

Hot Water Safety: Protecting Your Home and Your Family

Your water heater works hard every day — delivering hot water for showers, laundry, dishes, and more. But did you know that a water heater can also become a serious safety risk if neglected, improperly installed, or improperly maintained? Proper care plus professional installation equal peace of mind.

For in-depth guides and safety reference materials, visit www.HotWaterSafety.org

Why Water Heater Safety Matters

- **Scald-and-burn injuries:** A water temperature of 140 °F can cause a third-degree burn in a child in just a second, and in an adult in about five seconds.
 - **Legionella & bacteria risk:** Water stored at too low a temperature allows dangerous bacteria (like Legionnaires' disease-causing Legionella) to grow. But storing temperature too high increases scald risk. It's a careful balance.
 - **Gas, electric, ventilation hazards:** Whether your heater is natural gas, liquid propane, or electric, improper venting, pressure relief failure, or DIY installation can lead to leaks, fires, explosion risk or carbon monoxide poisoning.
 - **Equipment longevity & warranty:** A safe installation by a licensed plumbing contractor helps preserve warranties and ensures your system meets safety code and manufacturer requirements. HotWaterSafety.org emphasizes that hiring a licensed plumber is vital.
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Key Safety Practices to Follow

Here are essential steps every homeowner can take to keep their water heater safe, efficient and reliable:

1. Ensure Proper Installation by a Licensed Professional

Don't overlook the importance of having your water heater installed by a qualified, licensed plumbing contractor. HotWaterSafety.org states that unlicensed or DIY installations increase risk of incorrect venting, code violations, warranty voiding, and dangerous failures.

Make sure the installer:

- Matches the correct size and type of unit for your home's demand
- Installs proper venting (for gas/propane units)
- Connects the temperature/pressure relief (T&P) valve and discharge piping correctly
- Verifies the system meets local and state codes, and manufacturer's guidelines

2. Set a Safe Water-Temperature and Use Mix/Tempering Valves

- Many sources recommend setting the thermostat at or below **120 °F** at the fixture outlet to minimize scald risk.
- At the same time, storing water at higher internal tank temperatures (for bacteria control) while delivering tempered water at safe outlet temperature is a best practice. HotWaterSafety.org explains that storing at approximately 140 °F and then mixing down at the fixture can reduce bacteria risk and scald risk.
- Consider installing a thermostatic mixing valve (TMV) or tempering valve to combine hot and cold water for safe delivery.

3. Maintain Your Water Heater Annually

Proper maintenance helps extend the life of your unit and prevent safety hazards.

Tasks include:

- Flushing the tank to remove sediment (especially for tank-type models)

- Checking the anode rod and replacing it when necessary
- Operating the temperature/pressure relief valve to verify proper functioning
- Checking venting, combustion chamber (for gas/propane), and electrical connections for electric models

4. Remove Combustibles & Provide Clearance

- For gas or propane water heaters, keep flammable materials and vapors away from the unit, especially near the pilot light or burner area. HotWaterSafety.org warns of storing combustible items near tanks.
- Maintain required clearances around the heater for service access, inspection and venting.

5. Monitor for Warning Signs

If you notice any of the following, call a technician:

- Unusual noises (rumbling, banging, hissing) from the heater
- Pilot or ignition failure on gas/propane models
- Corrosion, rust, water leakage at base of tank
- Venting issues: flue gases backing up or vent cap blocked
- Hot water temperature that fluctuates wildly or is too hot