Everything you always wanted to know about fire extinguishers

By CFAY Safety Office

How hard and how confusing does something need to be for someone to do the right thing? Let's try to make things a little bit clearer for something we take for granted, fire extinguishers. These can be one of the most confusing things we find in our workplaces and at home. We know the basic concept of PASS, pull the safety pin, aim the nozzle at the fire, squeeze the handle, and sweep back and forth at the base of the fire. Sounds simple, right?

As most of us understand this technique or have been educated on how this concept works, there is actually an art to this for it to be effective. Due to a possible lack of practice, in a real event the majority of us good Samaritans can do more damage than good with even the smallest of fires and a very large fire extinguisher. Professionals can extinguish quite a large fire with the smallest of extinguishers. However, we first need to know what kind will work on the type of fire we encounter; this is where the confusion sets in. Let's take a minute to understand the different classifications of fire extinguishers.

The following classification of fire extinguishers is based on a National Fire Proctection Agency lettering system that indicates the types of fires on which an extinguisher has been found to be most effective.

• A Class-A fire extinguisher is used for ordinary combustibles, such as wood, paper, some plastics and textiles. Generally this is what we have at home or in an office setting.

• Class-B refers to fires in flammable liquids and gas fires such as oil, gasoline, et cetera. These fire extinguishers deprive the fire of oxygen and interrupt the fire chain by inhibiting the release of combustible vapors. This is a good one for in your car or in the garage.

• Class-C fire extinguishers are used on fires that involve energized electrical equipment which require the use of electrically nonconductive extinguishing agents. Here is a good one for computer rooms, servers and electronics.

• Class-D fires are fires in combustible metals such as magnesium, titanium, sodium, lithium, potassium and zirconium. These are the toughest fires to put out. Not many of us have these metals handy unless you work in an industrial type area; however, if you do have these metals, a Class-D fire extinguisher is the only type that will get these fires out.

• A Class-K fire extinguisher is used on fires involving cooking mediums such as fats, grease and oils in commercial cooking such as restaurants. This type of extinguisher is the ideal choice for use on cooking appliances. It sends out a mist which prevents splashing of the hot oils.

Japanese Master Labor Contract employee Masakazu Yashima puts out a fire using the PASS procedure; pull the safety pin, aim the nozzle at the fire, squeeze the handle, and sweep back and forth at the base of the fire, during a recent fire extinguisher training session.

Photo courtesy of CFAY Safety Office

What the heck is the Underwriters Laboratories (UL) rating for fire extinguishers? The UL rating is broken down into Class-A and Class-B:C ratings. These numerical ratings allow you to compare the relative extinguishing effectiveness of various fire extinguishers. For example, an extinguisher that is rated 4A:20B:C indicates the following:

• The Class-A rating is a water equivalency rating. Each "A" is equivalent to 1.25 gallons of water. For example, 4A equals five gallons of water.

• The Class-B:C rating is equivalent to the amount of square footage, that, related to the degree of training and experience of the operator (here is where practice pays off), the extinguisher can cover. For example, 20 B:C equals 20 square feet of coverage. The "C" indicates it is suitable for use on electrically energized equipment.

Now that you are really confused, try analyzing these UL ratings. There is no numerical rating for Class-C or Class-D fires. Class-C fires are basically either a Class-A or Class-B fire involving energized electrical equipment and the fire extinguishing medium must be non-conductive. The fire extinguisher for a Class-C fire should be based on the amount of the Class-A or Class-B component. For extinguisher use on a Class-D fire, the relative effectiveness is detailed on the extinguisher nameplate for the specific combustible metal fire for which it is recommended. Good grief! I'm just going to call 911, wait; I'm off base, I mean, call 119!

Fire extinguisher inspections. Fire extinguishers must be visually inspected monthly in accordance with NFPA regulations. The inspection date and the initials of the person performing the inspection must be recorded. The inspection should ensure that:

• Extinguishers are located in their designated place.

• There are no obstructions to access or visibility.

• Operating instructions on nameplate are legible and facing outward.

• Safety seals and tamper indicators are not broken or missing.

• Fullness was determined by weighing or lifting.

• Examinations for obvious physical damage, corrosion, leakage or clogged nozzles have been done.

• Pressure gauge reading or indicator is in the operable range or position.

• The condition of tires, wheels (for wheeled units), carriage, hose and nozzle are checked and in working order.

• The label is in place.

Annual maintenance requirements are dependent on the type of portable fire extinguisher. Stored pressure (or dry chemical type) extinguishers do not require an annual internal examination. Water or steam type fire extinguishers should be discharged, disassembled and inspected annually as per NFPA regulations. Dry chemical extinguishers that require a 12-year hydrostatic test are required to be emptied and subjected to applicable maintenance procedures every six years. Non-refillable, disposable dry chemical extinguishers are exempt from this requirement but must be removed from service at a maximum interval of 12 years from the date of manufacture. If you need additional fire extinguisher maintenance, follow the manufacturer's suggested maintenance procedure as presented in the operating manual.

Domestic violence awareness: Primer guide to basics - part one

By Special Agent Robin Kerr, NCIS Far East Field Office Yokosuka

Editor's note: This is part one of a two-part series. It is designed to give readers the basic definition of domestic violence, statistics regarding it, the triggers, and what constitutes restricted and unrestricted reporting. Quite often, victims and friends of victims wonder if they are in, are witnessing or are being told about a domestic violence situation. Hopefully, these answers will be provided from these articles. They are also available on line at: https://www.cnic.navy.mil/ Yokosuka/OperatingForcesSupport/NCIS/CrimeReductionProgram/index.htm.

What is domestic violence? It's a pattern of behavior resulting in emotional and, or psychological abuse; economic control; and, or interference with personal liberty such as violence or abuse directed at the opposite sex who is: a current or former spouse; a person with whom the abuser shares a child; or a current or former intimate partner with whom the abuser shares or has shared a home.

Many people may wonder, "Why doesn't she leave?" The most common answer is fear; fear of more violence; fear of losing child custody; and fear of losing financial support. There are many services available to get you through the process safely and without losing everything, so when you are ready to end the cycle of violence, contact Naval Criminal Investigative Service (NCIS), base security, or the Fleet and Family Service Center for assistance. No one deserves to be assaulted, and these types of incidents escalate. Very rarely is there a fatal attack on an intimate partner without prior assaults occurring in the relationship. Today's verbal abuse can become tomorrow's physical assault.

Did you know more than 40 percent of new U.S. Navy recruits have experienced some form of family violence? Did you know every five years, domestic violence kills as many people as the number of people who died in the Vietnam War? More than 30 percent of female homicide victims are killed by an intimate partner. Domestic violence is the third leading cause of injury-related death in women ages 15 to 44 and 45 percent of all female intimate violence victims live in a home with children under the age of 12. More than 30 percent of all pregnancy-related deaths were the result of homicide. Most of the domestic violence incidents occur in an off-base residence. If you don't get help for yourself, think about your children. In 15 percent of domestic violence cases, a child or children witnessed the violence. The biggest predictor of physical violence is verbal abuse.

"Separation violence" (when a couple splits-up), greatly increases domestic violence. Threats and violence escalate at the time of separation with 73 percent of women seeking emergency medical services after separation. Up to 75 percent of domestic homicides occur after separation. Women are most likely to be killed while attempting to report abuse or leave the abuser. Stalking is a version of domestic abuse.

There are many services available to get you through the process safely and without losing everything so when you are ready to end the cycle of violence, contact the Naval Criminal Investigative Service (NCIS), base security, and, or the Fleet and Family Support Center for assistance. No one deserves to be assaulted, and these types of incidents escalate. Today's verbal abuse can become tomorrow's physical assault.

Contact NCIS at 243-7535 for help or for more information. After normal working hours, please contact base security, who will then contact an NCIS agent on duty.

The editor asks:

"Did you know, changes to selective reenlistment bonus (SRB) award levels were announced in Naval Administrative Message NAVADMIN 300/10 for active duty and reserve full-time support Sailors? Approximately 17,000 Sailors working in 135 critical skills will be eligible to reenlist with SRB awards up to $90,000 in 2011.

"Enlisted ratings selected for SRB have been placed in one of three tiers. Varying award levels and early reenlistment opportunities have been provided for each tier.

"Sailors may request to reenlist early for an SRB, as long as their end of active obligated service is within the current fiscal year and is not later than 90 days from the requested date of reenlistment.

"Sailors serving in tier one skills may reenlist any time within the fiscal year their enlistment contract ends. Sailors receiving early promote in their most recent periodic evaluation report and Sailors with nuclear skills are given greater reenlistment flexibility. Read NAVADMIN 300/10 for more information."