

## REPRODUCTIVE HEALTH & PESTICIDE SAFETY: Know the Facts Occupational Exposure

Agriculture is known as one of the most dangerous industries for farm owners, workers, and their families, who live, work, and play in the same spaces. "Those working in the agricultural industry producing food, fiber, and fuel experience one of the highest risks factors among all occupations for injury, illness, and death" (Donham, 2016). The U.S. Department of Labor, Occupational Safety and Health Administration states that farmworkers are exposed to numerous safety, health, environmental, biological, and respiratory hazards (OSHA, n.d.). The United States is one of four significant producers of agriculture globally, and in 2016, a reported 1.2 billion pounds of pesticides were used in the United States, ranking America second to China in pesticide usage (Donley, 2019). Furthermore, the U.S. Environmental Protection Agency (EPA) estimates that almost 75% of U.S. households use pesticides (U.S. EPA, n.d.). Pesticides are used in agriculture to control weeds and other unwanted vegetation, insects, rodents, bacteria, fungi, and diseases.

### ..... WOMEN IN AGRICULTURE .....

The USDA Census of Agriculture data shows that the number of women in agriculture is increasing, with women accounting for 36% (1.2 million) of the country's producers (USDA, 2017). Pregnancy and fertility are often not considered when women assume farm tasks. The EPA states, "Women who are pregnant or planning a pregnancy, especially those currently performing farm work, should be informed of the implications of [pesticide] exposure before, during, and after pregnancy and assisted in making appropriate decisions for their work and home situations" (U.S. EPA, 2013).

### ..... POSSIBLE ADVERSE EFFECTS .....

Populations at significant risk of pesticide poisonings and adverse effects include pregnant women and children who reside in agricultural communities. Incidents of pesticide poisonings often go unnoticed without proper education, including prevention, and this leads to adverse effects such as neural tube defects, neurodevelopmental harm, spontaneous abortion, and cancer.

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### PREVENTING THE HEALTH IMPACTS OF PESTICIDE EXPOSURE

In a published PLOS One study focused on environmental exposure screenings by OB/GYNs, fewer than half of the physicians surveyed screened for occupational exposures, including pesticide use (Grindler et al., 2018). In addition, 85% of respondents reported that they did not feel comfortable obtaining an environmental history, and 58% of respondents said that they performed no regular screening of environmental exposures. Family physicians have a critical role in serving as the first line of defense for pregnant women working and living in agricultural communities. Occupational and environmental medicine recommend routine screening for environmental and occupational exposures to identify, monitor, and reduce prenatal exposures.

### CONSIDERATIONS FOR ROUTINE PATIENT SCREENING INCLUDE:

- Identification of agricultural risks and occupational exposures, including handling of pesticides
- Consideration of patient reproductive health from preconception to postpartum care, including breastfeeding, to address occupational exposures
- Assessment of work tasks and recommendation of modifications, including the elimination of exposure and guidance on proper personal protective equipment for the patient
- Continued professional development to understand the agricultural occupational risk of special populations

Family physicians are uniquely positioned to serve as the first line of defense for pregnant women, infants, and children exposed to pesticides. Please visit Pesticide Educational Resources Collaborative-Medical (PERC-med) for more population-specific resources.

### REFERENCES

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