

Preventing Chimney Fires

Every year, more than 20,000 residential fires begin as chimney fires.

Smoke from wood fires contains gases, wood particles, and various chemicals. As it moves up the chimney, the smoke cools and the compounds it contains condense, sticking to the inside of the chimney and forming a residue called creosote. Creosote is extremely flammable and can be ignited by sparks flying up the chimney or even the heat from your fire. Once a chimney has caught fire, it can be difficult to extinguish, and the fire can quickly spread to the rest of the house.

Creosote builds up over time, and as it builds up, the danger it poses and the difficulty of removing it increases — it's initially flaky and easy to remove with a chimney brush, but the longer you allow it to build up, the harder it gets and the more flammable it becomes, ultimately turning into what's essentially a concentrated fuel. To avoid chimney fires, you need to remove creosote while it's in that first stage and never let it get thicker and more dangerous.

You can **minimize creosote buildup** in your chimney by building fires that produce smoke containing fewer of the combustion byproducts that create it.

- Only burn dry, seasoned firewood. Allowing firewood to season (dry out for at least six months) will make it more like to burn completely and produce less smoke.
- Avoid burning artificial logs. They produce more combustion byproducts than regular wood.
- Build hot, clean-burning fires, not slow-burning, smoldering ones. Pack the logs tightly — with modest gaps in between for airflow — so the fire burns hotter and cleaner, and don't restrict air flow before the fire really gets cooking. Your fire's not hot enough if it's smoldering, looking like it might die out, or the door glass is sooting up quickly.
- Make sure the fire has sufficient airflow. Open the damper before you light a fire to ensure it will get enough oxygen and keep the intake air vents open at least a bit throughout your burn so air can circulate.
- Reduce condensation by warming up your flue. If your chimney isn't well insulated, the flue can get quite cold (especially on the days we most want to build a fire), and lighting your fireplace when the flue is cold will create more condensation and larger creosote deposits. Before starting your fire on cold days, warm up the chimney by lighting a branch, firelighter, or roll of newspaper and holding it up in the chimney or directly under the flue in your wood stove. When you see the smoke rising straight up, you'll know that the flue is warm enough to draw properly and you can start your fire. (Making sure your flue is drawing properly also helps keep the smoke from invading your house instead of going up the chimney.)

The above steps will help slow creosote buildup but won't stop it entirely — it's a natural result of burning wood and can't be entirely avoided. You'll still need to **clean your chimney** periodically.

There are several commercially available products that can be burned in the fireplace to assist in the removal of creosote. Some come in the form of a firelog that you burn and some are powders that you spread on your fire. While these will help slow the build-up of creosote and may do some cleaning of the chimney, they're not a substitute for manually cleaning it out. Therefore, we strongly recommend that you schedule an annual chimney cleaning and inspection to remove creosote and check for and repair any damage. Although

pellet stoves burn more cleanly and deposit less creosote than wood stoves and fireplaces, there will still be some build-up, so having your chimney cleaned regularly is recommended even if you're using a pellet stove.

So... what if you didn't have a chance to get your chimney cleaned this summer? **How can you tell if your chimney's caught fire?** It's an enclosed box, after all. The bad news is that it can be difficult to tell at first if a chimney fire has started, but there are a couple of signs you might notice:

- A loud roaring noise coming from the chimney.
- Popping and cracking noises in the chimney.
- Black smoke coming from the chimney.
- Ash and debris flying out of the top of the chimney.

What do you do if you think your chimney's on fire?

- Call 911!
- Get everyone, including pets, out of the house. A chimney fire can become a whole house fire with frightening speed.
- If you can safely do so, close any doors or intake vents on the stove to limit oxygen to the fire.
- If you have a chimney fire suppressant product and can safely use it, do so. There are several commercially available products designed to smother chimney fires, which can be found by searching for "chimney fire suppressant" online. They include FireEx, Fire Stop, and ChimFex (which the fire department carries). They're not very expensive and may slow down the fire until we can get there (or might even extinguish it). Make sure that the product you're relying on is a fire suppressant and not a creosote remover, and even if you think it's put the fire out, still call the fire department in to confirm it. We can use our thermal imaging camera to check your chimney for any sign of continued combustion.

So remember — build clean-burning fires that produce minimal smoke, use creosote-removing products to limit its buildup, get your chimney cleaned and inspected every year, and consider purchasing a fire suppressant product designed for chimney fires and keeping it near your fireplace. These steps can go a long way toward preventing a chimney fire and protecting your home.