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Consumer Product Safety

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Pest Management Regulatory Agency's Approach to Assessing Cumulative Effects of Pesticides

The *Pest Control Products Act* requires that we assess the cumulative effects of pesticides. A cumulative assessment evaluates the potential adverse health effects from being exposed to more than one pesticide at a time from the same pesticide "group". These groups are created based on a common toxic effect that occurs by the same or similar mechanism. Health Canada's [Science Policy Note \(SPN2001-01\): Guidance for Identifying Pesticides that have a Common Mechanism of Toxicity for Human Health Risk Assessment](#) describes the steps that are taken to determine these groups.

Examples of such groups include:

- Organophosphates
- N-methyl carbamates
- Pyrethrins/Pyrethroids

Currently, Health Canada is completing individual assessments for pesticides within the same group/class. This is the first step in the cumulative assessment process. The evaluation of cumulative effects is an emerging area in science. While guidance is in place for creating groups for cumulative assessments, scientific methodologies continue to evolve. The Pest Management Regulatory Agency (PMRA) continues to work with the international community, including the United States Environmental Protection Agency (U.S. EPA) and the Organisation for Economic Co-operation and Development (OECD) to ensure that Canada puts into place the most modern scientific methods and procedures. The department anticipates having a finalized methodology in place in 2017/2018.

When assessing cumulative effects, our scientists will consider:

- exposures that may occur at the same time from different sources and routes (i.e., oral, dermal, inhalation, drinking water, residential use);
- whether it is possible that low-level exposures to more than one chemical from the same group could lead to the same or increased health risks relative to a higher level of exposure to any of these chemicals individually; and,
- assessments completed by other regulatory bodies, such as the U.S. EPA.

If the outcome of the cumulative assessment identifies health concerns, PMRA will determine appropriate actions, such as requiring additional restrictions, in order to mitigate these concerns.

Health Canada already considers the combined or 'aggregate' exposure of a single pesticide from multiple sources (food, residential and drinking water) and from all possible routes of exposures (oral, skin and inhalation).