



Home Tips



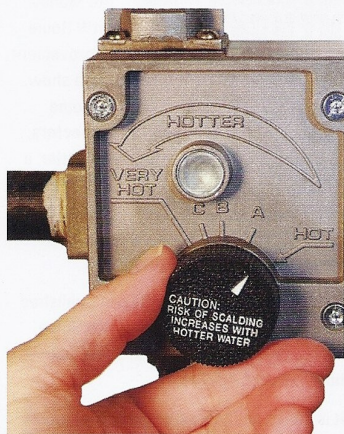
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Q & A

Water Heater Safety Hazards?

Would you tell us how to adjust our water heater temperature, and is there anything else we need to know about the heater?

Water heaters can be one of the most dangerous appliances in the home if not properly maintained. The front of a gas



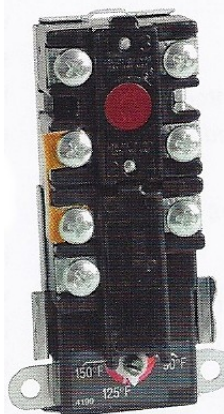
heater has an external thermostat, and an electric water heater has an internal thermostat located behind an access cover. Both controls can be set anywhere between 'Hot and Very Hot.' Always set the temperature of the water around 120° F. Temperatures higher than 125° F can burn a child or an adult quite severely and quite

quickly. For example, it is estimated that it takes only two seconds of exposure to water at 150° F (65.55° C) and only six seconds of exposure to water at 140° F (60° C) to cause a very bad burn to a child.

Some are concerned that lowering the water temperature will result in soap working improperly in dishwashers or washing machines. Actually, most soap and detergent are meant to work at between 120° to 125° F. Thus soap is actually designed for this temperature.

Others are concerned that lowering water temperature might lead to greater chances of passing illness between family members. Actually, the best method for preventing illnesses is hand washing with warm, not hot, soapy water. 120° F water is quite hot enough to wash most germs away. It will not always work since some germs are airborne, and one contracts them through exposure or inhalation of the infected droplets of someone else, as after a sneeze.

In terms of cost saving, dropping the water temperature setting by ten degrees typically saves approximately 4% on one's cost to heat water each year. This can make a profound difference if



dropping the water temperature from 150° to 120° F, saving essentially 12% a year.

If the thermostat goes bad, and some do, the heating source can raise the temperature of the water well above the boiling point of 212° F, and this can increase the pressure inside the tank, resulting in the water heater exploding. There have been accounts of water heaters taking off like rockets and landing several hundred feet away from the home. All water heaters should have a safety device called a temperature and pressure release (T&P) valve. The T&P valve will sense a temperature of 210° F or a pressure of 150 psi and open, allowing

the water to run to a safe place, preventing the water heater from exploding. How do you know if the T&P valve is working? All valves have a test lever located on top of the valve. Once a year the homeowner is required to test the valve by pulling the lever and listening for water running through the pipe. The valve should cut off the water flow when released. If the valve continues to drip after testing, the valve is considered defective and should be replaced by a licensed plumber.

The T&P piping should be a minimum of 3/4 inch diameter pipe and have a natural drain slope to ensure water does not remain in the pipe after testing. Water can deteriorate the valve, preventing it from opening when needed. Some installations, such as basements, cannot accommodate a natural drain slope, and the pipe is allowed to run up if a drain valve is installed to drain the water out of the pipe after testing. A 90 degree elbow with drain cap is normally installed on the copper piping near the valve at the lowest part of the pipe. The end of the pipe should extend to a safe location and be visible, so you can tell if the valve is leaking. If the pipe drains





into a crawl space, the end of the pipe is not readily visible and you would not necessarily know if the valve is leaking. The most common location is outside of the house. The pipe should turn down and extend to within 6 inches of the ground or pavement.

According to Watts, one of the largest suppliers of temperature and pressure relief valves, the following is required:

ANNUAL OPERATION OF T&P RELIEF VALVES:

WARNING: Following installation, the valve lever **MUST** be operated **AT LEAST ONCE A YEAR** by the water heater owner to ensure that waterways are clear. Certain naturally occurring mineral deposits may adhere to the valve, blocking waterways, rendering it inoperative. When the lever is operated, hot water will discharge if the waterways are clear. **PRECAUTIONS MUST BE TAKEN TO AVOID PERSONAL INJURY FROM CONTACT WITH HOT WATER AND TO AVOID PROPERTY DAMAGE.**



Before operating lever, check to see that a discharge line is connected to this valve, directing the flow of hot water from the valve to a proper place of disposal. If no water flows when the lever is operated, replacement of the valve is required. **TURN THE WATER HEATER OFF** (see your water heater instruction manual) **AND CALL A PLUMBER IMMEDIATELY.**

REINSPECTION OF T&P RELIEF VALVES:

WARNING: Temperature and Pressure Relief Valves should be inspected **AT LEAST ONCE EVERY THREE YEARS**, and replaced, if necessary, by a licensed plumbing contractor or qualified service technician, to ensure that the product has not been affected by corrosive water conditions and to ensure

that the valve and discharge line have not been altered or tampered with illegally. Certain naturally occurring conditions may corrode the valve or its components over time, rendering the valve inoperative. Such conditions can only be detected if the valve and its components are physically removed and inspected. **Do not attempt to conduct an inspection on your own.** Contact your plumbing contractor for a reinspection to assure continuing safety. **FAILURE TO REINSPECT THIS VALVE AS DIRECTED COULD RESULT IN UNSAFE TEMPERATURE OR PRESSURE BUILD-UP WHICH CAN RESULT IN SERIOUS INJURY OR DEATH AND/OR SEVERE PROPERTY DAMAGE**

Quote Of The Month

"Blessed is the person who is too busy to worry in the daytime and too sleepy to worry at night."

Leo Aikman

A Tip Of The Hat To:



Steve Bing
Virtual Properties Realty
6650 Sugarloaf Parkway
Suite 700
Duluth, Georgia 30097

Thank You

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