

Competency IV:

Risk Communication

IV-1. Patient Education: Be able to educate patients about basic routes of exposure and absorption, and how to minimize exposure to pesticides.

Content

- Healthy People 2000 / 2010 Objective 11. Environmental Health
- Be able to discuss examples of potential exposure, routes of exposure, and absorption in lay person's terms, and be able to incorporate them into patient teaching that is appropriate to the patient/family.
- Be able to counsel patients about minimizing unnecessary use of pesticides.
- Be able to provide anticipatory guidance about signs, symptoms, and recognition of pesticide exposure, and safe use of pesticides including hygiene practices, reading labels, and protective clothing.
- Be able to assess and discuss risks of patient exposure to pesticides and to develop individualized strategies for patient and family for reducing risk of exposure (See Pesticide Safe Use Checklist on page 49):
 - ▶ Safeguard homes during pesticide applications
 - ▶ Mitigating risks to family during and following an application
 - ▶ For patients who work with pesticides: use of personal protective clothing and equipment, decontamination procedures, preventing residues from being brought home on clothing.
- Be able to counsel patients who are pregnant or planning a pregnancy that some pesticides have adverse reproductive risks, and the desirability of switching to other tasks, if possible, at least during the first trimester of pregnancy.
- Be able to describe the purpose and function of available resources and know when to refer patients to the following:
 - ▶ Local health department
 - ▶ Cooperative extension services
 - ▶ Primary care provider
 - ▶ Poison Control Center
 - ▶ EMS

Points of Insertion

■ Nursing

- ▶ Adult, Pediatric, Maternal-Child Health Nursing courses (didactic and clinical) at both undergraduate and graduate levels
- ▶ Community Health or Public Health Nursing courses (didactic and clinical)
- ▶ Primary Care Management courses (didactic and clinical)
- ▶ Elective in Environmental Health Nursing
- ▶ Midwifery

■ Undergraduate Medicine

- ▶ 3rd year clerkships in Pediatrics, Internal Medicine, Family Medicine
- ▶ 4th year elective in Preventive Medicine
- ▶ OB-GYN rotations

■ Residency

- ▶ Environmental Medicine rotation
- ▶ Primary Care clinics
- ▶ Occupational/Environmental Medicine

IV-2. Labels: Be able to advise patients on how to read pesticide labels.

Content

■ Know the components of a pesticide label that patients should look for:

- ▶ Pay special attention to the precautionary statements and physical hazards.
- ▶ Know what the “signal word” is to determine level of toxicity.
- ▶ Know what types of first aid are indicated and contraindicated.

■ Know that it is a violation of the law to use pesticides in a manner other than as stated on the label.

■ Be able to teach patients to read labels and follow instructions carefully:

- ▶ Discuss the dangers of altering mixing and application procedures.
- ▶ Discuss the need for wearing appropriate protective clothing, masks, and other personal protective equipment (PPE), as instructed on product labels.
- ▶ Discuss the need to be prepared for emergencies and to ensure that necessary equipment, supplies, etc., are available and in proper working order.
- ▶ Teach patients to post telephone numbers nearby for EMS and Poison Control Center.

■ Be aware that there may be specific patient populations that will have limitations in reading the label (illiterate, non-English speaking, etc.) and special preventive education will be necessary.

Points of Insertion

■ Nursing

- ▶ Community Health or Public Health Nursing course (didactic and clinical)
- ▶ Home Health Nursing courses (didactic and clinical)
- ▶ Maternal-Child Health Nursing, Obstetric Medicine rotations
- ▶ Pediatric Nursing courses (didactic and clinical)
- ▶ Adult Health Nursing courses (didactic and clinical)
- ▶ Elective course in Environmental Health Nursing
- ▶ Midwife training courses

■ Undergraduate Medicine

- ▶ 3rd year clerkships in Pediatrics, Internal Medicine, Family Medicine
- ▶ 4th year elective in Preventive Medicine
- ▶ OB/GYN rotations

■ Residency

- ▶ Environmental Medicine rotation
- ▶ Anticipatory guidance in Primary Care clinics
- ▶ Occupational/Environmental Medicine residency

Resources for Competency IV

■ Online Resources

- ▶ U.S. EPA, Read the Label First: www.epa.gov/pesticides/label/
- ▶ Integrated Pest Management: www.epa.gov/oppbppd1/ipm/index.htm
- ▶ National Pesticide Information Center: Public access to pesticide information; supported by EPA. Tel: (800) 858-7378 (M-F, 8 am - 6 pm CST). <http://npic.orst.edu/gen.htm#ps>
- ▶ NEETF Pesticides Resource Library: www.neetf.org/Health/Resources/healthcare.htm

■ Publications

- ▶ Hitchcock J, Schubert P, Thomas S. *Community Health Nursing*. Albany: Delmar Publishers; 1999;15-16.
- ▶ Institute of Medicine. *Role of the Primary Care Physician in Occupational and Environmental Medicine*. IOM Report, Division of Health Promotion and Disease Prevention, Washington, DC: National Academy Press;1988.
- ▶ Pope AM, Snyder M, Mood L, for Committee on Enhancing Environmental Health Content in Practice, Institute of Medicine. *Nursing, Health, and the Environment: Strengthening the Relationship to Improve the Public's Health*, Chapter 3. Washington, DC: National Academy Press; 1995; 17-8.
- ▶ Rogers B. *Occupational Health Nursing Concepts and Practice*. Chapter 4. Philadelphia, PA: W.B. Saunders Company; 1994.
- ▶ Rosenstock L, Cullen M. *Textbook of Clinical Occupational and Environmental Medicine*, Chapters 1, 10. Philadelphia, PA: W.B. Saunders Company; 1994.

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>