

GENERATOR SAFETY: CARBON MONOXIDE, PLACEMENT, AND FUEL

Run a portable generator outdoors only, more than 20 feet from any window, door, or vent, with the exhaust pointed away from buildings, and never in a home, garage, basement, or shed, even with the doors open. Put battery or battery backup CO alarms in the house before you start it.

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Portable generators produce carbon monoxide (CO), an odorless, colorless gas that, in CDC's words, "kills without warning." CPSC reports that an average of nearly 100 people die in the US each year from CO poisoning caused by portable generators. Nearly all of the rules below come down to one thing: keep the exhaust out of the house.

WHERE TO PUT A GENERATOR

■ WARNING

Never use a generator inside your home or garage, even if doors and windows are open. Only use generators outside, more than 20 feet away from any windows, doors, and vents (CDC).

What the federal sources add:

- **No enclosed or partly enclosed spaces.** CPSC lists homes, garages, basements, crawlspaces, and sheds, and says this holds "even when using fans or opening doors and windows for ventilation." CO can build up quickly in those spaces and linger for hours after the generator shuts off. FEMA also says using fans will not prevent CO build-up in the home.
- **Distance.** CDC says more than 20 feet from windows, doors, and vents. Ready.gov says generators and fuel should be at least 20 feet from windows, doors, and attached garages. CPSC's 2026 guidance says at least 20 feet from the house.
- **Point the exhaust away.** CPSC says to direct the exhaust away from your home and other buildings' entrances.
- **Use a long enough cord.** CDC says to use an extension cord more than 20 feet long so the generator can stay at a safe distance.

If you are shopping for a generator, CPSC says to look for models with a CO shut-off safety feature.

CARBON MONOXIDE ALARMS

Put CO alarms in before the outage, not after. Every source below calls for battery-operated or battery backup alarms.

- CDC: install battery-operated or battery backup CO detectors near every sleeping area, and check the batteries when you change your clocks each spring and fall. Replace the detector following the maker's instructions or every 5 years.
- CPSC: install battery-operated or battery backup alarms on each level of the home and outside separate sleeping areas, and test them monthly. Its safety alert says alarms should be certified to the latest safety standards (UL 2034, IAS 6-96, or CSA 6.19.01).
- Ready.gov: working CO detectors on every level of your home.

CARBON MONOXIDE POISONING SYMPTOMS

CDC lists the most common symptoms as headache, dizziness, weakness, upset stomach, vomiting, chest pain, and confusion, and says they are often described as “flu-like.” People who are asleep, drunk, or under the influence of other substances can die from CO before they have symptoms.

Anyone can be poisoned. CDC says infants, older adults, and people with chronic heart disease, anemia, or breathing problems are more likely to get sick from CO.

WHAT TO DO IF A CO ALARM SOUNDS OR SOMEONE FEELS SICK

■ DO THIS

If a CO alarm sounds, get outside immediately and call 911 (CPSC). Never ignore an alarm. If you start to feel sick, dizzy, or weak while using a generator, CPSC says get to fresh air right away and do not delay.

REFUELING AND STORING FUEL

From CPSC and FEMA:

- Turn the generator off and let it cool down before refueling. Gasoline spilled on hot engine parts could ignite.

- Never store generator fuel in your house. Keep gasoline, propane, kerosene, and other flammable liquids outside living areas in properly labeled, non-glass safety containers.
- Do not store fuel near a fuel-burning appliance, such as a natural gas water heater in a garage.

NEVER BACKFEED: USE A TRANSFER SWITCH

Plugging a generator into a wall outlet to power the house wiring is called backfeeding. CPSC calls it “extremely dangerous”: it presents an electrocution risk to utility workers and neighbors served by the same utility transformer, and it bypasses some of the built-in household circuit protection devices.

FEMA says connecting a generator directly to your home power supply could cause a surge to the outside power lines and potentially injure or electrocute a utility lineman. Its instruction: use a qualified electrician to install the appropriate equipment in accordance with local electrical codes, or ask your utility company to install an appropriate power transfer switch.

Without a transfer switch, run appliances from the generator itself using extension cords, as below.

EXTENSION CORDS AND ELECTRIC SHOCK

Generators can shock or electrocute you, especially in wet conditions (CPSC).

- Use heavy-duty extension cords made for outdoor use, with a wattage rating that exceeds the total wattage of everything plugged into them.
- Check each cord along its full length for cuts or tears, and make sure the plug has all three prongs.
- Protect the cord from being pinched or crushed where it passes through a window or doorway.
- If it is wet outside, CPSC says to run the generator under an open, canopy-like structure on a dry surface where water cannot reach it or puddle under it, still away from openings to the house. Dry your hands before touching it.
- Ready.gov says to keep the generator dry and protected from rain or flooding, because touching a wet generator or devices connected to one can cause electrical shock.

Follow the manufacturer’s instructions for your model. CPSC and Ready.gov both say so.

OTHER FUEL-BURNING EQUIPMENT TO KEEP OUTSIDE

The same CO risk applies to more than generators. CDC says never burn charcoal indoors, never use a portable gas camp stove indoors, and never heat your house with a gas oven. CDC says never run a pressure washer or any gasoline-powered engine inside your home, basement, or garage, and never leave a vehicle running in an enclosed or partly enclosed space such as a garage.

For heating the house without power, see staying warm without power. For battery backup, see how big a portable power station you need, and for the equipment itself, see home backup power.

GENERATOR SAFETY CHECKLIST

BEFORE AN OUTAGE

- ☐ Battery or battery backup CO alarms near sleeping areas and on every level
- ☐ Test CO alarms and replace batteries
- ☐ Pick a spot outdoors more than 20 feet from windows, doors, and vents
- ☐ Heavy-duty outdoor extension cords, rated above your total load and long enough to reach
- ☐ Fuel in labeled, non-glass safety containers, stored outside living areas
- ☐ Ask a qualified electrician or your utility about a transfer switch

EVERY TIME YOU RUN IT

- ☐ Outdoors only, never in a garage, basement, crawlspace, or shed
- ☐ Exhaust pointed away from your home and other buildings
- ☐ Dry location, protected from rain
- ☐ Never plug it into a wall outlet
- ☐ Turn it off and let it cool before refueling

IF AN ALARM SOUNDS OR SOMEONE FEELS SICK

- ☐ Get everyone outside to fresh air
- ☐ Call 911

TRACK Power outage

SHEET 3 of 9

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COMPILED FROM THESE SOURCES

- 1.** CDC, Carbon Monoxide (CO) Poisoning Basics
- 2.** CDC, Generator Safety Fact Sheet
- 3.** CDC, What to Do to Protect Yourself During a Power Outage
- 4.** CPSC, Safety Alert: Portable Generator Hazards (Publication 5123)
- 5.** CPSC, Winter Storm May Knock Out Power; CPSC Warns of Deadly Carbon Monoxide and Fire Risks (2026)
- 6.** FEMA, Fact Sheet: Be Safe When Using a Portable Generator
- 7.** Ready.gov, Power Outages

Every safety claim on this sheet links to its primary source.