Introduction: The term pesticide is often used to refer to substances that are insecticides, herbicides and fungicides. These are designed to kill weeds, insects, rodents, fungus and mould. As they are harmful to plant and animal life, they are also harmful to humans and especially developing children. Some pesticides are naturally derived, such as from arsenic or plant extracts, while most in use are man-made chemicals. The widespread use of man-made pesticides really began in the 1940s and 1950s when production rapidly grew and spread throughout the world. Pesticides are credited as part of the “green revolution” which raised agricultural productivity and yields.

What it’s used for: Pesticides are most often used in agriculture to control the spread of weeds, insects and fungus which could threaten the crop. However, they are also used in and around the home for the same reasons as well as to kill rodents and control mould.

Where it’s found: Pesticides are in heavy use in almost all agricultural areas and in forestry as well. Canada’s Northern Contaminants Program was also able to prove that some pesticides which are POPs travel from the south to the north, disproportionately affecting northern food chains and people who live in northern areas.

10 out of the 12 most dangerous Persistent Organic Pollutants are pesticides
- Stockholm Convention on POPs

Not all pesticides are POPs as some pesticide compounds break down and dissipate rapidly over weeks and months. That doesn’t mean that exposure to these types of pesticides is harmless, remember they are still designed to kill.

While pesticides are often only sprayed on fields or in forests, they can drift through winds and currents to land in areas that people live, onto lawns, through open windows or even onto playgrounds.
Heath effects summary: High levels of exposure to organochlorines (one type of pesticides) have been shown to cause cloracne, a type of acne cause by chlorine-containing chemicals and skin rashes. There is some evidence that organophosphate insecticides affect the immune system and can cause psychiatric problems such as paranoid behaviour, disorientation, anxiety and depression. Other pesticides may cause muscle twitching, tremors, weakness, inability to breath, blurring of vision, vomiting, cramps, excessive perspiration, unconsciousness and even death in cases of high exposures. But there remain many questions on the long-term, low-level exposure of many types of pesticides.

How we are exposed: Exposure to pesticides often comes from the consumption of food and water but those most at risk of the highest exposures are the workers who apply the pesticides in the first place. Pesticides can also be absorbed through the skin and from
breathing. Those living in agricultural areas may seem to face the highest rates of exposure, but the household application of insecticides and herbicides can also be a significant source of exposure.

**What you can do to reduce exposure:** Buy and eat organic certified foods as much as possible. If you have a farmer’s market in your area, ask them about their use of pesticides, many smaller farmers choose not to go through the organic certification process, but still do not use pesticides. Always thoroughly rinse or wash all foods before consuming regardless of where it was purchased or grown. Planting your own garden is also another way to be sure you have pesticide-free foods.

To avoid using insecticides in the home you can avoid the conditions that attract insects and rodents:

- Seal any cracks that you can find which might provide a way in for insects or rodents
- Keep food in cupboards and tightly sealed containers
- Completely clean up any food spills
- The moisture found in many basements can attract and provide a source of water for insects. Fix any leaks and get rid of the moisture