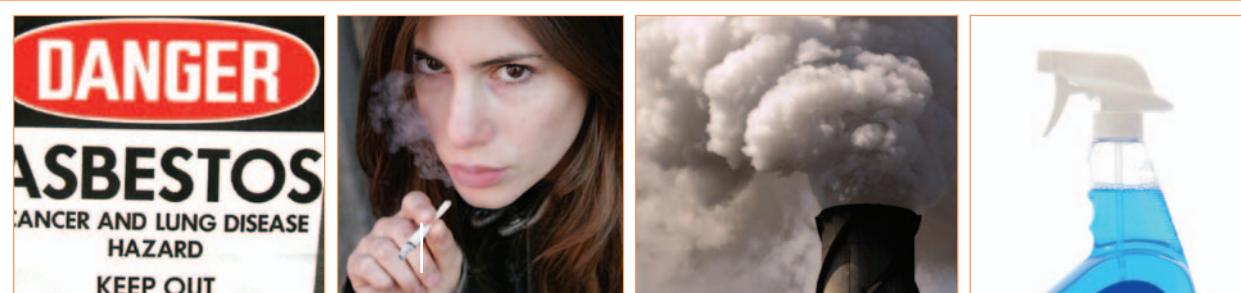


# Health Factors: A Complex Web

A woman's health is a balance of many complex factors. Exposure to environmental contaminants is just one of them. There is no formula that can determine the exact effects of exposure to different contaminants. The effect depends on the risk associated with that exposure and a person's overall health and susceptibility. This illustration shows just some of the factors at work.

To protect our health, it is important to do the positive things where we have control, such as eating well, exercising, using healthier products and reducing stress. And then join the growing movement of women working to make sure the government does its job of protecting all of us from environmental contaminants.



## Environmental Contaminants

It is impossible to make exact predictions of whether a person exposed to environmental contaminants will develop health problems. But some of the factors that influence the risk of being harmed by contaminants include:

### Hazard of the Contaminant

Not all contaminants are equally hazardous. Adequate information about the health impacts of thousands of chemicals does not yet exist; yet it is clear that some contaminants are especially hazardous to human health and the health of other species. For example, mercury is widely understood to affect brain development, especially in the very young.

### Dose of Exposure

For many years people assumed that contaminants were only harmful if people were exposed in high doses. But new research indicates that the question of dose is more complicated. Some contaminants are harmful at high doses, some at low doses, some at both high and low doses, but in different ways.

### Timing of Exposure

Exposures to some contaminants early in life can influence health later in life. For example, early life exposure to chemicals that are hormonally-active (i.e. interfere with the hormone system), such as Bisphenol A, may cause puberty to happen earlier in life. Exposure to arsenic in the womb is tied to lung disease and cancer in adults.

### Combinations of Exposures

Most of the research on the connection between health and contaminants is focused on exposure to one contaminant at a time. In reality, people are generally exposed to multiple contaminants at the same time through the variety of products we use, the food we eat, the emissions we are surrounded by and the contaminants that may be stored in our bodies for years.

Much more research is needed on how combinations of contaminants can affect our health, but smoking is one area where this kind of research has been done. The results are not good. For example, smokers exposed to asbestos have a markedly increased risk for lung cancer, much larger than the risk of lung cancer from just smoking or just asbestos exposure.



## Nutrition

Good nutrition is important for children to grow strong and for all people to support their overall health. Studies indicate that poor nutrition may magnify the effect of environmental contaminants. For example, iron-deficient children may experience greater effects from lead exposure because they actually absorb and retain more lead. Additionally, iron-deficient kids may ingest more lead because they are more likely to live in lead-contaminated environments. When, like any normal child, they put their hands in their mouths, they are likely to swallow more lead-contaminated dust and dirt.



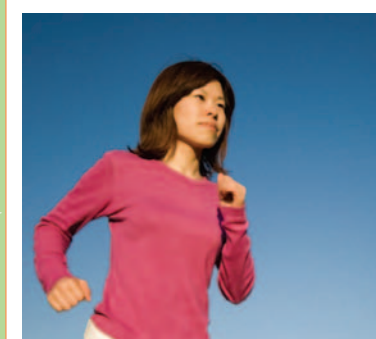
## Stress

Stress comes in many forms, such as too many responsibilities, financial pressure or challenges in our relationships. Reducing stress is important for our overall health and being able to handle life's challenges—mental, physical or otherwise. Constant stress taxes the immune system and makes us more vulnerable to harmful influences on our health, such as environmental contaminants. Taking time to exercise, eat well and do things that make you happy can help reduce stress.



## Pregnancy

Events in a woman's reproductive cycle can affect her health. For example, women who have their first child after age 30 and women who never give birth have about a two- to three-fold increased risk of breast cancer compared to women who have their first child before age 20.



## Exercise

Exercise is important for staying healthy. It builds strength, increases circulation and strengthens the immune system—all important things when fighting the everyday cold or resisting the effects of environmental contaminants. Plus it feels good and helps lift the spirits. However, care should be taken when exercising outdoors on poor air-quality days.



## Social Support

Strong social support from friends, family and/or a supportive community can play an important role in a person's well-being and even help protect people against chronic illness. For example, people with a strong social network may be less likely to develop obesity and diabetes. One study found that the social support African American women received in their faith-based community helped them maintain healthier lifestyles.



## Genetic Heritage

Each of us inherits our genes from our biological parents. Some of these genes determine how we look, such as eye color or face structure. Other genes make people more susceptible to developing some diseases. For example, people with inherited alterations in the genes called BRCA1 and BRCA2 (short for breast cancer 1 and breast cancer 2) have an increased risk for breast and ovarian cancer. But carrying these genes does not mean a woman will automatically develop such cancers.