and Biomonitoring of Exposures to Pesticides," available at <http://www.apha.org/advocacy/policy/policysearch/default.htm?id=1400>

The contents of this publication are solely the responsibility of Farmworker Justice and Migrant Clinicians Network and do not necessarily reflect the official views of the Bureau of Primary Health Care or the Health Resources and Services Administration.

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