The Firebird Sweep Inc.

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# Your Neglected Heating System Could Kill You



Is yours one of those millions of heating systems that never receive any attention until they break down? If preventive maintenance sounds like a drag, contemplate this fact: The furnace that keeps you warm and snug can also do you in.

It may "look okay" and seem to be working, but a blocked flue, cracked part or minor malfunction can put carbon monoxide fumes into your living environment and quietly poison you ... v-e-r-y slowly or overnight.

A heating system that runs on oil, coal or wood will let you know when the flue is blocked by setting off your smoke alarm or filling the house with choking smoke. A gas furnace, however, emits no telltale smoke to alert you or the standard smoke alarm.

The carbon monoxide fumes produced by a malfunctioning system are colorless, odorless and tasteless. They can cause headaches, nausea, chest pains and/or heart palpitations.

You can feel groggy, dizzy, disoriented and terribly tired because your blood cells are being starved of oxygen. You might decide that you're getting the flu, or that something you ate doesn't agree with you, or that you really ought to make a doctor's appointment if you don't start feeling better soon. Even if you go to the doctor, however, chances are slim that your trouble will be correctly diagnosed because the symptoms of carbon monoxide poisoning are so much like those of other maladies – flu, overwork, emotional stress, allergic reactions, heart trouble. .. just to mention a few.

Every year newspapers carry stories about people, sometimes whole families, felled by carbon monoxide poisoning. Even when the furnes don't kill, they can do permanent damage to the human body and brain.

## WHAT CAN GO WRONG WITH A GAS HEATING SYSTEM?

PLENTY: Replacements and conversions old coal, wood or fuel-oil heating systems that By Jay Hensley Illustrations by Sandy Thacker

have been replaced or changed over to accommodate natural gas or propane – cause some of the most dangerous situations.

In many cases, sometimes in violation of appliance installation instructions or applicable codes, flues were not cleaned or inspected prior to or during the replacement or conversion. Here's what can happen in an old chimney venting either a converted or new gas furnace: The high concentration of acidic moisture (water mixed with hydrochloric acid) in the flue gases washes down leftover soot and debris, then attacks sand, brick and mortar in an unlined flue. or flakes terra cotta and starts deteriorating mortar joints in a tile flue liner.



The results of this washdown are plugged venting systems, rusty and corroded vent pipes, rusted and/or plugged heat exchangers and burner assemblies. These can cause incomplete combustion of the fuel, causing the production of carbon monoxide.

Let's look at the wording of the International Fuel Gas Code (2000) intended to prevent such a thing from happening: "Before replacing an existing appliance or connecting a vent connector to a chimney, the chimney shall be examined to ascertain that it is clear and free of obstruction if previously used for venting solid or liquid-fuel-burning appliances or fireplaces."

Additionally, "Chimneys shall be lined in accordance with NFPA 211." Further, "When inspection reveals that an existing chimney is not safe for the intended application, it shall be repaired, rebuilt, lined, relined or replaced with a vent or chimney to conform to NFPA 211, or local building codes, and it shall be suitable for the equipment to be vented."

#### **Multiple Venting**

Another stipulation of the International Fuel Gas Code is that "Gas utilization equipment shall not be connected to a chimney flue serving a separate appliance designed to burn solid fuel." Multiple venting, where more than one appliance is connected to the same flue, can affect the draft, causing flue gases from the gas furnace to escape into the house. Soot and creosote build-up from the solid-fuel burning appliance can plug the chimney and force flue gases to back up into the living environment; or the washdown of soot and other debris from flue walls can fill up the catch basin and block the flue.

#### **Chimney Deterioration**

Moisture damage can destroy a chimney, but before the masonry actually falls apart flue gases can leak through the deteriorating structure and into the house. Most old chimneys must be completely lined or relined to serve a gas furnace properly.

Corrosion and stress cracking of heat exchangers can suddenly allow carbon monoxide and other products of combustion into the living space.

#### Incomplete Servicing

The "gas man" or "furnace man" may inspect, clean and repair the furnace, but he typically doesn't check the flue. The furnace is now in "working order," but its flue needs to be inspected, cleaned, repaired or perhaps relined before you can be certain the heating system will function safely and efficiently.



### **False Expectations**

Many people have the mistaken impression that gas heating systems are maintenance free.

Don't take chances. Call a qualified heating professional now!

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