

## **Everything You Need To Know About Fire Safety (almost)**

### INTRODUCTION

Everyday, somewhere in our country, somebody's home catches fire. Fires in American homes claim more than 4000 lives every year. It could happen in YOUR home, to YOU and YOUR family.

A serious home fire is a deadly combination of heat, blinding smoke, and toxic gases. Gases produced by fire can kill sleeping victims long before flames reach them. Fire can produce temperatures over 1000°F (537°C) in just minutes! And as temperatures rise, flashover can ignite an entire room virtually instantaneously.

You should try to eliminate fire hazards from your home. The best time to stop a fire, after all, is before it starts. By following our Fire Safety Links, you will find information that will help you in eliminating hazards, and improving your chances in the event a fire does occur in your home.

### HOW FIRES START

Fire is a *chemical reaction* involving rapid oxidation or burning of a fuel. It needs three elements to occur:

- **FUEL** - Fuel can be any combustible material - solid, liquid or gas. Most solids and liquids become a vapor or gas before they will burn.
- **OXYGEN** - The air we breathe is about 21% oxygen. Fire only needs an atmosphere with at least 16% oxygen.
- **HEAT** - Heat is the energy necessary to increase the temperature of the fuel to a point where sufficient vapors are given off for ignition to occur.
- **CHEMICAL REACTION** - A chain reaction can occur when the three elements of fire are present in the proper conditions and proportions. Fire occurs when this rapid oxidation, or

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burning takes place. Take any one of these factors away, and the fire cannot occur or will be extinguished if it was already burning.