What you need to know about smoke and carbon monoxide detectors.



Because the consequences of a home fire or carbon monoxide poisoning can be so devastating, most states have laws requiring smoke detectors and carbon monoxide detectors in residential homes. And even though they're not required by law, there are also fuel gas leak detectors that warn of natural gas or propane leaks. But how do you know if you should invest in one of these? And what kind of detectors are best?

It can be confusing, especially when you try to choose a detector and discover that there are dozens of different models. But don't worry, we're here to clear the air about smoke, carbon monoxide, and fuel gas leak detectors.

Smoke detectors: Where do I need them?

The National Fire Protection Association recommends smoke detectors be installed on every level of your home, including the basement. Detectors should also be installed inside each bedroom and outside each sleeping area. Because smoke rises, smoke detectors should be installed on the ceiling 6 inches away from the wall or on a wall 6-12 inches from the ceiling.

Smoke detectors: Which kind should I buy?

While there are many variations and brands, there are three types of smoke detectors:

1. **Ionization smoke detectors.** These are best at detecting flaming, rapid fires, but not as effective at detecting smoldering, smoky fires. Because ionization smoke detectors are more prone to false alarms caused by burnt food or steam, it's best to avoid using them in or near kitchens and bathrooms.
2. **Photoelectric smoke detectors.** These are best at detecting the smoldering, smoky fires that ionization detectors can miss. However, they're less effective at alerting us to flaming fires. So, which is best? The answer….
3. **Dual-sensor smoke detectors.** By using both ionization and photoelectric technology, these detectors offer superior protection against both kinds of fires. Dual-sensor smoke detectors are recommended for most areas. If you find false alarms annoying, you may want to use a photoelectric smoke detector near your kitchen or bathroom, but choose a dual-sensor option for the rest of your home.

No matter what type of detector you purchase, make sure it has the Underwriters Laboratories mark, which indicates it has met the standards for safety. For all types of detectors, we recommend buying established name brands rather than generic or discount brands. Also, check the manufacture date — the newer the better. Smoke detectors should be replaced every 10 years.

Carbon monoxide detectors: Why do I need them, and where?

Each year, carbon monoxide poisoning sends about 50,000 Americans to the emergency room and causes more than 400 deaths. Carbon monoxide is found in fumes produced by gas-fueled appliances like furnaces, kerosene heaters, gas stoves, and portable generators. Vehicle exhaust and fumes from burning charcoal or wood also contain carbon monoxide.

Because carbon monoxide is a colorless and odorless gas, it is important to have carbon monoxide detectors throughout your home. Install one on each level of your home, as well as one in each bedroom. Carbon monoxide will disperse evenly throughout a room, so detectors can be installed high or low on a wall. Consult the manufacturer's manual for recommended placement.

Carbon monoxide detectors: Which one should I buy?

As with smoke detectors, there are many different models and brands of carbon monoxide detectors. Some are battery-powered, some are hard-wired into your home's electrical system, and some have a long-life lithium battery that will last for ten years (after which you must purchase a new detector).

There are also combination detectors on the market that detect both smoke and carbon monoxide. However, according to Consumer Reports, "Few combination detectors are effective at detecting carbon monoxide, smoldering fires, and flaming fires, which is why we recommend that consumers use a combination of detectors in their homes for complete protection."

As with smoke detectors, always look for the Underwriters Laboratories mark on any carbon monoxide detectors you buy. Carbon monoxide detectors should be replaced every five years.

Fuel gas leak detectors: What are they and do I need one?

Fuel gas leak detectors alert you to natural gas, propane, and other combustible gases. If you are only concerned about one gas, you can buy a detector that focuses on the presence of only that gas. For instance, most homes have some appliances fueled by natural gas, such as a gas furnace or clothes dryer, but not everyone has propane-fueled appliances.

Combination detectors can alert you to multiple gases, such as carbon monoxide, natural gas, and propane. However, because propane is heavier than air, and carbon monoxide and natural gas are lighter than air, the placement of combination detectors can be problematic. For propane, which sinks, detectors should ideally be placed lower on a wall; detectors for lighter gases should be placed higher. If you are especially concerned about propane leakage, a separate detector may be your best bet.

Though natural gas is odorless, most providers add an odorant called mercaptan to give it a rotten-egg smell. This makes it more noticeable, but if you are not close enough to the source, you may not detect it in time to prevent disaster. That's why a natural gas leak detector is a smart investment in your family's safety.

Look for the Underwriters Laboratories mark on any detector you buy. Most gas leak detectors should be replaced about every five years. Check the manufacturer's manual of your model for details, including the proper placement of detectors in your home.

Test detectors regularly.

Test all types of detectors at least once a month. Most detectors have a test button you can press to ensure the alarm is working properly. Keep your detectors clean and free of dust, too, because excessive dust can block the grates and prevent them from working properly.

One more way to protect your home.

Smoke, carbon monoxide, and fuel gas leak detectors give you peace of mind by protecting your family. But even if you are given an early warning of a fire or other issue, it can still cause costly damage to your home. A good homeowners insurance policy to cover those costs can give you even greater peace of mind.