



CITY OF LODI FIRE DEPARTMENT



FIRE PREVENTION BUREAU

SMOKE DETECTORS

Fires in the home across the nation occur every 85 seconds. Every year about 3,000 people die in residential fires along with over 25,000 injured. Property loss is estimated at over nine billion dollars. The peak time for a death from a home fire is between 2 a.m. and 4 a.m. when most people are asleep.

Eighty percent of fire deaths occur in a home without a working smoke detector. Fire deaths in homes without any smoke detectors made up half of those deaths. If fire occurs, working smoke detectors cut the risk of dying in a home fire nearly in half. Most fire fatalities in the home occur not from the fire itself, but from the smoke that is produced. Properly installed and maintained smoke detectors in the home are considered one of the best and least expensive means of providing an early warning of a potentially deadly fire. Smoke detectors save lives, prevent injuries, and minimize property damage by enabling residents to detect fires early in their development. If you are asleep when a fire starts, a working smoke detector may be the only chance you have of waking up. The Lodi Fire Department wants your family and you to be knowledgeable regarding smoke detectors for your safety.

TYPES OF SMOKE DETECTORS

There are two basic types of smoke detectors – ionization and photoelectric. Each senses smoke by a different principle of operation. Either type provides adequate home fire protection.

Ionization smoke detectors depend on the fact that even a very weak source of radiation will increase the ability of air to conduct electricity. In these detectors, a small and carefully shielded bit of radiation material “ionizes” the air in the detector’s smoke chamber. As a result, a very weak electrical current flows through the chamber and is sensed by the detector’s circuit. When tiny particles of smoke drift into the chamber, they reduce that electrical current flow. When enough particles have entered the chamber the electrical current drops below the acceptable threshold and the horn activates.

Photoelectric smoke detectors are the most common type of home smoke detectors. It detects smoke by “seeing it” in much the same way your eyes do. When particles of smoke are carried into the detector by room air circulating through it, they each reflect or “scatter” light from a small lamp in the device. Some of the reflected light falls in a photocell, causing it to produce a slight electrical current. When enough smoke particles enter to reflect a pre-set amount of light, the detector circuit actuates the alarm.

BUYING A SMOKE DETECTOR

- Average cost \$10 to \$25 per detector.
- Detector must have a Underwriters Laboratories (UL) symbol or a Factory Mutual (FM) seal of approval on it along with a California State Fire Marshal approval.
- It should have a warning signal which warns you when bulbs or batteries need replacing.
- The smoke detector's alarm must be loud enough (85 decibel or louder) to wake a sleeping person behind a closed door. Special detectors are available for hard of hearing persons.

INSTALLING SMOKE DETECTORS

- Follow manufacture's instructions exactly in or on the box.
- Smoke detectors operate by electricity, battery or by both types. Electrical with battery back-up provide the safest, most reliable option.
- If you purchase a smoke detector to be connected to your home electrical system, you should have a qualified electrician install them. If your detector is solely battery powered, you can easily install them yourself with a screwdriver and a drill following the manufacturer's instructions.
- Every level in your home should have at least one smoke detector.
- Smoke detectors need to be placed within 10 feet of sleeping areas. New construction requires smoke detectors installed in each bedroom.
- Smoke detectors should be mounted on the ceiling or high on the wall – remember smoke rises. Never place smoke detectors in the dead air space within 6 inches from a corner where a wall and ceiling meet.
- Never place a smoke detector near heating ducts or cold air returns.
- Avoid placing detectors near bathrooms with showers, cooking areas, furnace rooms or near fireplaces or wood-burning stoves.
- After installation, test detectors to assure they work, have everyone in your household know what they sound like and what to do if they hear that noise. Practice fire escape planning and determine a pre-set meeting place outside so everyone can be accounted for to assure no one reenters the home.

MAINTAINING SMOKE DETECTORS

- **NEVER** remove your battery if the alarm activates. Check to assure there are no hidden fires, and then fan the detectors with a newspaper until the alarm stops. If false alarms continue, try relocating your detector further from the kitchen or bathroom area and closer to the sleeping area.
- Change your battery annually when it's time to adjust your clocks for daylight saving time
- If your detector makes a "chirping" sound every 60 seconds or so, it is telling you the battery needs to be changed. This sound will last for a few days, but once the battery is dead you will have no protection at all.
- Clean the detectors face and screen by vacuuming it to remove any dust or cobwebs which could cause false alarms.
- Test your smoke detector **MONTHLY** by pushing the test button or using smoke from an extinguished match or candle. Never use a flame to test the detector.