

Portable Generators: Use them Safely

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When temporary or remote electric power is needed, portable generators are useful but they also can be dangerous. Every year, people die when portable generators are not used correctly.

The primary hazards to avoid when using a generator are carbon monoxide (CO) poisoning from the toxic engine exhaust, electric shock or electrocution, and fire.

Carbon monoxide hazard

Never use a portable generator in an enclosed or partially enclosed space. Portable generators can produce high levels of CO very quickly. When you use a portable generator, remember that you cannot smell or see CO. Even if you cannot smell exhaust fumes, you may still be exposed to CO.

If you start to feel sick, dizzy or weak while using a portable generator, get to fresh air **immediately**. Alert others in the home or in the vicinity to get to fresh air. **Do not delay**. The CO from portable generators can quickly lead to full incapacitation and death.

If you experience serious symptoms, get medical attention immediately. Tell the medical staff that you suspect CO poisoning. If you experienced symptoms while indoors, have someone call the fire department to determine when it is safe to reenter the building.

Follow these safety tips to protect against CO poisoning:

- ◆ **Never** use a portable generator indoors, including in homes, garages, basements, crawl spaces and other enclosed or partially enclosed areas, even with ventilation. Opening doors and windows or using fans does not prevent CO buildup.
- ◆ Follow the instructions that come with your portable generator. Locate the unit **outdoors** and away from doors, windows and vents that could allow CO to drift indoors.

Electrical hazards

To protect against electrical hazards:

- ◆ Keep the portable generator dry, and do not use it where it could get wet by rain or snow. Operate it on a dry surface under an open, canopy-like structure. If your hands are wet, dry them before touching the generator.
- ◆ Plug appliances directly into the portable generator. Or, use a heavy-duty, outdoor-rated extension cord that is rated (in watts or amps) at least equal to the total electrical load of all the connected appliances. Check that the entire cord is free of cuts or tears and that the plug has three prongs, especially a grounding pin.
- ◆ **Never** try to power the home wiring by plugging a portable generator into a wall outlet, which is known as “backfeeding.” This extremely dangerous practice presents an electrocution risk to utility workers and neighbors served by the same utility transformer. It also bypasses some of the built-in household circuit protection devices.
- ◆ If you must connect a portable generator to the home wiring to power appliances, have a qualified electrician install the appropriate equipment in accordance with local electrical codes. Or, check with your utility company to see if it can install an appropriate power transfer switch.

- ◆ For power outages, the best type of generator to use is a permanently installed stationary generator. It is better suited for providing backup power to a home than is a portable generator. Even a properly connected portable generator can become overloaded and overheat. This may cause the generator to fail.

Fire hazards

Follow these tips to protect against fire hazards:

- ◆ Never store fuel for your portable generator in the home. Store gasoline, propane, kerosene and other flammable liquids outside of living areas in nonglass, safety containers that are labeled properly.
- ◆ Do not store these fuels near a fuel-burning appliance, such as a natural gas water heater in a garage. If the fuel is spilled or the container is not sealed properly, invisible vapors from the fuel can travel along the ground and be ignited by the appliance’s pilot light or by arcs from electric switches in the appliance.
- ◆ Before refueling a portable generator, turn it off and let it cool. Gasoline spilled on hot engine parts could ignite.

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