Chimney Fires and Fireplace Safety

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AS THE DAYS GET SHORTER and temperatures drop, the image of a roaring fire comes to mind. Fireplaces, woodstoves and other fuel burning appliances are not only nice to look at, they are often a necessity. It is estimated that they serve as the primary heating source for nearly one third of homes in the United States (www.usfa.fema.gov). However, there are nearly 25,000 chimney fires per year, causing damage to structures, injuries and about 10 deaths per year (www.csia.org). Helping clients understand the hazards of chimney fires and prevent accidents is another value-added service of the professional insurance agent.

Like any other form of home heating system, fireplaces and woodstoves, including their stovepipes and chimneys, should be inspected annually. According to the National Fire Protection Association (www.nfpa.org), approximately 28% of home heating fires are due to dirty equipment – chimneys in particular. Build up of creosote is one of the main dangers of wood burning appliances.

The purpose of the chimney flue is to remove the byproducts of the combustion process, including smoke, unburned wood and water vapor, thereby keeping the air inside the home safe to breathe. As these materials travel through the chimney, they cool and condense, forming creosote. Creosote comes in a number of forms, but all are highly combustible. With enough of a build up and high enough flue temperatures, fire can ensue. Creosote can be tar like in appearance, or brown and crusty.

Dirty chimneys cause chimney fires. Creosote buildup can be accelerated by several factors, including reduced air supply, unseasoned wood, and cooler than normal chimney temperatures. Failure to open the damper all the way also restricts air flow.

Chimney fires can be very explosive with popping and crackling sounds that may be loud enough to alarm the neighbors. They may include dense dark smoke and a smell of something being hot. Perhaps more dangerous are the chimney fires that burn much more slowly, usually because there is not enough air flow to sustain a more dramatic fire. Temperatures in the slow burning fires are hot enough to damage the chimney and any nearby combustible parts of the house.

Evidence of a preexisting chimney fire includes creosote flakes or pieces on the floor or ground outside, and flue tiles or roofing material that are cracked or damaged. Creosote that has a honeycomb appearance is another sign, as is a chimney rain cap that is discolored or distorted.

There are some safety measures that can help to reduce the risk of a chimney fire. Stack thermometers are a good tool to let homeowners know that the chimney is getting too hot. Glass doors should not be closed when a fire is burning, as this impedes the air flow needed for complete combustion. There is usually a mesh screen as well, and this should be used when a fire is burning. Sometimes the firebox in a woodstove is overloaded in order to try to keep the fire burning – and the house warm – overnight. This can also increase creosote build up. Keep

a screen over the top of the chimney to prevent birds and other creatures from getting in.

Heating a home need not be hazardous to someone's health. Chimney fires are completely preventable. Helping clients avoid the potential tragedy of chimney fires is another sign of the true insurance professional.

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