

# Tips on Wood Stoves, Fireplaces, and Space Heaters

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**NIST**



More than one-fifth of residential fires are related to the use of supplemental room heaters, such as wood- and coal-burning stoves, kerosene heaters, gas space heaters, and electrical heaters. You can reduce the chances that your family will experience a home fire by following simple guidelines on the installation and use of these appliances.

## Install Safely

Most of the fires related to supplemental heating appliances are caused by improper installation, maintenance, or use of the appliances. Every appliance should have a complete set of installation instructions and should be installed according to the manufacturer's instructions. Wood stoves should sit on a non-combustible surface or on a code-specified or listed floor protector. Fireplaces should have noncombustible materials around the opening and hearth. Space heaters should be placed on a firm surface out of the way so that they won't be tipped over and spill fuel or have hot surfaces come in contact with combustible flooring. Many space heater fires are caused by the heater being tipped over by children or pets. Combustibles such as curtains, chairs, firewood, and even walls should be at least three feet away from the appliance.

Vents and chimneys for heating appliances must be installed with proper clearances to combustible materials. Typically, 18 inches of air space is required between single-wall connector pipes and combustibles and 2 inches between insulated chimneys and combustibles. A common fire problem exists where chimney pipes pass through exterior walls and are too close to combustibles within the wall. Unvented gas-fired space heaters should not be used in small enclosed areas, especially bedrooms, because of the potential for carbon monoxide poisoning.

## Use Safely

Careful operation is crucial to occupant safety. Use only fuels appropriate for the appliance. Use coal only if specifically approved by the stove manufacturer. Gasoline or other flammable liquids should never be used to start a wood fire since it might explode or flare up. Never use gasoline in kerosene heaters. Even small amounts of gasoline mixed with kerosene can increase the risk of fire. The directions on artificial logs made from wax and sawdust say they should be used one at a time in fireplaces and never used in wood stoves. This is because the heat can melt the log causing it to flare up or leak burning liquid from the appliance. Pressure-treated wood should not be burned in stoves or fireplaces because it contains toxic chemicals that can make you sick. Always use a fireplace screen to keep sparks from igniting materials in the room. Keep a window ajar or the door open in a room where an unvented heater is in use. Avoid the use of extension cords with electric heaters. Never use heaters to dry clothing or other combustibles. Do not leave fireplaces or most space heaters unattended. Young children should be kept away from any appliance that has hot surfaces that can cause burns.

## Maintain Carefully

Chimneys and vents should be inspected and cleaned annually. Have chimneys inspected and cleaned when necessary by a professional chimney sweep. Creosote is an unavoidable product of wood-burning stoves and fireplaces. Creosote builds up in connectors and chimney flues and can cause a chimney fire. Don't burn newspapers or other trash in a fireplace because they burn too hot and can ignite a chimney fire. Kerosene heaters should be cleaned and wicks replaced annually. Electric heaters with frayed or damaged cords should never be used.