

PESTICIDE SAFE USE CHECKLIST

BEFORE USING A PESTICIDE:

- Check the label to:
 - ▶ be sure the pest you need to control is listed on the label;
 - ▶ be sure the site or plant to which you intend to apply the pesticide is listed on the label;
 - ▶ see if any special protective clothing or equipment is necessary;
 - ▶ find out what equipment to use to apply the pesticide;
 - ▶ see whether the pesticide is toxic to certain plants -- it may be necessary to remove or cover plants;
 - ▶ be sure you are applying the pesticide at the right time.
- Buy only enough pesticide for one, or at most, two years. Pesticides stored longer may degrade and become less effective.
- Remove or cover pet food and water dishes and fish tanks.

DURING APPLICATION:

- Always wear long trousers, a long-sleeved shirt, socks, and shoes when applying any pesticide. Other protective equipment, such as gloves, boots, a respirator, or goggles, may be necessary or desirable for extra protection.
- Do not wear leather shoes, boots, or gloves while handling pesticides. Leather absorbs pesticides and cannot be decontaminated easily.
- Take care to avoid pesticides coming into contact with your eyes, mouth, or skin.
- Avoid breathing spray mists. Open the windows when spraying indoors.
- Keep children and pets out of the treated area until the spray has dried or the dust has settled; longer if the label lists a longer reentry period.
- Wash your hands with soap and water before eating, smoking, or using the toilet.
- Stand upwind while mixing and applying pesticides.
- Never apply a pesticide where it could contact food, utensils, or food preparation areas, unless the label allows for such contact.
- If you are applying the pesticide to a food crop, check the label to see how many days you must wait before harvesting.
- Unless the label specifically allows such use, never apply a pesticide where it could contact water sources and avoid applying to bare ground.
- Follow label directions for method of application carefully. When practical, use spot treatments rather than broadcast sprays. If the label specifies "crack and crevice" treatment, apply only as a very narrow band.
- Never apply a pesticide at a higher rate than the label directs.

AFTER USING A PESTICIDE:

- Wash your hands with soap and water immediately after applying a pesticide. Shower as soon as possible.
- Wash all clothing worn during mixing and application separately from household laundry. Use a heavy duty liquid detergent and hot water. Dry the clothes in a hot dryer or outside in the sun.
- Keep pesticide measuring utensils separate from household and kitchen utensils.
- Store pesticides only in their original containers. Keep them away from food, feed, seed, and fertilizers in a locked building or cabinet.
- Dispose of empty pesticide containers in accordance with label directions and state and local requirements.

Source: Amy Brown, Maryland Cooperative Extension, Pesticide Education and Assessment Program, <http://pesticide.umd.edu>

Competency V:

Reporting Requirements and Regulations

Content

V-1. Surveillance Needs: Understand the importance of surveillance and incident reporting.

- Understand surveillance as the systematic collection and evaluation of all aspects of exposure occurrence and sequelae resulting in information that may be useful in the control of the exposure. To be effective, surveillance should be linked to preventive action.
- Be aware of cases of pesticide exposure and monitoring data on trends of exposure.
- Be able to describe strategies, both individual patient focused and population-based, that may result in reduced exposure.
- Be able to compare and contrast surveillance versus screening.
- Understand the relationship between incident reporting and workers' compensation process, including when to report and to whom to report.
- Understand the ethical / legal requirements of the nurse and physician for reporting pesticide exposures and be able to cite regulations, OSHA standards, etc.
- Understand relevant OSHA standards and the 1994 Worker Protection Standard, as well as additional requirements for workers in greenhouses and nurseries, and for early-entry workers.
- Be able to briefly describe the NIOSH Sentinel Event Notification System for Occupational Risks (SENSOR) system.

V-2. Reporting: Know how to participate in mandatory state surveillance systems and reporting requirements.

- Know that eight states conduct pesticide poisoning surveillance, and that at least 25 have some form of pesticide poisoning reporting requirements.
- Be able to briefly describe the rules and regulations regarding surveillance and reporting in the student's current state.
- Be knowledgeable about local, county, state, and national agencies for reporting of pesticide exposure, and about how to access state reporting data.

- Given a scenario, the student should be able to briefly describe his/her responsibilities and the process for reporting a pesticide exposure, and give a rationale for his/her actions, including regulatory and ethical considerations.

V-3. Regulations: Understand other legal and regulatory provisions that have implications for health care providers.

- Know that several laws administered by EPA, FDA, and OSHA regulate the use and sale of pesticides to protect human health.
- Understand the role and functions of EPA in the regulation of pesticide use under the Federal Insecticide, Fungicide, and Rodenticide Act.
- Understand the role, jurisdiction, and function of the Occupational Safety and Health Administration (OSHA) relative to workplace pesticide exposures.
- Know about EPA's Worker Protection Standard and the two types of workers to whom it affords protection in the farming, greenhouse, nursery and forest industries: (1) agricultural pesticide handlers (mixers, loaders, applicators, equipment cleaners or repair persons, and flaggers) and (2) field workers (cultivators or harvesters).
- Understand EPA's role relative to pesticide contamination of water and implications for migrant farmworkers.

V-4. *Legal Framework: Understand framework of federal laws that address pesticides and pesticide exposures.

(*Advanced nurse practitioner/resident or fellow)

- FIFRA: Federal Insecticide, Fungicide, Rodenticide Act (1947)
 - ▶ Provides definition of pesticide
 - ▶ Establishes pesticide label as law
 - ▶ Enables EPA to take action against pesticides considered to present unreasonable risks to human health
- FFDC: Federal Food, Drug, and Cosmetic Act
 - ▶ Establishes concept of a tolerance, the maximum level of pesticide residue at harvest, for pesticide residue on human food and animal feed
 - ▶ Requires EPA to set tolerance levels
- FQPA: Food Quality Protection Act
 - ▶ Amends FIFRA and FFDC
 - ▶ Establishes health-based standard for all pesticides
 - ▶ Provides additional ten-fold safety factor for infants and children

- ▶ Requires EPA to review pesticide registrations
 - ▶ Requires consideration of cumulative exposure
 - ▶ Requires reasonable certainty that pesticides are not causing harm
- WPS: Worker Protection Standard
 - ▶ EPA regulation issued under FIFRA
 - ▶ Provides protection to pesticide handlers and agricultural workers
 - ▶ Requires employer to ensure safety for all workers
- OSHA: Occupational Safety and Health Act
 - ▶ Provides for worker safety in manufacture, formulation, and distribution of pesticides
 - ▶ Establishes “Right-to-Know” law, whereby employers furnish employees information on hazardous chemicals they may be exposed to at work
 - ▶ Administered by Occupational Safety and Health Administration
- TSCA: Toxic Substances Control Act
 - ▶ Establishes an inventory of chemical substances
 - ▶ Requires manufacturers of chemicals to submit test results to EPA
 - ▶ Allows EPA to regulate new and existing commercial chemicals based on their risk to health or the environment

V-5. Ethical, Legal, Advocacy: Understand ethical, legal, and advocacy roles of health care providers in pesticide exposure incidents.

- Be able to identify vulnerable, at-risk populations relative to a potential exposure to a pesticide, e.g. children, adults working in selected occupations including mixer/handlers, applicators, farmers, pregnant women, migrant farmworkers, medical workers.
- Understand concept of environmental justice and its implications for vulnerable populations and for the role of health care providers.
- Given a scenario, the student should be able to write a position paper to a specific agency regarding the pesticide exposure, addressing the health, cultural, social, ethical, legal, economic, and political factors related to the issue for the vulnerable population, and describing the roles of the health care provider.

Points of Insertion

- Nursing
 - ▶ Ethical, legal, public policy course or units of instruction (undergraduate and graduate levels)
 - ▶ Community Health or Public Health Nursing courses
 - ▶ Occupational Health Nursing
 - ▶ Elective in Environmental Health Nursing (undergraduate and graduate levels)

- ▶ Leadership in Nursing (undergraduate and graduate levels)
- ▶ Role course/unit of instruction or module (undergraduate and graduate levels)

■ **Medicine**

- ▶ Public Sector Medicine rotation
- ▶ 4th year elective and residency elective in Environmental Medicine or Preventive Medicine
- ▶ Occupational/Environmental Medicine or Primary Care residency

Resources

National Pesticide Information Center: <http://npic.orst.edu>

NEETF Pesticides Resource Library: www.neetf.org/Health/Resources/healthcare.htm

U.S. EPA: Laws and Regulations, <http://www.epa.gov/epahome/lawreg.htm>
www.epa.gov/pesticides/regleg.htm. Pesticide Management Resource Guide:
www.epa.gov/oppfead1/pmreg/index.html. Worker Protection Standard and Recent Amendments:
www.epa.gov/pesticides/safety/workers/amendmnt.htm

* An asterisk denotes material for residents and nurse practitioner students over and above that of the undergraduate.

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