

# Tap Water Scald Prevention

Each year, approximately 3,800 injuries and 34 deaths occur in the home due to scalding from excessively hot tap water. The majority of these accidents involve the elderly and children under the age of five. The U.S. Consumer Product Safety Commission (CPSC) urges all users to lower their water heaters to a maximum of 120 degrees Fahrenheit. In addition to preventing accidents, this decrease in temperature will conserve energy and save money.

Most adults will suffer third-degree burns if exposed to 150 degree water for two seconds, a six-second exposure to 140 degree water, or a thirty second exposure to 130 degree water. Even if the temperature is 120 degrees, a five minute exposure could result in third-degree burns.

**Electric water heaters:** Call your local electric company to adjust the thermostat. Some companies offer this service at no-charge. Hot water should not be used for at least two hours prior to setting. To make the adjustment yourself, start by shutting off current to the water heater, then turn off the circuit breaker to the heater or remove the fuse that serves the heater. Most electric water heaters have two thermostats, both of which must be set to a common temperature for proper operation. To reach these thermostats you must remove the upper and lower access panels. Adjust the thermostat following the instructions provided with the appliance. Hold a meat thermometer under the faucet to check water temperature.

**Gas water heaters:** Because thermostats differ, call your local gas company for instructions. Where precise temperatures are not given, hold a meat thermometer under the faucet for most accurate reading first thing in the morning or at least two hours after water use. If reading is too high, adjust thermostat on heater, according to manufacturer's instructions, and check again with thermometer.

**Furnace heater:** If you do not have an electric, gas, or oil-fired water heater, you probably have an on-line hot water system. Contact your fuel supplier to have the temperature lowered. If you live in an apartment, contact the building manager to discuss possible options for lowering your tap water temperature. Reducing water temperature will not affect the heating capacity of the furnace.

The CPSC notes that a thermostat setting of 120 degrees Fahrenheit may be necessary for residential water heaters to reduce or eliminate the risk of most tap water scald injuries. Consumers should consider lowering the thermostat to the lowest settings that will satisfy hot water needs for all clothing and dish washing machines.

Never take hot water temperature for granted. Always hand-test before using, especially when bathing children and infants. Leaving a child unsupervised in the bathroom, even if only for a second, could cause serious injuries. Your presence at all times is the best defense against accidents and scaldings.

Various anti-scald devices are available and should be installed by a qualified contractor to reduce the potential for injury. These devices include mixing valves and anti-scald valves. An excellent resource on these devices can be found at <http://inspectapedia.com/BestPractices/MixingValves2.htm> and <http://inspectapedia.com/heat/MixingValves.htm>.

\* Portions excerpted from CPSC Tap Water Scalds Doc. #5098

# Water Heater Service

Although a water heater can run for years without any problems, there's a potential for great danger should something go wrong. Being burned by scalding water, sickened or killed by poisonous gas or having your house burned down due to an out of control gas-fed fire are just a few of the things that can go wrong when a water heater isn't working properly.

Unless you have professional experience working with water heaters, it's best to hire a licensed service company to make sure everything is in proper working order and the system is operating safely and efficiently. A few of the things your service company should be doing when they do perform maintenance on your tank include:

1. **Draining the tank:** Unless your water heater is drained regularly (even if it is a "self-cleaning" design), you should have your tank drained once a year. This will help prevent sediment build-up at the bottom of your tank that can rob capacity and efficiency.
2. **Inspecting the anode rod:** Not many people do this but replacing the anode rod can extend the life of your water heater. The purpose of the anode rod is to sacrifice itself to save your tank. Instead of your tank rusting out, your anode rod deteriorates due to an electrolytic process.
3. **Checking the gas pressure:** This step is often overlooked, even by qualified installers. Proper gas pressure is important to insure the system is operating efficiently and safely. The system is designed to work within a particular pressure range. Pressures outside that range can cause simple problems or dangerous conditions.
4. **Testing the Temperature/Pressure Relief Valve:** This is the most critical safety component on your water heater. If it doesn't work when it needs to, the pressure build-up in your tank can cause a catastrophic incident. The T&P valve should open when temperatures or pressures get too high in the tank. Your service company can test it and replace it if necessary.
5. **Checking the Flue Pipe:** Another critical component of your system is the flue (vent) pipe, especially if your water heater is located within your living area (as opposed to an attic or garage). If your vent becomes clogged or damaged, dangerous carbon monoxide (CO) can escape into your home. CO can make you very sick and even kill you. It's colorless and odorless so you may not even know you have a problem until it's too late. Make sure you install a carbon monoxide detector on every level of the home.
6. **Water Cut-off Valve:** If there's a leak in your tank, you want to be sure your cut-off valve will work when the time comes. A lot of old valves won't shut-off all the way due to calcium build-up. Your service company can make sure the valve works by opening and closing it after draining your tank.

Annual water heater maintenance is required.

If you have any questions, contact your service provider.

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