The Villages®

PUBLIC SAFETY DEPARTMENT

The Basics of Fire Extinguishers, Smoke Detectors and General Safety Tips

3035 South Morse Boulevard
The Villages, FL 32163
352-205-8280

Reminder, this is information only,

Call 9-1-1

when in doubt about any fire, smoke or potentially life threatening emergency situation.

THE BASICS OF FIRE EXTINGUISHERS…

With so many fire extinguishers to choose from, selecting the proper one for your home can be a daunting task. Everyone should have at least one fire extinguisher at home, but it's just as important to ensure you have the proper type of fire extinguisher. Fire protection experts recommend one for the kitchen, the garage and workshop.

Fire extinguishers are divided into four categories, based on different types of fires. Each fire extinguisher also has a numerical rating that serves as a guide for the amount of fire the extinguisher can handle. The higher the number, the more fire-fighting power. The following is a quick guide to help choose the right type of extinguisher.

- **Water extinguishers** or APW extinguishers (air-pressurized water) are suitable for **class A fires only**. Never use a water extinguisher on grease fires, electrical fires or class D fires - the flames will spread and make the fire bigger! Water extinguishers are filled with water and are typically pressurized with air. Again - water extinguishers can be very dangerous in the wrong type of situation. Only fight the fire if you're certain it contains ordinary combustible materials only.
- **Dry chemical** extinguishers come in a variety of types and are suitable for a combination of **class A, B and C fires**. These are filled with foam or powder and pressurized with nitrogen.
    - **BC** - This is the regular type of dry chemical extinguisher. It is filled with sodium bicarbonate or potassium bicarbonate. The BC variety leaves a mildly corrosive residue which must be cleaned immediately to prevent any damage to materials.

- **ABC** - This is the multipurpose dry chemical extinguisher. The ABC type is filled with mono-ammonium phosphate, a yellow powder that leaves a sticky residue that may be damaging to electrical appliances such as a computer Dry chemical extinguishers have an advantage over CO2 extinguishers since they leave a non-flammable substance on the extinguished material, reducing the likelihood of re-ignition.

- **Carbon Dioxide (CO2) extinguishers** are used for **class B and C fires**. CO2 extinguishers contain carbon dioxide, a non-flammable gas, and are highly pressurized. The pressure is so great that it is not uncommon for bits of dry ice to shoot out the nozzle. They don't work very well on class A fires because they may not be able to displace enough oxygen to put the fire out, causing it to re-ignite.

CO2 extinguishers have an advantage over dry chemical extinguishers since they don't leave a harmful residue - a good choice for an electrical fire on a computer or other favorite electronic device such as a stereo or TV.

Three most commonly used extinguishers…

- **Class A** extinguishers are for ordinary combustible materials such as paper, wood, cardboard, and most plastics.
- **Class B** fires involve flammable or combustible liquids such as gasoline, kerosene, grease and oil.
- **Class C** fires involve electrical equipment, such as appliances, wiring, circuit breakers and outlets. Never use water to extinguish class C fires - the risk of electrical shock

It is vital to know what type of extinguisher you are using. Using the wrong type of extinguisher for the wrong type of fire can be life-threatening.

These are only the common types of fire extinguishers. There are many others to choose from. Base your selection on the classification and the extinguisher's compatibility with the items you wish to protect.

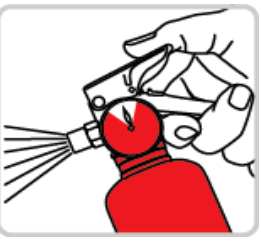
How Fire Extinguishers Work

A fire extinguisher is an absolute necessity in any home or office. While there's a good chance that the extinguisher will sit on the wall for years, collecting dust, it could end up saving your property and even your life.

How do I use my fire extinguisher?

The operating instructions for fire extinguishers are clearly noted on the extinguisher label, and in the Owner's Manual that came with the extinguisher.

1. HOLD THE EXTINGUISHER UPRIGHT AND PULL THE RING (SAFETY) PIN breaking the plastic seal.
2. STAND BACK FROM THE FIRE (the minimum distance stated on the nameplate) and AIM AT THE BASE OF THE FIRE NEAREST YOU.
3. Keeping the extinguisher UPRIGHT, SQUEEZE THE HANDLES TOGETHER to discharge and SWEEP FROM SIDE TO SIDE. Move closer as the fire is extinguished but not so close as to scatter the burning material or liquid.
4. When the fire is out, back away while watching for possible re-ignition.
5. Evacuate and ventilate the area immediately after use. The fumes and smoke from any fire may be hazardous and can be deadly.



REMEMBER THIS SIMPLE WORD:

PULL
AIM
SQUEEZE
SWEEP

THE BASICS OF SMOKE DETECTORS…

Some statistics on why we should have smoke detectors?

Smoke alarms have become such a common feature in U.S. homes that it is easy to take them for granted. Newspapers often report fires in which smoke alarms alerted sleeping occupants to danger. These devices alert countless others to fires just as they are starting. **Almost two-thirds of home fire deaths resulted from fires in properties without working smoke alarms. Smoke alarm failures usually result from missing, disconnected, or dead batteries.** People are most likely to remove or disconnect batteries because of nuisance activations. Sometimes the chirping to warn of a low battery is interpreted as a nuisance alarm. Smoke alarms should be tested at least once every month to ensure that both the batteries and the units themselves are still working. Replaceable batteries should be replaced in accordance with the manufacturer's instructions, at least once every year. **According to NFPA research one-fifth of all homes with smoke alarms, none were working.**

Some non-fire activations are actually useful warnings. Chirping is intended to be a useful warning. Other non-fire activations, particularly from cooking, may actually be pre-fire warnings. A sounding smoke alarm may remind a cook who has left the kitchen area of food on the stove requiring immediate attention. While not yet a fire, the potential exists if corrective action is not taken. If such action is taken, the situation is usually resolved without fire department involvement.

People Who Are Deaf or Hard of Hearing
Smoke alarms and alert devices, called accessories, are available for people who are deaf. Strobe lights throughout the home are activated by smoke alarms and alert people who are deaf to fire conditions. When people who are deaf are asleep, a high intensity strobe light is used along with a pillow or bed shaker to wake them up and alert them to fire conditions so they can escape. Currently this equipment is activated by the sound of a standard smoke alarm.

Recent research has shown that a loud, mixed low-pitched sound is more effective for waking people of all ages than the loud high-pitched sound of a traditional smoke alarm. As people age, their ability to hear high-pitched sounds decreases.

Choose smoke alarms and accessories for people who are deaf that have the label of a recognized testing laboratory (i.e., UL). Research the available products and select one that best meets your individual needs.

The above information is an excerpt from:

http://www.nfpa.org/assets/files/pdf/os.smokealarms.pdf

IONIZATION VS. PHOTOELECTRIC

The two most commonly recognized smoke detection technologies are ionization smoke detection and photoelectric smoke detection.

- **Ionization** smoke detection is generally more responsive to flaming fires.
    - **How they work:** Ionization-type smoke alarms have a small amount of radioactive material between two electrically charged plates, which ionizes the air and causes current to flow between the plates. When smoke enters the chamber, it disrupts the flow of ions, thus reducing the flow of current and activating the alarm.
- **Photoelectric** smoke detection is generally more responsive to fires that begin with a long period of smoldering (called “smoldering fires”).
    - **How they work:** Photoelectric-type alarms aim a light source into a sensing chamber at an angle away from the sensor. Smoke enters the chamber, reflecting light onto the light sensor; triggering the alarm.

For each type of smoke alarm, the advantage it provides may be critical to life safety in some fire situations. Home fatal fires, day or night, include a large number of smoldering fires and a large number of flaming fires. You can not predict the type of fire you may have in your home or when it will occur. Any smoke alarm technology, to be acceptable, must perform acceptably for both types of fires in order to provide early warning of fire at all times of the day or night and whether you are asleep or awake.

The best evidence has always indicated that either type of smoke alarm will provide sufficient time for escape for most people for most fires of either smoldering or flaming type. However, research is ongoing, and standards are living documents. If at any time, research points to a different conclusion, then that will lead to proposals for changes in the NFPA standard or the closely related Underwriters Laboratories standard for testing and approving smoke alarms. Both organizations currently have task groups looking at smoke alarm performance in the current home environment.

For best protection, use both types of smoke alarm technologies

For best protection, it is recommended both (ionization and photoelectric) technologies be in homes. In addition to individual ionization and photoelectric alarms, combination alarms that include both technologies in a single device are available.

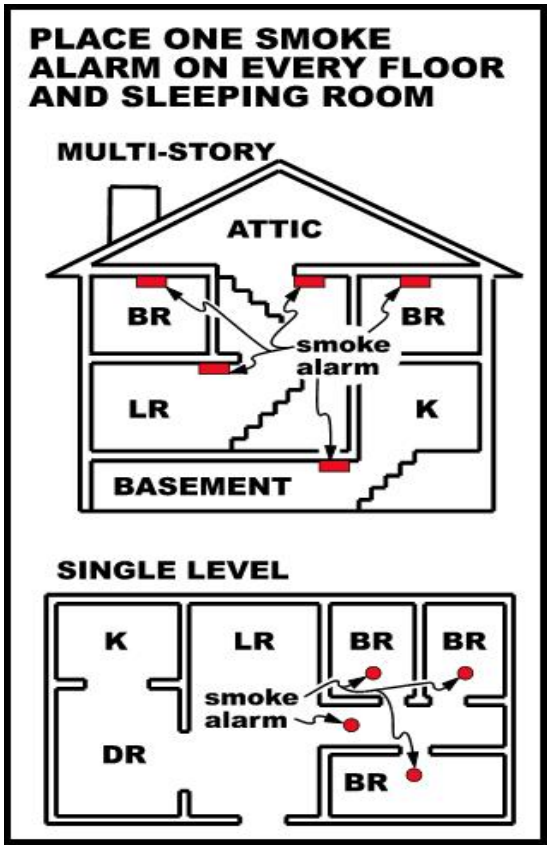
http://www.nfpa.org/itemDetail.asp?categoryID=1649&itemID=39909&URL=Safety%20Information/For%20consumers/Fire%20&%20safety%20equipment/Smoke%20alarms/Ionization%20vs.%20photoelectric&cookie%5Ftest=1

History of The Villages as somewhat compared to NFPA changes …

Between 1970 and 1980 the Orange Blossom Gardens community had only approximately 400 homes. In the early1980's, styles of homes here in The Villages started changing and the numbers increased to about 3,000. The homes have continued to change with the times to approximately 77,000 in 2009…

Along with the changing types of homes in The Villages the NFPA guidelines have also had a number of changes with smoke detectors based on findings from NIFS statistics.

From the mid-1960's until the early 1970's, the market for smoke detectors was limited primarily to the protection of high-valued electronic equipment, museums and libraries. The applications were driven primarily with a concern to protect the contained commodities, and were not required by codes at the time. In 1964, First Alert developed a low-power (24 V) ionization smoke detector [Richardson, 2003]. This opened the door to the development of even lower power smoke detectors.



The notion of residential detection was advanced thinking at the time. When the first edition of NFPA 74, Standard on Household Fire Warning Equipment was published in 1967, the minimum requirement for a residential fire alarm system was to provide a heat detector outside the bedrooms, all connected to a control panel. Such systems were installed in less than 1 percent of U.S. homes and had an estimated cost of about $1,500 for a small house [Bukowski, 1993]. BRK Electronics created the First Alert brand and designed the first UL-listed battery operated smoke alarm [ehow, 2010]. In 1974, Sears and BRK partnered to place Sears name on the BRK smoke detector. From 1973 to 1979, all three model building codes in the U.S., Council of American Building Officials (developer of the 1-21 and 2-Family Dwelling Code) and NFPA 101 had changed to require smoke alarms in homes [Public/Private Fire Safety Council, 2006]. Several changes were made in the UL approval standards for smoke detectors from 1976 to 1981. First in 1976, the two separate standards (UL 167 for ionization detectors and UL 168 for photoelectric detectors) were combined into one standard, UL 217 (Single and Multiple Station Smoke Alarms) at the request of industry. 4th Generation Smoke Detectors (1990-present)
By 2006, smoke detectors (now called smoke alarms) were common equipment in U.S. residences, with 96% of the homes found to have at least one smoke alarm [Ahrens, 2009]. In an analysis of 378,000 fire incidents that occurred from 2003 to 2006 in U.S. homes, the fire death rate in homes without a working smoke alarm was determined to be approximately twice that in homes with working smoke alarms.

With a bit of the smoke detection history above, The Villages homes have changed from mobile homes, ranch to expansive single story homes of all sizes. Still within The Villages we have all these types of homes, so you may still have a battery only type smoke detector or if you have built a new home (2012) recently, you may have the new combo detectors (ionization - smoke/heat/Co) in your home. There are some just battery, just hard-wired and battery/hard-wired. It is necessary to make sure that the batteries are changed on a regular basis.

All of these types of smoke detectors work, and are positive factors in making sure you have some type of alert system in your home, however there are many individuals who may decide to change or place different types of detection systems based on their level of comfort. Some individual homes have even installed sprinkler systems in their homes. What is right for one may not be for another. You make that choice, however, what you have is what was or is appropriate based on the residential code at the time your home was built. It is the homeowners responsibility to make sure that the detectors are maintained and or replaced based on the manufacturers requirements, so please make sure you familiarize yourself with your own detection system.

SC9120B
120V AC/DC
Smoke/CO
Combo Alarm

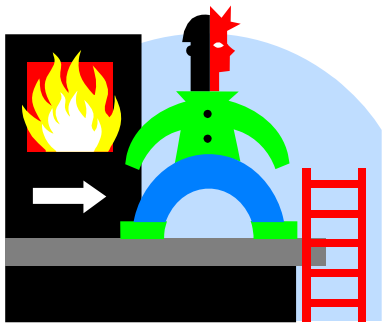
Tips for Fire Safety

Install smoke detectors
Check smoke detectors once a month and change the batteries at least once a year. Smoke detectors sense abnormal amounts of smoke or invisible combustion gases in the air. They can detect both smoldering and burning fires. At least one smoke detector should be installed on every level of a structure. Purchase smoke detectors labeled by the Underwriters Laboratories (UL) or Factory Mutual (FM).

Post emergency numbers near telephones.
Be aware that if a fire threatens your home, you should not place the call to emergency services from inside the home. It is better to get out and place the call to fire authorities from a safe location outside the home.

After a fire emergency
Give first aid where appropriate. Seriously injured victims should be transported to professional medical help immediately. Stay out of the damaged building. Return only when fire authorities say it is safe.

Make sure you have a safe fire escape method for all situations
You may have installed a very expensive home security system. But if you cannot escape the burning structure you have a false level of confidence.



Space Heaters Need Space

Keep portable and space heaters at least 3 feet from anything that may burn. Never leave heaters on when you leave home or go to sleep. Children and pets should always be kept away from them.

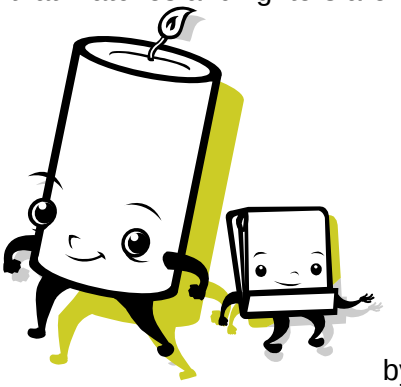
Smokers Need To Be Extra Careful

Never smoke in bed or when you are sleepy. Carelessly discarded cigarettes are a leading cause of fire deaths in the United States.

Be Careful Cooking

Keep cooking areas clear of combustibles and wear short or tight-fitting sleeves when you cook. Keep the handles of your pots turned inward so they do not over-hang the stove. If grease catches fire, carefully slide a lid over the pan and smother the flames, then turn off the burner.

Matches and Lighters are Dangerous

In the hands of a child, matches and lighters can be deadly! Store them where kids can't reach them, preferably in a locked area. Teach children that matches and lighters are "tools" and should only be used  by adults.

Use Electricity Safely

If an appliance smokes or has an unusual smell, unplug it immediately and have it repaired. Replace frayed or cracked electrical cords and don't overload extension cords. They should not be run under rugs. Never tamper with the fuse box or use the improper size fuse.

Cool a Burn

If someone gets burned, immediately place the wound under cool water for 10 to 15 minutes. If the burn blisters or chars, see a doctor immediately!

Be Careful of Halogen Lights

If you have halogen lights, make sure they are away from flammable drapes and low ceiling areas. Never leave them on when you leave your home or office.

Barbeques

Barbeques should be operated outdoors on a flat secured surface. The grill should be in good operating order. Always follow the manufacturers recommendations. Barbeque grills can remain HOT for a significant time after cooking. Liquid propane and natural gas grills should be inspected by the operator prior to lighting; check the hoses for cracks or splits and make sure all connections are tight.

IF THE GAS IS LEAKING TURN OFF THE GRILL AND THE MAIN VALVE AND HAVE IT REPAIRED PRIOR TO USE.

Remember when cooking have a safe zone around the cooking area so not to trip or knock over the grill, this could cause a medical emergency and or create a fire emergency. Be careful and wear proper fitting clothing so the garment is not a hazard.

Fire Pits

Fire pits should only be used outdoors on a flat secured surface. Keep the pit at least three feet from combustibles. Always keep a safety zone around the pit. The fire pit will remain HOT for hours after use. I always recommend following all manufacturers recommendations when using any appliance.

Fire Station Locations in The Villages Public Safety Department

Station 40
2455 Parr Drive - The Villages, FL 32162

Station 41
8013 CR 466 - The Villages, FL 32162

Station 42
17202 SE Belle Meade Circle - The Villages, FL 32162

Station 43
1419 Paradise Drive - Lady Lake, FL 32159

Station 44 / Fire Headquarters
3035 South Morse Boulevard - The Villages, FL 32163

Station 45
3555 South Buena Vista Boulevard - The Villages, FL 32163

Station 51
1231 Bonita Boulevard - The Villages, FL 32162

Main Office - 352-205-8280 Fax – 352-205-8290
Main Office Hours – 8:00 a.m. – 5:00 p.m. - Monday - Friday

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PUBLIC SAFETY


INTERNATIONALLY ACCREDITED AGENCY
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