

# Why Furnace Flues need yearly inspection and cleaning... and what happens if you neglect them!

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Illustration by Kyle McQueen

***The flue to your oil or gas furnace can deteriorate and fail unseen;  
causing carbon monoxide poisoning, soot blowback and major clean up expenses.***

The furnace flue is one of the most neglected parts of the house, according to chimney sweeps, who answer many emergency calls due to blocked or damaged furnace flues every heating season.

Many people seem to think their utility company or fuel supplier is keeping a close eye on their flue for them and only discover that's not true when something goes wrong.

Consequently, every winter, flues blocked by bird's nests or other debris cause soot blowback into the house, plus needless deaths and sickness from carbon monoxide fumes.

The good news is that some fuel suppliers now routinely alert customers to the need for furnace flue maintenance.

## Scrutiny & Maintenance

Masonry, B-vent and stainless steel flues all need professional scrutiny and regular maintenance to ensure they will do their job of safely escorting the products of combustion out of the house.

Assessing flue conditions takes a practiced eye. Sometimes video-scanning is recommended. A chimney sweep once told me, "You have to look at 100 chimneys before you know what you're seeing!"

Contrary to popular belief, most professional chimney sweeps service all types of flues, not just chimneys to wood-burning fireplaces and stoves.

## Deterioration

Sweeps have become particularly concerned about conversions to gas furnaces. Building codes stipulate that these flues are to be cleaned and adapt-



ed for the new furnace before it is installed. When this is not done, which happens often, flues can become blocked and fail due to moisture and corrosion damage.

The accumulation of oil or coal soot on flue walls loses its bond over time and washes down, aided by moisture in the stack gases from the new furnace. This can fill the clean-out pit and plug up the flue.

Corrosion from acidic condensate in the flue, due to chlorides and other indoor pollutants in the combustion air, is also a problem in both masonry and metal flues.

Moisture can enter a chimney externally — down a flue with no weather cap, through a crown if it is cracked or porous, or through the porous brick.

Moisture can also come from within a chimney due to excessive condensation. Improved heat exchangers in modern gas furnaces call for a smaller flue size, three to four inches, to help speed water vapor laden combustion gases on their way before they can cool down, condense on flue walls and cause trouble.

## Proper Venting

Sweeps often find that the furnace installer didn't use the proper vent pipe. Also, many furnaces are vented into unlined masonry chimneys, which may cause draft problems and rapid deterioration of the chimney from water damage.

For both durability and the draft, the sizing and configuration of the entire venting system for gas furnaces is critical. Connector pipe (from furnace to its flue) should be as short and straight as possible. The furnace manufacturer's specifications or building codes may also require double-walled connector pipe to hold in heat.

Chalky deposits you see on masonry chimneys are called "efflorescence," mineral salts borne to the surface by moisture migrating through the brick. Indoors, wet walls or ceilings next to the chimney signal trouble.

A good chimney sweep will also check your flue for proper draft, which can be influenced by the tightness of your house and many other factors. Draft problems can usually be solved.

If is not too far-gone, masonry chimneys can be repaired, lined, and treated with water repellent. A corroded, damaged or improperly sized metal flue should be replaced.

Do you see why furnace flues and chimneys need to be checked and cleaned at least once a year? Call your chimney professional for an appointment. While you're at it, ask your chimney professional to schedule an appointment for you next year, too.