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FIRE DEPARTMENT

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TIME CHANGE A GOOD TIME TO CHANGE THE BATTERIES

Home Fire Safety begins with making sure smoke detectors are working properly

The following is one of a series of articles on Community Risk Reduction presented by the Muscatine Fire Department.

MUSCATINE, Iowa – One of the best ways to practice fire safety is to install smoke and carbon monoxide detectors at various locations in the home or in the business. But with that comes the responsibility to make sure these devices remain in proper working order.

The spring and fall dates for changing the clocks (Spring Forward and Fall Back) have been associated for many years now with another campaign ...





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checking on and changing detector batteries.

At 2 a.m. on Sunday, March 10, Muscatine residents will join with citizens from throughout the United States in turning their clocks "forward" for Daylight Savings Time. Many people will use this opportunity to change the home's smoke alarm batteries as well.

"Having smoke detectors in the home and making sure they are working properly saves lives," Firefighter Brandon Rheingans said. "Muscatine Fire reminds residents that with the changing of the clock they should also remember to test their smoke detectors and change the smoke detector batteries."

Although a large percentage of homes have smoke alarms, many may not work because of dead or missing batteries. These nonworking alarms give residents a false sense of security. To check an alarm, firefighters recommend pushing the test button. The alarm should sound a loud beeping sound by the time you count to 10. If not, it needs to be replaced immediately.

The National Fire Prevention Association (NFPA) did not originate the long standing "Change Your Clocks, Change Your Batteries" campaign, but also encourages the public to change their smoke alarm batteries when turning back clocks in the fall or ahead in the spring.

Because working smoke alarms are a critical element of home fire safety, NFPA supports any and all efforts to reinforce the importance of working batteries. Smoke alarms are the single most



important means of preventing fire-related deaths in the home. They warn people who would



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otherwise be overcome by toxic smoke gases in their sleep. Properly installed and maintained, they will give residents those crucial minutes they will need to escape.

- Each year there are over 400,000 residential fires that cause nearly 4,000 deaths, over 18,000 injuries and \$4.7 billion in property losses.
- More than half of all fire fatalities occur in homes without a working smoke detector.
- In a fire, smoke spreads farther and faster than fire. More people die from breathing smoke than from burns.
- When people are asleep, deadly smoke fumes can cause them to sink into unconsciousness and then death, long before flames ever reach them.

"Working smoke alarms provide an early warning to the dangers of smoke and fire," Rheingans said. "This early warning is particularly important for those most at risk, such as children and seniors. Changing smoke alarm batteries once a year is one of the simplest and most effective ways to reduce these tragic deaths and injuries."

If residents do not own a smoke alarm or need help changing batteries or checking alarms, they should contact the fire department to receive assistance.

"If you ever have any concerns with your smoke detectors, reach out to the Fire Department," Rheingans said. "We will be happy to answer any questions you might have."

Residents can call the Muscatine Fire Department directly at 563-263-9233.

Smoke alarms in the market fall under two basic categories: ionization and photoelectric. Ionization smoke alarms react quickly to open flame fires; photoelectric smoke alarms react to smoldering fires. A dual sensor smoke alarm combines the features from ionization and photoelectric smoke alarms.

In addition, smoke alarms can be battery-operated or hard-wired. The difference between the



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two is that hard-wired smoke alarms are linked together so when one alarm goes off, all the alarms in the home activate.

Battery-operated smoke alarms can be powered by a 10-year non-replaceable lithium battery or by a disposable 9-volt battery.

When installing smoke alarms in the home, be sure to follow the instructions provided by the manufacturer. Smoke alarms should be installed on every floor of your home as well as on the inside and outside of every bedroom.

To maintain your smoke alarms, you must test the alarms monthly. For battery-operated smoke alarms with a disposable battery, replace the battery twice a year. For battery-operated smoke alarms with a lithium battery, since it is non-replaceable, replace the entire smoke alarm according to the manufacturer's instructions.

A trick to remember when it's time to change your smoke alarm batteries is to change them when you change your clocks (fall backward, spring forward) to make it a habit. For hard-wired smoke alarms, replace the backup battery at least once a year. A smoke alarm should be replaced every 10 years.

Following is information to help make sure all smoke alarms have working batteries, accounting for the multiple types of smoke alarms on the market and their varying battery requirements:

- Smoke alarms with non-replaceable 10-year batteries are designed to remain effective for up to 10 years. If the alarm chirps, warning that the battery is low, replace the entire smoke alarm right away.
- Smoke alarms with any other type of battery need a new battery at least once a year. If that alarm chirps, warning the battery is low, replace the battery right away.
- When replacing a battery, follow the manufacturer's list of batteries on the back of the alarm or manufacturer's instructions. Manufacturer's instructions are specific to the



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batteries (brand and model) that must be used. The smoke alarm may not work properly if a different kind of battery is used.

SLEEPING INDIVIDUALS DO NOT SMELL SMOKE

Assistant Fire Chief Mike Hartman noted that research has shown that sleeping individuals do not smell smoke so the sounds emitting from a smoke detector are important to rousing sleeping individuals.

"Studies have also shown that children, especially, will sleep through an alarm that beeps because it sounds a lot like an alarm clock," Hartman said. "The alarms that actually speak to you have been shown to greatly increase a person's ability to escape a fire."

Pre-teenage children don't wake up to traditional high-frequency tone alarms according to research from the Center for Injury Research and Policy. Detectors that speak or vibrate when activated can help wake children or individuals with visual or hearing impairments.

A variety of smoke and carbon monoxide detectors are available and finding the right one for your family situation is important, Hartman said.

"Also be sure to check the date on the smoke detector," Hartman said.

The International Association of Fire Chiefs (IAFC) also recommends replacing smoke alarms in homes every 10 years and those that actually speak warnings are more effective in saving lives than those alarms that just beep.

The Muscatine Fire Department also recommends photoelectric alarms with a 10-year lithium battery and to mark the date of installation on the detectors.



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"These detectors do not last forever," Hartman said. "It is important that you check the date on the detectors and replace those that are seven years old or more."

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