

Inspecting Your Chimney: How to Tell When it Needs Cleaning

by [Karie Fay](#) on November 11, 2012

It's the focus of family gatherings and a great way to take the chill off the coldest winter nights. It's also a danger to your house and family. A wood stove or fireplace that is improperly cared for may start a fire where you don't want one.

According to the National Fire Protection Association, the second leading cause of house fires is heating equipment, and two out of three heating equipment fires result from space heaters, which includes fireplaces, chimneys and wood stoves. Of fires that start in the chimney or fireplace, most are the result of creosote. Sadly, most are also preventable with regular inspections and maintenance. Prevent your home from joining these statistics by scheduling routine chimney inspections to catch dangerous creosote before it catches you.

About Creosote: Your Chimney's Enemy

Although you remove them often, ashes indicate energy efficiency – showing that the fire completely consumed the fuel source. It's what doesn't turn to ash that puts your home at risk. Creosote is nothing more than unburned wood energy that condensates on the inner chimney surface.

Similarly, burning wood emits tiny unburned particles that are carried up your chimney with the smoke. Hitting the cooler surface inside the chimney, the soot and creosote first coats and then solidifies on the surface. Given enough time, the layer grows deep enough to provide a ready fuel source. Rising flames and sparks may ignite the coating, flashing through the chimney and burning your house.

Contrary to popular belief, you can't avoid creosote by burning only hardwoods like oak, birch or maple. Some believe that tree sap causes creosote when burned and thus avoid pine or other softwoods like fir or cedar. It's simply not true. All wood creates creosote and hardwoods may cause more than softwoods. It all depends on the wood's moisture content and your burning practices. In fact, the darker the smoke emerging from the chimney, the more creosote it contains regardless of what tree you are burning. So watch your smoke when you build a fire – it will tell you a lot about the condition of your chimney.

To avoid creosote formation, always dry your wood – regardless of type – to about 20 percent moisture. A good rule of thumb is to age it about a year. In addition, build vigorous fires and use plenty of small logs to encourage rapid, complete burning (instead of small, smoldering fires with large logs). Never burn scrap lumber or trash. Always operate your fireplace or wood stove properly to avoid stifling the fire and creating creosote or other dangerous conditions.

Signs of Creosote Buildup

Regular chimney cleaning will remove the inevitable buildup of creosote and soot. Unfortunately, there's no simple rule of thumb for when to do it. Don't rely on advice to do it once a year or at some other set time. Clean your chimney when it needs it – when the creosote is thick enough to warrant cleaning. You can't keep the chimney completely creosote-free, but left to sit, eventually it will harden into a stubborn glaze if it doesn't burn first.

Obviously, if you notice smoke flooding into your house, soot covering your furniture, even dark smoke constantly flowing from your chimney, you should suspect creosote issues. Creosote may not make itself known so readily, however. Until you know how much creosote your burning habits form, check your chimney regularly to catch the problem before it gets bad enough to become obvious. At least every three to four weeks is likely sufficient. While you're at it, consider expanding your creosote check into a complete system inspection. Once you get into the habit of checking each part, it will become second nature.

A note on chimney inspection and cleaning services: The average homeowner is completely capable of visually inspecting the chimney flue and even cleaning it (with the exception of chimneys covered in glazed creosote, in which case professional cleaning is necessary). Likely the best course of action is to hire a professional to inspect the chimney at the beginning of the season and clean or repair as required. Subsequent inspections, if not cleanings, you may then perform yourself if you feel capable. If you take plenty of notes and ask a lot of questions during the initial professional servicing, eventually you may become something of an expert yourself.

About Chimney Inspections

- Inspections are best performed on still days, with little wind. Windy conditions may cause a condition called a downdraft. Downdrafts sweep soot, creosote and dangerous gasses into your house, especially while a fire is burning. You can feel a downdraft as a breeze in or emerging from the fireplace or stove. Opening a window or two helps create negative pressure, counteracting the downdraft. If the downdraft persists, the chimney may need to be raised higher above the house. Consult a professional for further information.
- Due to the presence of noxious substances, professional cleaners wear dust masks and safety goggles. Inhaling soot or creosote is never a healthy activity.
- The chimney is inspected from both inside the fireplace or wood stove and again from the top of the chimney.
- A strong flashlight beam will illuminate the flue walls. In some cases, a cleverly angled mirror will reveal the inside of the chimney when looking from a hard-to-access area like inside a wood stove.
- Any debris or obstructions, such as falling leaves or bird nests, must be removed before using your wood stove or fireplace. While birds may see it as a cozy little home, improper airflow may cause carbon monoxide buildup within the house.
- The chimney's inner surface should appear smooth and regular. Bumps, ridges, slick and bubbly surfaces or thick, scale-like buildup may indicate creosote. Any irregularities are

suspect – creosote goes through stages as it accumulates and dries, therefore it may not appear exactly the same depending on where it's located or how long it has been there.

- Scraping the inside of the chimney flue with a fire poker or even a small screwdriver helps gauge the creosote. If the creosote coating is paper thin, your chimney does not require cleaning. If the layer depth approaches 1/8 inch – about the thickness of two dimes stacked together – your chimney needs cleaning. If it is 1/4 inch thick or deeper – about the thickness of two nickels – do not use your chimney until it is cleaned.
- The chimney exterior also requires inspection and repair as necessary. Signs of damage or stress, such as cracks, missing mortar and bricks, or other damage should be addressed immediately. Consult a professional for expert assistance.
- A professional inspection also assesses the condition of the roof surrounding the chimney. Is the flashing intact where the chimney and roof meet? Is the roof sound?
- If there's moss growing on the chimney exterior, plan to remove it. Moss retains moisture, which may rot wood and eventually degrade even masonry surfaces. Consult a professional for more information.
- The cap above the chimney flue may need replacing. A small patch of wire mesh may be attached to the top as well to prevent small animals from entering.
- The first inspection of the heating season is an excellent time to prune trees and branches. Look at the growth over your roof and chimney. Do any come close to touching your roof structure? Do you see dead areas? Branches hanging over the chimney are a particular concern as sparks drifting up the chimney may start a fire. Consult a professional for further assistance.
- Don't forget the fireplace or wood stove. A complete inspection includes examining the spark screens, opening and closing the doors and checking the seals as applicable. A look at the firebox or grate, any ash container, and the damper helps spot any potential issues.
- If a portion of the stovepipe runs through the home interior, it merits special attention. Leaky connections and small holes may allow soot and smoke to flood your house, not to mention gasses or sparks. Where the pipe enters the wall or ceiling is of particular concern as loose connections often occur there. Consult a professional for further information.
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Inspecting your chimney is critical to ensuring your house doesn't join the growing list of house fire statistics. The entire process takes less than an hour or two for even the most cautious and painstaking inspection. The payoff is priceless – peace of mind every time you build a fire.

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