Smoke Detectors
By: Melissa Vink

Most of us go about our daily lives never thinking twice about the smoke alarms in our homes. The only time we really notice them is when we hear that annoying little chirp coming from the alarm when it's time to change the battery out, or the loud screaming sound coming from it when we've left our toast in the toaster a bit too long. What we fail to realize is that the little device that can be such an annoyance at times may be the thing that one day saves our life and the lives of our loved ones. Knowing where to install them and how to maintain them is key to keeping the alarm in good working order so it can do its job in alerting you when there is a smoke hazard and potential fire in the area.

Types of Smoke Alarms

The two most commonly recognized smoke alarms are ionization and photoelectric.

Ionization smoke alarms are typically more responsive to flaming fires. Within an ionization smoke alarm lies a small amount of radioactive material between two electrically charged plates. This material ionizes the air and causes current to flow between the plates. The flow of the ions is disrupted when smoke enters the chamber, thus reducing the flow of current and activating the alarm.

Photoelectric smoke alarms are typically more responsive to “smoldering fires”, fires that begin with a long period of smoldering. In photoelectric-type alarms a light source is aimed into a sensing chamber at an angle away from the sensor. When smoke enters the chamber, light is reflected onto the light sensor, thus triggering the alarm.

The advantage each type of smoke alarm provides may be critical to saving lives in fire situations. Fatal home fires, both during the day and at night, include a large number smoldering fires and a large number of flaming fires. Since you cannot predict which you might have should a fire break out in your home; it is recommended both alarms be installed. Dual sensor smoke alarms which contain both ionizations and photoelectric smoke sensors are also available.

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SMOKE ALARMS FOR THE HEARING IMPAIRED

It is important to note there are smoke alarms for people with hearing loss. These alarms typically include strobe lights that flash and/or vibrate to alert those who are unable to hear standard smoke alarms when they sound.
By: James Caesar & Allie Naldoza

The fourth annual Isla Vista YMCA Teen Community Emergency Response Team (CERT) program was completed on Aug. 15 with 15 teenagers learning about emergency preparedness. To date, it is the only ongoing teen CERT program in Santa Barbara County and is partnered with the Aware and Prepare Initiative with UC Santa Barbara, the City of Goleta, California Volunteers, Santa Barbara County Fire Department and the Isla Vista YMCA. James Caesar is the Emergency Manager at UCSB, and for the past 5 years has participated in the organization, preparation and execution of the UCSB CERT program. With the support and involvement from the local community, university and various CERT partners, Caesar and the Santa Barbara County CERT community have successfully developed numerous CERT programs to fit the needs of the Santa Barbara community. The success of a CERT program lays in the connectivity of its partners and the interest of its participants. By continuing to reach out to as many local CERT organizations as possible, Caesar and his team have been able to continue to create a diverse selection of CERT programs, such as Spanish CERT, Access and Functional Needs CERT and the Isla Vista Teen CERT. Working with each partner has produced the specific courses to address the diverse needs of the community in an emergency situation. Instructors come from relevant fields involving emergency and medical services, while trainees from the university and the community fill the courses. Instructors and the project manager(s) must be certified through FEMA in order to teach the classes. Those who participate in the Train the Trainer course must also take a class through FEMA. The UC Santa Barbara CERT Program worked with each partner to provide courses that not only educate, but teach and enhance skills that are needed in case of an emergency.

At the conclusion of each course, a simulation exercise tests the participants on the specific skills that were learned that week. Skills that are tested include: rescuing victims, extinguishing fires, performing search and rescue in limited visibility environments and preparing for medical operations. The simulation exercise ends once the partnering fire department arrives and the CERT team leader communicates a report of the actions taken by the CERT team to the fire captain. The concluding simulation exercise helps to create a CERT team out of the participants participating in the course. The connectivity of the CERT community comes full circle when the programs grow and participants continue to strengthen their skills course after course.

“At times it is more than an emergency preparedness program. We have made a difference in the lives of both the trainers and the community members, whether by building their resumes or providing community links to help them with life issues.” - James Caesar
Maintenance of Smoke Alarms

Smoke alarms are powered either by battery or by your home's electrical system. Battery powered smoke alarms run on either a disposable 9-volt battery or a non-replaceable 10-year lithium ("long-life") battery. Alarms that are "hardwired" or get power from your home's electrical system, usually have a back-up battery that will need to be replaced once a year.

General maintenance tips for each type of smoke alarm include:

Smoke alarm powered by a 9-volt battery
- Test the alarm monthly.
- Replace the batteries at least once every year.
- Replace the entire smoke alarm every 10 years.

Smoke alarm powered by a 10-year lithium (or "long-life") battery
- Test the alarm monthly.
- Since you cannot (and should not) replace the lithium battery, replace the entire smoke alarm according to the manufacturer’s instructions.

Smoke alarm that is hardwired into your home's electrical system
- Test the alarm monthly.
- Replace the backup battery at least once every year.
- Replace the entire smoke alarm every 10 years.

Smoke alarms save lives. When a fire breaks out, smoke spreads fast and you need a working smoke alarm to give you time to get out. Having a well maintained smoke alarm can cut the chances of dying or being seriously injured in a fire in half. With proper installation and maintenance by following the tips provided, you just might save a life, including your own.

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