Smoke alarms

A smoke alarm is an inexpensive way to protect your family from smoke and fire injuries, but you must take the time to test it to ensure that it's working properly. A properly functioning smoke detector doubles your chance of surviving a fire by warning you of a dangerous situation before it's too late.

For minimum coverage, have at least one smoke detector or alarm on every level of your home and in every sleeping area. You can also add alarms to hallways outside every bedroom, the top and bottom of all stairways, and often-forgotten places such as basements, attics, utility rooms, and garages.

There are two kinds of smoke detectors:

- **Battery-operated:** These inexpensive units can easily be installed anywhere. They require frequent inspection to determine the condition of the battery.

- **AC-powered:** Installed by an electrician (or those with a good working knowledge of electricity), these units are much more dependable over the long haul due to their direct-wired power source. But they should have an independent battery backup so that they continue to operate during a blackout or an electrical fire that temporarily interrupts power.

Some newer models have a hush-button feature that silences a nuisance false alarm and desensitises the unit for a few minutes until the air clears, when it resets itself. Other high-end models have safety lights that come on when the alarm is activated.

All smoke detectors and alarms have a test button that, when pushed, causes the alarm to sound. Also, most detectors have either a blinking or a solid light that glows to let you know that the alarm is getting power.

Once a month, get up on a chair or use a broom handle for extra reach and push the test button. If you don't hear anything, then your battery is dead. If after changing the battery, the smoke detector is still not working, immediately replace it with a new one.

While battery-operated units have a built-in device that chirps when batteries get low, signalling the need for replacement, common wisdom dictates not waiting until that point. Batteries should be replaced twice a year, once in the spring and once in the autumn.

Never remove a battery from your smoke alarm for use in another item, such as a radio, toy, or TV remote. Many people do so with every intention of replacing them in short order, only to remember that they forgot while standing and watching their house burn down (if they were lucky enough to escape).

While you're up checking your battery every month, also brush or vacuum the alarm to keep dirt and dust out of the mechanism. Never use cleaning sprays or solvents that can enter the unit and contaminate sensors.

The button test ensures that the batteries are working. However, it doesn't tell you whether the detector is operating properly. To find out, put two or three lighted matches together (the wood kitchen type is best) and then blow out the flame, holding the matches so that the smoke wafts up toward the unit.

After a period of ten years, a smoke detector has endured more than 87,000 hours of continuous operation, during which time the internal sensors have probably become contaminated with dust, dirt, and air pollutant residues. If your alarm or detector is more than ten years old, consider replacing it to maintain optimal detection capabilities of deadly smoke in your home.
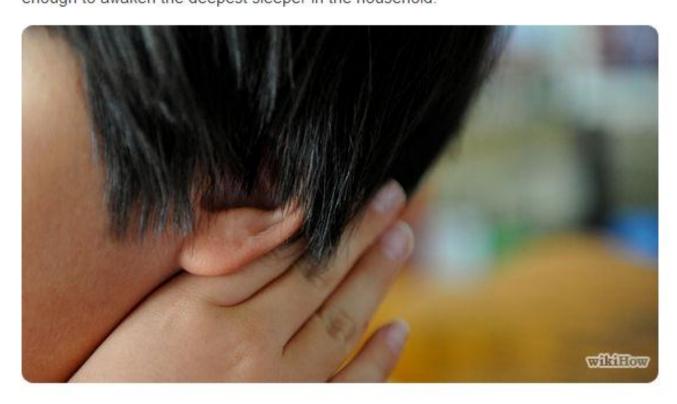
The widespread use of smoke detectors in home has resulted in significant reductions of injuries and deaths from house fires. You can cut the chance that you or someone that you love will die in a house fire simply by installing these inexpensive devices in your home. However, the only smoke detector that can help you survive is the one that is properly functioning. Like all electronic devices, they can fail. The only way to be sure that your smoke alarm will work when you need it is to test it periodically.

STEPS:

1 Alert all members of your household that you are testing the alarm first, unless you would like to use the opportunity for a fire drill.

2 Have someone go to a part of the house or apartment that is as far from the smoke detector as possible when conducting a function test, to determine whether the alarm can be clearly heard at that distance. Remember, it has to be loud enough to awaken the deepest sleeper in the household.
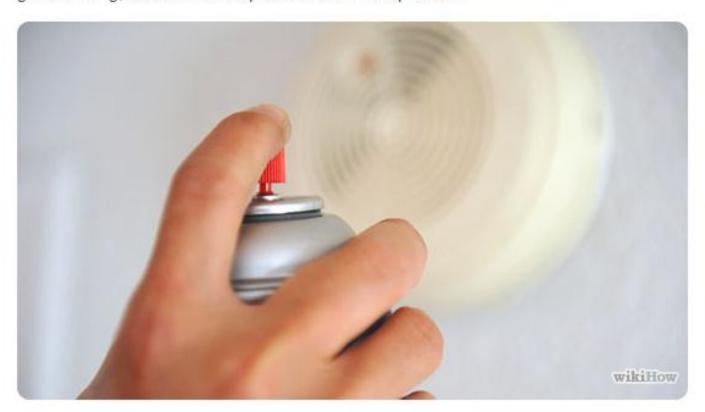

3 Push and hold the test button for a few seconds. The detector should produce a loud noise.

4 **To test whether the unit will actually work in a fire, you will need a small spray can of smoke detector test aerosol.** You might find this in a well-stocked hardware or home improvement store. If not, you can find it by searching the Internet. They cost only a few dollars, and one small can will last for years. Just spray some of the test material into the detector, and wait 5 to 10 seconds for a response. If the alarm sounds, you know the unit will sound in a fire. If not, you have a non-functioning smoke detector, *even if it beeps when you push the button*. Try changing the batteries and cleaning the detector to remove any dust that may be blocking the openings, then repeat the test procedure. If that does not get it working, it is useless. Replace it as soon as possible.

5 **To turn off the alarm after testing you can hold a small, hand-held vacuum under the detector, suck out the test material, and the alarm will silence.** If you only have a full-sized vacuum (the kind with wheels) use the extension tubes to reach up to the alarm and suck the test material out of your smoke detector. Newer smoke detectors may have a silence button that can silence the alarm until the residue leaves the unit. Alternatively, you can just wait for it to turn off by itself, but that wastes battery power, and the sound is very annoying.

6 **Test every smoke alarm in your home every month**. If you are not willing to do that, do it at least a few times a year. Always test alarms after battery changes to ensure that the device is working.

Tips:

- Never decorate any part of a smoke alarm (including the outer cover) with paint, stickers, hanging objects, etc. This can impair function.
- A few times a year, use a vacuum cleaner (hand-held or full-sized with extension tube) to gently remove dust from the slots cut into the unit's cover. Dust in those slots could slow the entry of smoke and interfere with early detection of a fire.
- Smoke detectors have a reliable service life of ten years. After ten years, replace the smoke detector with a new one.
- If you move into a home with existing smoke detectors of an unknown age, look at the manufacturer's label on the back of the device. It might display a date of manufacture and you can use that date to calculate the device's age. If you cannot find a date of manufacture, replace the unit with a new one as soon as possible.
- Wear ear protection when you test the smoke alarm. It's very loud and you will be right next to it when you're testing it.
- Most manufacturers recommend testing the detector weekly. The push button test is sufficient for this. Use the aerosol test gas a few times per year to ensure proper airflow into the detector.

Warnings:

- An alarm of any sort is merely a signalling device, it does not make the danger go away. In order to survive, you and your household must take action. Make a fire escape plan, [2] discuss it with everyone in your home (including children) and practise it.
- No smoke detector can sound the alarm instantly. The fire will grow and spread before the alarm sounds. Consequently, when an alarm sounds, you MUST get yourself and everyone else in your home out as quickly as possible. In a house fire, the difference between death and survival is often measured in minutes; sometimes seconds.
- Laws in your jurisdiction probably specify how one must dispose of outdated and unreliable smoke detectors. Check the rules that apply in your area, and dispose of old and unreliable detectors properly.
- It is dangerous to test a smoke detector using flame. It is safer to use an aerosol test spray. However:
- Never try to test a smoke alarm with any aerosol spray other than one specifically manufactured for that purpose. Other types of sprays contain material that will stick to the sensor, and make the device less reliable in the future.
- Do not use candles or incense to test a smoke detector. The smoke produced by candles and incense contain waxy or oily particles that can contaminate the sensor and reduce its sensitivity.
- All the test button does is check the BATTERY. It does NOT check the smoke sensor.