

Air contamination and what you can do to protect yourself

Chemicals are the most likely source of air contamination. An accident at a plant or factory or a train wreck might release large amounts of a hazardous chemical into the air, for instance. A terrorist attack could involve the deliberate release of a toxic chemical or gas.

In a bioterror attack, bacteria or viruses causing diseases such as anthrax, pneumonic plague, smallpox or tularemia could be released in an aerosol form. Anyone who inhaled the substance could be affected.

Although air itself does not become radioactive, the release of radiation into the environment can create radioactive dust and dirt (fallout) that can make the air unsafe. A “dirty bomb” could work in this manner, causing a relatively minor explosion but doing its real damage by releasing radioactive materials into the environment.

What you can do

You cannot do much in advance to protect yourself from a hazardous substance released into the air. If there hasn't been an obvious explosion or a known terrorist attack, the air could become contaminated without anyone knowing it until people or animals start to have symptoms.

As with other potential emergencies, it makes sense to have a disaster kit with water, food, first aid items, tools and other essentials. Concern over terrorist threats has prompted some people to consider adding the following items to their supplies:

- **Masks.** A mask can help protect against some infections. But it will not protect against many other substances. A gas mask can protect against many toxic gases and other harmful substances in the air. But gas masks are expensive and hard to use. They are helpful only if you know how and when to use them and if they are properly fitted. They are not recommended for the general public. You do not need to purchase or wear any kind of protective mask unless civil or health authorities in your area tell you to do so.
- **Potassium iodide tablets.** Potassium iodide, also known as KI, should only be used if public health officials recommend them. KI helps protect your thyroid gland from the harmful effects of radioactive iodine, which could be released as a result of a dirty bomb, an explosion at a nuclear power plant, or any other nuclear incident.

If a hazardous substance is released into the environment:

- Get out of the immediate area if possible. If the release has occurred outdoors, go inside. If it has occurred indoors, go outside. Move out of low-lying spots to higher ground, because most chemicals released into the environment are heavier than air and will sink.
- Follow instructions from public health and emergency officials. Phones of government agencies are likely to be overwhelmed with calls during a public health emergency. So do not try to call for instructions. Depending on the kind of release, authorities may advise you to shelter in place or simply to stay indoors. You do not need to leave your community unless local authorities tell you to.
- If you are directly exposed to radioactive dust, dirt or other fallout, follow the steps for personal decontamination to get the substance off your skin as quickly and completely as possible.



Critical support when you need it

Visit optumwellbeing.com/criticalsupportcenter for additional critical support resources and information.



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