Generators

Annual ER visits: 4,500
Deaths: 68
A portable generator produces power if your electricity goes out in a storm, but it also produces deadly carbon monoxide (CO)—the top cause of generator-related deaths. Take the case of three Wisconsin friends, ages 23 to 30, who died in a home from carbon monoxide poisoning in 2017 after using a generator indoors to power their electricity.

"Gas generators release levels of CO that are exponentially higher than an idling car, and they should never be operated in an enclosed space," says CR's Wallace. High concentrations of CO can kill in a matter of minutes or leave victims with lasting injuries, such as brain damage.

You could end up in the ER for reasons other than CO poisoning, too: You could suffer electric shock from plugging an extension cord into the machine if water has collected inside or receive burns from getting splashed by gas while trying to refuel a generator before it has completely cooled.

How to Stay Safe Using a Generator

Simple precautions to prevent carbon monoxide poisoning:

- Never, ever use a generator anywhere inside your home—including the basement or garage.
- Keep your generator at least 20 feet from the house and—this is critical—aim the engine exhaust away from windows and doors. Recent testing at CR found that the direction the exhaust is pointed is one of the biggest factors contributing to carbon monoxide buildup, even more so than distance or wind speed or direction. "As an extra layer of safety, when it's running keep a battery-operated carbon monoxide detector where you are," says Wallace.

To avoid electric shocks and burns:

- Keep your generator dry to reduce the chance of getting shocked when you plug in an electric cord. Tents designed for generators keep them protected from moisture and well-ventilated so that dangerous levels of CO don't collect.
- Consider getting an electrician to install a transfer switch that connects the generator to your circuit panel, which lets you power hardwired appliances and mechanical equipment, such as your water heater, without the risk of using extension cords. Skipping it could endanger utility workers, cause appliances to fry, or damage the generator itself. For a generator rated 5,000 watts or higher, you can expect to pay $500 to $900 to have a transfer switch installed.
- In an emergency, if you must use the outlets on the generator to power your appliances, plug them into a high-gauge extension cord plugged directly into the generator. "Use the heaviest gauge extension cord: We recommend 12-gauge," says Dave Trezza, who oversees our generator tests.
- To avoid burns, turn off a gas-powered generator before refueling, and let it cool. Gasoline spilled on hot engine parts can ignite or cause burns.

For more information on generators, check our generator ratings and buying guide.