

# Practice Skill VI:

## Providing Prevention Guidance and Education to Patients

### Content

#### VI-1. Engage in primary prevention strategies to promote health and prevent disease among patients.

##### For Individuals and Families:

- Assess perceived risk of exposure. Provide anticipatory guidance about pesticides to prevent exposures. (For example, advise families on appropriate concentrations of DEET.)
- Provide anticipatory guidance about signs, symptoms, and recognition of pesticide exposure; and safe use of pesticides including hygiene practices, and protective clothing (pamphlets, slides, etc.). Advise patients to read and follow label directions on protective garb needed when applying pesticides around the home, garden, or yard. Long pants, a long-sleeved shirt, and chemical-resistant gloves are generally recommended as extra protection even when not required by the label.
- Teach patients to read labels and follow instructions carefully, paying specific attention to precautionary statements and "signal words" that indicate level of toxicity.
- Assess lifestyle factors and medications taken for interactions. Discuss or refer to specialist about use of substitutes.
- Deal appropriately with pesticide-related questions that patients pose – whether by asking additional pertinent questions, by searching out accurate information, by referring patients to specialists, or by preparing oneself to answer certain types of questions (see Examples of FAQs).
- Counsel patients about minimizing unnecessary use of pesticides. Discuss the rationale for integrated pest management. Advise family to contact local county cooperative extension services for information regarding alternatives to pesticide use for control of insects, weeds, etc.
- Discuss potential reproductive toxicity (e.g., teratogenic) effects related to pesticide exposures.
- Caution nursing mothers that pesticides may be excreted into mother's milk.
- Be aware that there may be specific patient populations with limitations in reading labels (illiterate, non-English speaking only, etc.), and special preventive education may be necessary.

## Examples of FAQs

- I received a report from my water utility that said the water contains 0.5 ppb of dibromochloropropane. What is this chemical, what does it mean for my health, and what should I do?
- I just read in the newspaper that schools in my state are spraying their buildings with toxic pesticides. I'm worried because my child has asthma and sometimes feels worse at school. Could it be the pesticides?
- I have a six-month-old child and the cat has fleas. Is it safe to have the exterminator in to flea-bomb the house? The exterminator says it's safe if we stay out for a few hours and open the windows afterwards.
- My husband and I are having trouble conceiving a child. We own a farm and he sprays pesticides. I want to know if the pesticides may be causing a problem.
- I get a headache and have difficulty concentrating at the office. I think it may be because the janitor sprays pesticides at night.
- I am a farmworker and was picking celery in the fields. Today I have a rash on my hands and arms. Is it from the chemicals?

### For Workers:

- Assess occupational exposure risk knowledge.
- Provide anticipatory guidance about pesticides to prevent exposures.
- Educate about signs/symptoms of pesticide exposure.
- Discuss and demonstrate use of personal protective equipment and clothing, (gloves, face shields, aprons, boots). Teach patients to read labels and follow instructions carefully. Discuss the dangers of altering mixing and application procedures. Teach patients to pay attention to specific components of a pesticide label, including precautionary statements and "signal words" that indicate level of toxicity.
- Teach patients to be prepared to treat emergencies prior to occurrence, to know what types of first aid are indicated and contraindicated, and to ensure that necessary equipment, supplies, etc., are available and in proper working order.
- Assess lifestyle factors and medications taken for interactions. Discuss or refer to specialist about use of substitutes.
- Discuss use of closed cab systems in mixing and loading pesticides with proper training, closed tractor cabs in application. Carbon-HEPA filtration systems are recommended in some cases.
- Discuss use of substitute pesticide formulations that are less toxic.

- Discuss need for washing facilities for decontamination and removal of residues before eating or bathroom use.
- Discuss avoidance of mixing/spraying during windy conditions.
- Discuss need to change contaminated clothing at work, place in a separate bag and wash separately from other wash.
- Be aware that there may be specific patient populations with limitations in reading labels (illiterate, non-English speaking only, etc.), and special preventive education may be necessary.

## **VI-2. Work proactively with patients and the community to prevent exposure, ensure early detection, and limit effects of illness.**

### **Individuals/Families:**

- Provide information about emergency procedures to be used if contamination occurs.
- Discuss how to report exposures to appropriate authorities.
- Conduct screening tests to detect pesticide-related exposure/illness (e.g., cholinesterase, spirometry), including baseline screening and after exposure.
- Limit disability and rehabilitate or restore to optimal functioning, for example, by providing avenues for vocational rehabilitation, or case management services to restore optimal functioning.

### **Workers:**

- Conduct worker screening tests (e.g., cholinesterase, spirometry) to detect pesticide-related exposure/illness. If possible, conduct baseline screening before and after exposure. Remove worker from exposure if indicated.
- Advise workers to carry water attached to tractors and know emergency procedures for decontamination (need to follow WPS and OSHA regulations about providing basic hygiene requirements).
- Partner with workers to develop peer support groups for disabled workers.

### **Population-Based:**

- Work with local agricultural extension office, agro-universities, local grain/pesticide sellers, health care practitioners, farm bureaus, garden shops, plant nurseries, manufacturers, distributors, etc. in prevention strategy development.
- Develop network for new work opportunities.
- Work with community groups (e.g., schools, PTA, churches, daycare, migrant groups, farm worker, farm associations, etc.) to identify environmental justice issues, and to discuss and advocate for targeted prevention strategies.

- Discuss need for integrated pest management programs to control pest growth.
- Develop/use pesticide/illness incident reporting system to track patterns of exposure and disease.

## Resources

U.S. EPA: Integrated Pest Management, [www.epa.gov/oppbppd1/ipm/index.htm](http://www.epa.gov/oppbppd1/ipm/index.htm).

Read the Label First, [www.epa.gov/pesticides/label/](http://www.epa.gov/pesticides/label/) (Explains basic statements found on pesticide product labels.)

National Pesticide Information Center: General Pesticide Information, <http://npic.orst.edu/gen.htm#ps>. County Extension Offices, <http://npic.orst.edu/countyext.htm>.

Children's Environmental Health Network. *Training Manual on Pediatric Environmental Health: Putting It Into Practice*. 1999.

Pope AM. *Environmental Medicine: Integrating a Missing Element into Medical Education*. Institute of Medicine. Washington DC: National Academy Press; 1995.

Reigart JR, Roberts JR. *Recognition and Management of Pesticide Poisonings*, 5th ed. Washington DC: U.S. EPA, 1999. EPA #735-R-98-003. Online: <http://npic.orst.edu/rmpp.htm>.

## **The National Environmental Education & Training Foundation**

The National Environmental Education & Training Foundation (NEETF) was chartered by Congress in 1990 as a private non-profit organization that designs and implements innovative programs in life-long environmental learning. NEETF serves students as well as adults, elected and appointed officials of local, state, and federal government, and professionals in health, business, education and the media.

The National Environmental Education & Training Foundation

1707 H Street, NW Suite 900

Washington, DC 20006-3915

Tel: 202-833-2933

Fax: 202-261-6464

E-mail: [neetf@neetf.org](mailto:neetf@neetf.org)

Website: [www.neetf.org](http://www.neetf.org)