

Fire Safety & Smoke Alarm Installation Lesson Instructions

for home educator installing smoke alarm at a quick visit

How to use files:

1. Begin with Lesson Instructions (this document).
2. Use Smoke Alarm Installation handout to install, test, and check batteries of smoke alarms.
3. Review Resource Appendix.
4. Leave documents with participant: Leave Behind Message, Keeping our Homes Secure : Preventing Fires & Taking Safety Measures, Red Cross Fire Escape Plan, Red Cross Home Fire Safety Checklist, Smoke Alarm Testing.

This lesson discusses the importance of home safety fire prevention with young parents or elders. Depending on the audience, tailor the discussions for each topic area.

1. Preventing Home Fires

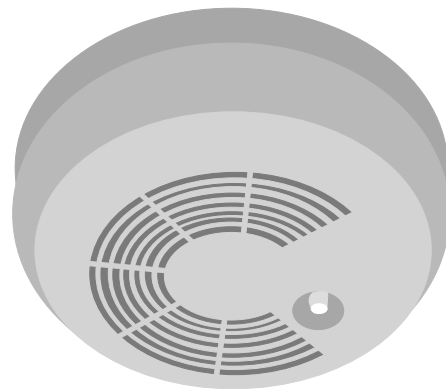
- Home fires create a serious problem
- Ways to prevent injuries from fire

2. Smoke Alarms Save Lives

- Smoke alarms help protect families and keep people safe
- Tips on how to correct smoke alarm beeping without presence of fire
- Make sure smoke alarms work correctly

3. Fire Escape Planning

- Why we need a fire escape plan
- Discuss escaping from each room of the home



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

**Johns Hopkins Center for
Injury Research and Policy**



JOHNS HOPKINS
CENTER FOR AMERICAN
INDIAN HEALTH

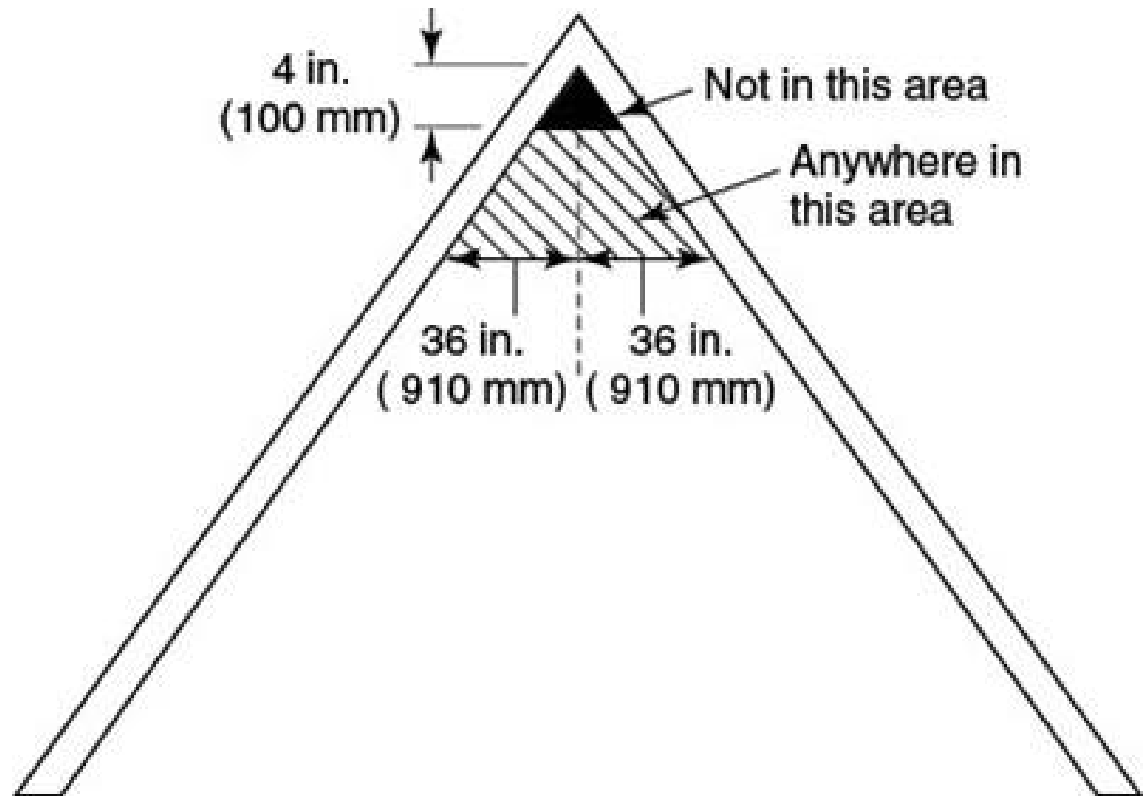
© JHU CAIH
2021-2022

Smoke Alarm Installation

Smoke Alarm Installation Instructions

- Install smoke alarms inside each bedroom, outside each sleeping area and on every level of the home, including the basement.
- On levels without bedrooms, install alarms in the living room (or den or family room) or near the stairway to the upper level, or in both locations.
- Smoke alarms installed in the basement should be installed on the ceiling at the bottom of the stairs leading to the next level.
- Smoke alarms should be installed at least 10 feet (3 meters) from a cooking appliance to minimize false alarms when cooking.
- Mount smoke alarms high on walls or ceilings (remember, smoke rises). Wall-mounted alarms should be installed not more than 12 inches away from the ceiling (to the top of the alarm).
- If you have ceilings that are pitched, install the alarm within 3 feet of the peak but not within the apex of the peak (four inches down from the peak).
- Don't install smoke alarms near windows, doors, or ducts where drafts might interfere with their operation. Don't install in bathrooms, near ceiling fans, or unfinished attics.

Diagram for Pitched Ceilings



Reference: National Fire Protection Association

Maintenance of Smoke Alarms

- Never paint smoke alarms.
- Keep manufacturer's instructions for reference.

Resource Appendix

Web

Create A Fire Escape Plan. MI Prevention. <https://www.michigan.gov/-/media/Project/Websites/lara/bfs/Folder21/2019-lara-fire-escape-plan.pdf?rev=ef2a5aa7ebb24c2388c76743e567ba08>

Fire Safety Equipment. Red Cross. <https://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/fire/fire-safety-equipment.html>

Home Fire Safety. Red Cross. <https://www.redcross.org/get-help/how-to-prepare-for-emergencies/types-of-emergencies/fire.html>

Home Safety Plan. <https://homesafetyvisit.strategicfire.org/>

Installing and Maintaining Smoke Alarms. National Fire Protection Association. <https://www.nfpa.org/Public-Education/Staying-safe/Safety-equipment/Smoke-alarms/Installing-and-maintaining-smoke-alarms>

Portable Fire Extinguishers and Fire Fighting, National Fire Protection Association. <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=10>

Safe Wood Burning Stove. MF Fire. <https://mffire.com/category/safety/>

Wood Burning Stove Safety Tips to Prevent Fires. Nationwide. <https://www.nationwide.com/lc/resources/home/articles/wood-stove-safety>

PDFs

Bed Shaker Alarm Application Instructions. Red Cross. 2017.

Development of a Culturally Informed Child Safety Curriculum for American Indian Families, Berns et al, *J Prim Prev*. 2017 April ; 38(1-2): 195–205. doi:10.1007/s10935-016-0459-y.

Home Safety for People with Disabilities. National Fire Prevention Association. 2016.

Preparing for Disaster for People with Disabilities. Federal Emergency Management Agency. 2004.

Sleep Safe. Indian Health Service. 2010.



**Johns Hopkins Center for
Injury Research and Policy**

PROTECTING YOUR FAMILY FROM SMOKE AND FIRE





PROTECTING YOUR FAMILY FROM SMOKE AND FIRE

INTRODUCTION

This lesson discusses the importance of fire prevention with young parents or elders. Depending on the audience, tailor the discussions for each topic area:

1. Preventing Home Fires
2. Smoke Alarms Save Lives
3. Creating and Practicing a Fire Escape Plan
4. Supplemental content as time allows

Look through each section and reference the Guiding Questions. Add in more if necessary.

1. Have you thought much about fire prevention in the home?
2. Are there working smoke alarms in the home? If so, what kind of smoke alarms do you have? Do the smoke alarms have batteries?
3. Do you have a fire escape plan?
4. Additional questions for remaining sections
 - What do you use to cook in the home? How do you heat the home?
 - Where do people sleep in the home?
 - Do you own a fire extinguisher?

Materials Needed

- “Protecting Your Family from Smoke and Fire” flipchart pages
- Flipchart binder
- Materials to install smoke alarms, including alarms, drills, and step stool
- Handout: Smoke Alarm Installation & Testing Guide
- Additional Resources: *Red Cross Home Fire Escape Plan*, *Red Cross Home Fire Safety Checklist*

Objectives

- Understand why home fires are serious
- Understand ways to prevent home fires
- Install smoke alarms
- Understand ways to keep the entire family safe if there is a fire

Teaching Points

- Home fires can cause serious damage to property and loved ones. There are ways to prevent fires from occurring in the home.
- Smoke alarms help keep families safe from smoke and fires.
- Thinking through a fire escape plan helps families know what to do and where to go if there is a fire.
- Fires may help us cook or heat our homes. When fire is involved, it is important to follow safe cooking and heating practices.
- It is very important that sleeping areas are kept clean and safe from fire hazards.
- Fire extinguishers can be an important safety tool to have in the home, however they must be used properly in order to prevent people from getting injured or fire spreading.

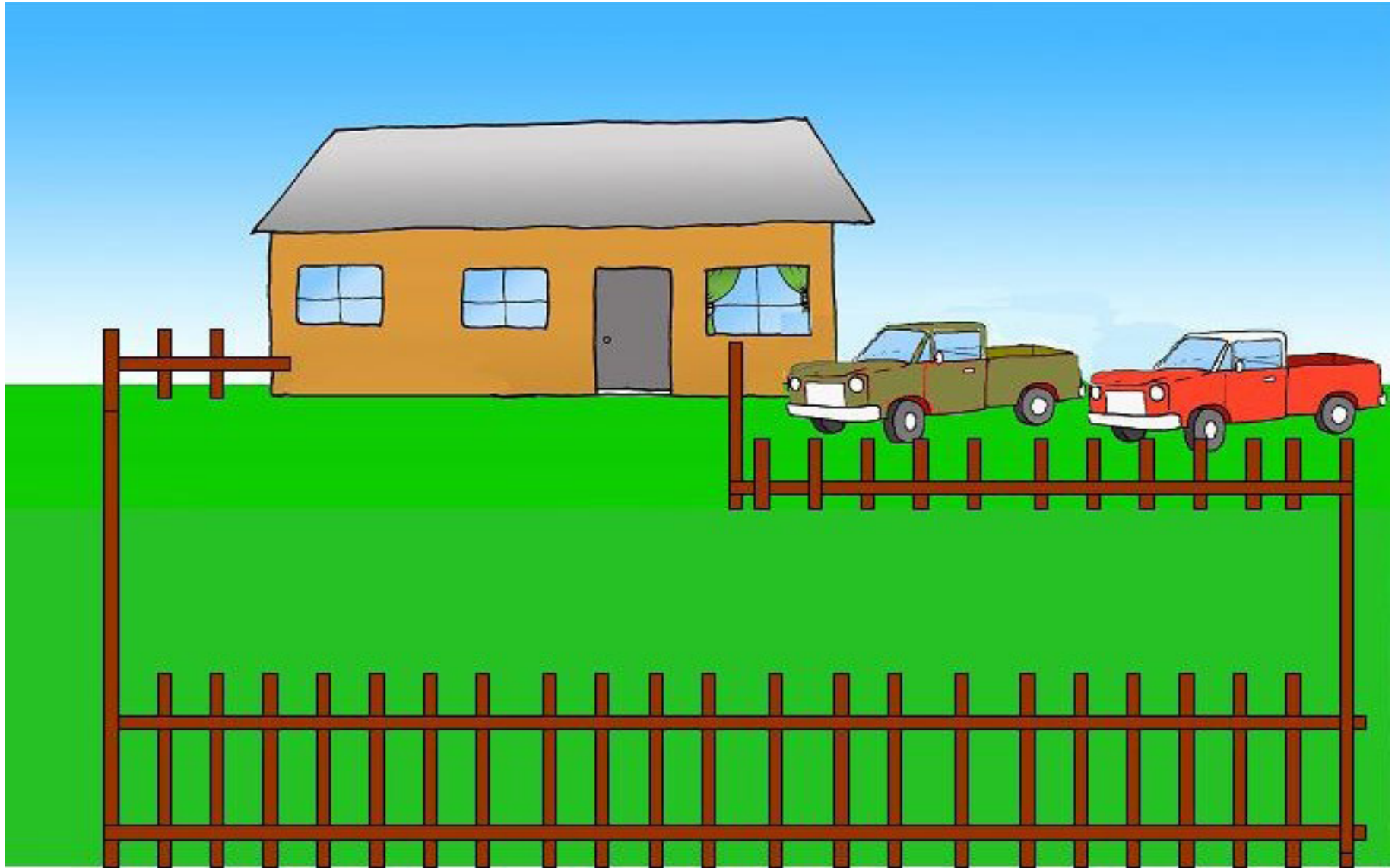
Activities

- Installing and Testing Smoke Alarms
- Fire Escape Planning
- Inspecting Heating Areas

Wrap-Up

- Review teaching points and answer any remaining questions

PREVENTING HOME FIRES





PREVENTING HOME FIRES

🕒 TEACHING POINTS

Home fires can cause serious damage to property and loved ones. There are ways to prevent fires from occurring in the home.

» GUIDING QUESTIONS

Have you thought much about fire prevention in the home?

Review the teaching points with the participant.

■ Home fires are a serious problem.

- Home fires are a preventable cause of injury or death.
- Most fire-related deaths happen during sleep, between midnight and 6 a.m.
- Fires are fast. Individuals may only have up to two minutes to get to a safe place outside.

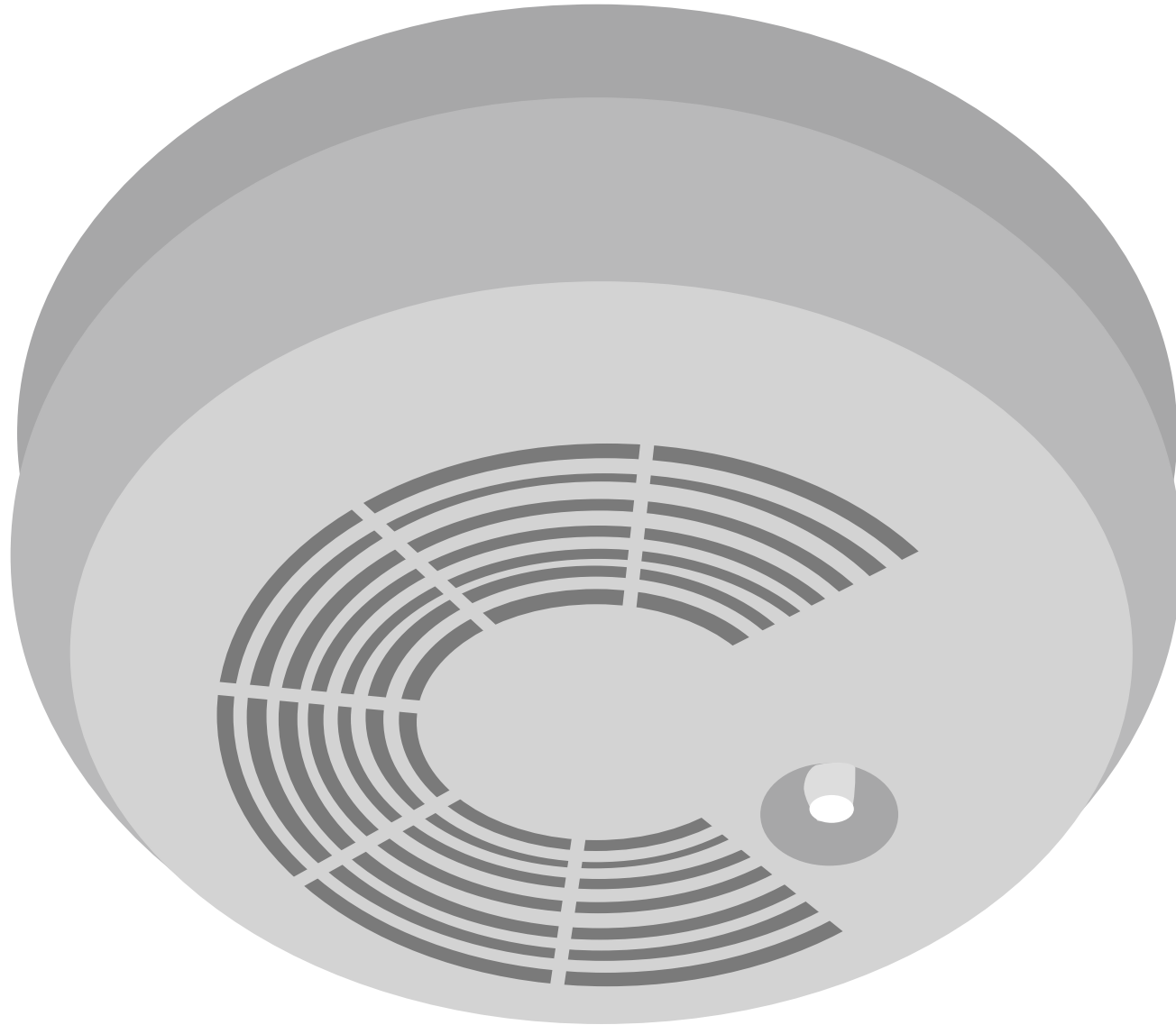
■ Safety and protection of others is a cultural value.

- By planning ahead, we can make sure our loved ones are safe from home fires.

■ How do we prevent injuries from fire?

- The six main ways to prevent fires include:
 - **Have a working smoke alarm**
 - **Create and practice a fire escape plan**
 - Practice safe cooking behaviors
 - Practice safe heating practices
 - Keep sleeping areas safe
 - Keep matches and lighters away from children

SMOKE ALARMS SAVE LIVES





SMOKE ALARMS SAVE LIVES

🎯 TEACHING POINT

Smoke alarms help keep families safe from smoke and fires.

» GUIDING QUESTIONS

Are there working smoke alarms in the home? If so, what kind of smoke alarms do you have? Do the smoke alarms have batteries?

Review the teaching points with the participant.

■ Smoke alarms will help protect your family and keep them safe.

- Smoke makes it hard to breathe. It can make a person sick, hurt their lungs, or even kill them.
- Smoke alarms make a loud noise when there is smoke in the home.
- For hearing or visually impaired family members, smoke alarms are available that have strobe lights or bed shakers that pair with smoke alarms to receive and transmit alerts.
- A smoke alarm's job is to give people an early warning and wake them up if a fire starts while they are sleeping.
- Smoke alarms should be on every level of your home and outside each sleeping area. Smoke alarms should be inside every bedroom.
- Smoke rises to the ceiling. Put smoke alarms on the ceiling or high on the wall.
 - If there is smoke in the house, drop to the floor and crawl to the nearest exit

■ What to do if a smoke alarm goes off when there is not a fire, like when someone is cooking?

- Press the hush button or fan away the smoke if the alarm goes off while you are cooking.
- Don't take the battery out of the alarm. The alarm will not work if the battery is missing.
- Make sure to fan away the smoke or steam from the alarm. Consider opening windows or doors for a few moments to let the space air out.

■ Make sure your smoke alarms work.

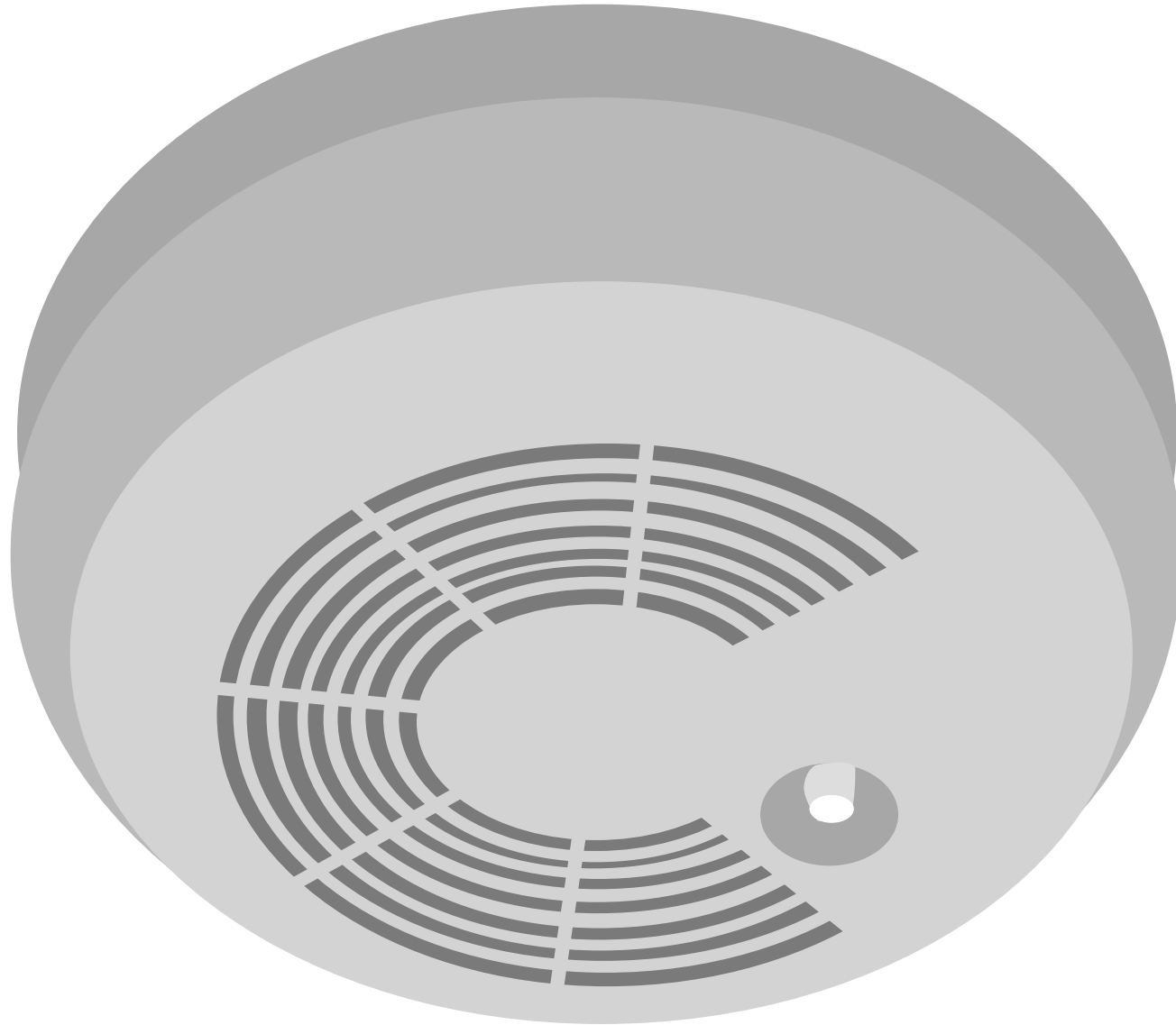
- A family is not safe if their smoke alarms aren't working.
- Make sure the smoke alarm always has a working battery.
- Some smoke alarms have batteries that last up to 10 years. 10-year lithium batteries are a new technology that makes it easier to keep your smoke alarms working for longer.
- Alarms with 9-volt batteries need a new battery every 6 months.
- A good way to remember to replace the battery is to change it on holidays such as New Year's Day and Memorial Day.
- Smoke alarms do not last forever. Get new smoke alarms every 10 years.

■ Activity 1: Installing and Testing Smoke Alarms

- ☑ *Note: Install smoke alarm but inform participant of the process while doing this. Make sure to ask if the participant has any questions.*

- To check if the smoke alarms are working properly, press and hold the test button on the smoke detector. It can take a few seconds to begin, but a loud sound should come from the device while the button is pressed. If the sound is weak or nonexistent, the smoke detector is not working properly.

SMOKE ALARMS SAVE LIVES CONTINUED...





SMOKE ALARMS SAVE LIVES CONTINUED...

🎯 TEACHING POINT

Smoke alarms help keep families safe from smoke and fires.

» GUIDING QUESTIONS

Do you know what carbon monoxide is?

Review the teaching points with the participant.

■ Carbon monoxide poisoning is preventable.

- CO is a colorless and odorless gas that can kill a person who breathes in a lot of it. It comes from the fumes produced by burning fuel from stoves, grills, furnaces, water heaters/boilers, generators, dryers, space heaters, power tools, and vehicles.
- The most common symptoms of CO poisoning are headache, dizziness, weakness, upset stomach, vomiting, chest pain, and confusion. CO poisoning symptoms are often described as “flu-like.”
- The cost of CO detectors can range from \$8 to \$20. Combination smoke alarm and CO detectors are an option, too.

■ There are many benefits of having a carbon monoxide (CO) detector in your home.

- Early warning of gas leaks, alarm will sound before anyone is sick with symptoms listed above, and peace of mind that your home is safe are a few benefits.

☑ *Note: Leave Smoke Alarm Installation & Testing Guide with participant.*

FIRE ESCAPE PLANNING





FIRE ESCAPE PLANNING

🕒 TEACHING POINTS

Thinking through a fire escape plan helps families know what to do and where to go if there is a fire.

» GUIDING QUESTIONS

Do you have a fire escape plan?

Review the teaching points with the participant.

■ A fire escape plan helps you and your family get to safety if a fire occurs inside the home.

- If a fire starts, you have **two minutes** to get to safety.
- Call 911 or local emergency numbers **after** everyone is outside.
 - How will you describe where you live to emergency services?
- Sometimes it will take them a long time to get to your home. Local authorities may tell you to evacuate. Follow their guidance once outside of the home.

☑ *Note: Remind participant to contact local emergency services with questions about fire safety and fire escape planning methods.*

☑ *Note: For the Fire Escape Planning activity, walk around the home while asking the questions. Let the participant know you will leave resources for them to review and fill out.*

■ Activity 2: Fire Escape Planning

- Everyone in your household should know of two ways to escape from each room of the house.
- Let's take this room by room:
 - How do we get out of the living room? Kitchen? Bedrooms?
 - Are there two ways out of each room?
- Identify specific safety roles for adults.
 - Who is in charge of getting children or elders to safety?

- Are there any special considerations you need to make for getting family members to safety? (I.e.: limited mobility, impaired vision, etc.)
- Choose a safe place to meet outside.
 - A safe place to meet is 300 feet away from the home
 - Is there a tree or road that makes sense to meet at?
- Inform others in your home of your fire escape plan, including elders, children, and overnight guests.
- Review fire escape plan when changing smoke alarm batteries (New Year's Day, Memorial Day).

☑ *Note: Leave the Red Cross Home Fire Escape Plan and Red Cross Home Fire Safety Checklist as additional safety resources for the home.*

☑ *Note: If time allows, draw out the fire escape plan with participant. Go through a fake scenario to ensure that participants have a plan that will work during a fire emergency.*

☑ *Note: At the end of the activity, put the fire escape plan on the refrigerator or other commonly visible area.*

Home Fire Escape Plan



Use the graph to draw your home's floor plan and plot your home fire escape routes.

Tips for creating your home fire escape plan and practicing your 2-minute drill:

- Everyone in your household should know *two* ways to escape from each room in your home.
- Smoke is dangerous. Get low and go!
- Decide where to meet once you get outside:

- Get out and stay out. Never go back inside for people, pets or things.
- If a fire starts, you may have less than **two minutes** to get to safety. So time your fire drills and find out: what's your escape time?



If a fire starts in your home, get out to safety, then dial 911.

You can keep your family safe with 2 simple steps.



Practice your 2-minute drill.



Test your smoke alarms monthly.



FEMA



MAKE SAFE HAPPEN®

Plan para desalojar de la casa en caso de incendio

Utilice la gráfica para dibujar el plano de su casa y trazar las rutas de escape en caso de incendio domiciliario.

Consejos para crear su plan de escape ante incendios y de como practicarlo para salir en menos de dos minutos:

- Cada persona en su hogar debe aprender *dos* vías diferentes de escape desde cada habitación.
- El humo es peligroso. ¡Arrástrense todos por el piso, y escapen por debajo del humo!
- Decida dónde encontrarse con los demás una vez que todos estén afuera:

- Salgan de casa y permanezcan afuera. Nunca regresen en busca de personas, mascotas u objetos.
- Si se inicia un incendio, es posible que sólo cuentes con menos de **dos minutos** para llegar a un lugar seguro. Así que tome el tiempo que tarde en evacuar durante los simulacros de incendio e investigue: ¿cuánto tiempo tarda en salir de su casa?



Si se inicia un incendio en su casa, salga inmediatamente del lugar por su seguridad y llame al 911.

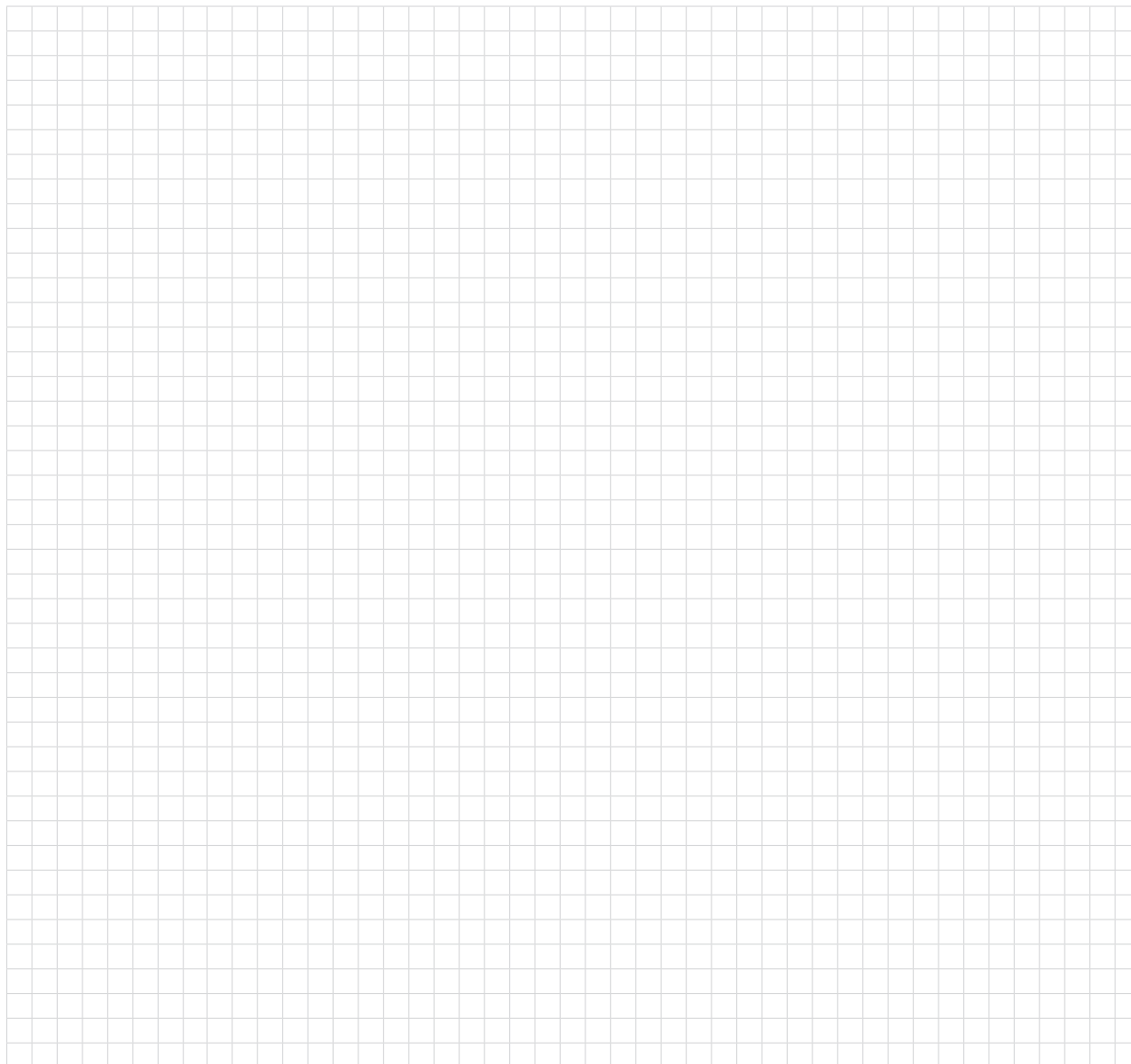
Tome acciones preventivas que bien podrían salvar sus vidas. Algo tan sencillo como seguir estos dos pasos.



Practique su plan de escape hasta que todos en casa puedan salir en menos de dos minutos.



Pruebe sus alarmas de humo mensualmente.



Home Fire Safety Checklist



Cooking Safety

- ☐ "Keep an eye on what you fry." Stay in the kitchen when frying, grilling or using an open flame.



Fireplaces, Space Heaters, Baseboards, etc.

- ☐ "3 feet from the heat." Furniture, curtains, dish towels and anything that could catch fire are at least 3 feet from any type of heat source.



Smoking Safety

- ☐ Never smoke in bed.



Electrical and Appliance Safety

- ☐ Large and small appliances are plugged directly into wall outlets.



Children Playing

- ☐ Matches and lighters are locked away.



Smoke Alarms

- ☐ Make sure you have working smoke alarms. Different types of smoke alarms, ionization and photoelectric, detect fire in different ways. Experts recommend having both types in your home.
- ☐ Change smoke alarm batteries every year unless it has a long-life battery.
- ☐ Replace smoke alarms every ten years.
- ☐ A combination of working smoke alarms and fire sprinklers decreases the risk of dying in a home fire.

Home Fire Escape Plan

At least twice a year, use your home fire escape plan to practice your 2-minute drill with all your family members. Practice makes perfect! After each fire drill, mark down your escape time.

Practice your 2-minute drill.

Make sure everyone can escape in 2 minutes or less.

Drill 1

Drill 2



Lista para verificar la seguridad durante un incendio domestico



Medidas de seguridad en la cocina

- ☐ Esté atento a la hora de freír. Permanezca en la cocina cuando frite, use la parrilla o esponga algo a fuego directo.



Chimeneas, calefactores, zócalos radiantes, etc.

- ☐ A 1 metro del fuego. Los muebles, las cortinas, las toallas de cocina y cualquier otro objeto que pueda incendiarse debe estar a por lo menos 1 metro de distancia de cualquier fuente de calor.



Medidas de seguridad para fumadores

- ☐ Nunca fume en la cama.



Medidas de seguridad respecto a electrodomésticos

- ☐ Los electrodomésticos, tanto grandes como pequeños, se deben enchufar directamente a las tomas de corriente.



Niños jugando

- ☐ Los fósforos y los encendedores deben guardarse bajo llave.



Detectores de humo

- ☐ Asegúrese de tener en casa alarmas/detectores de humo funcionales. Hay diferentes tipos de alarmas contra incendios, las de ionización y fotoeléctricos detectan fuego de diferentes maneras. Expertos recomiendan tener ambos tipos de alarmas contra incendios en casa.
- ☐ Cambie las baterías del detector de humo una vez al año, a menos que tenga baterías de larga vida.
- ☐ Reemplace los detectores de humo cada diez años.
- ☐ Una combinación de alarmas de humo y rociadores contra incendio en funcionamiento disminuye el riesgo de morir en un incendio doméstico.

Plan para desalojar de la casa en caso de incendio

Por lo menos dos veces al año, practique su plan de evacuación para incendios con todos los miembros de su familia. ¡La práctica hace al maestro! Después de cada simulacro de incendio, indique el tiempo que tardaron en evacuar.

Practique su plan de escape hasta que todas en casa puedan salir en menos de dos minutos.

Asegúrese de que todos puedan evacuar en 2 minutos como máximo.

Simulacro 1

Simulacro 2



Types of Fires

Extinguish Fires Based on Their Type

Class A (plastic, paper, wood, and fabric)

Extinguish with water.

Class B (alcohol, oils, solvents, kerosene)

Extinguish by cutting power, use fire extinguisher.

Class C (electrical components)

Extinguish by cutting power, use fire extinguisher.

Class K (cooking fires)

Extinguish by covering with lid, throwing baking soda or salt on it, smother with wet towel, use fire extinguisher.



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

Johns Hopkins Center for
Injury Research and Policy



JOHNS HOPKINS
CENTER FOR AMERICAN
INDIAN HEALTH

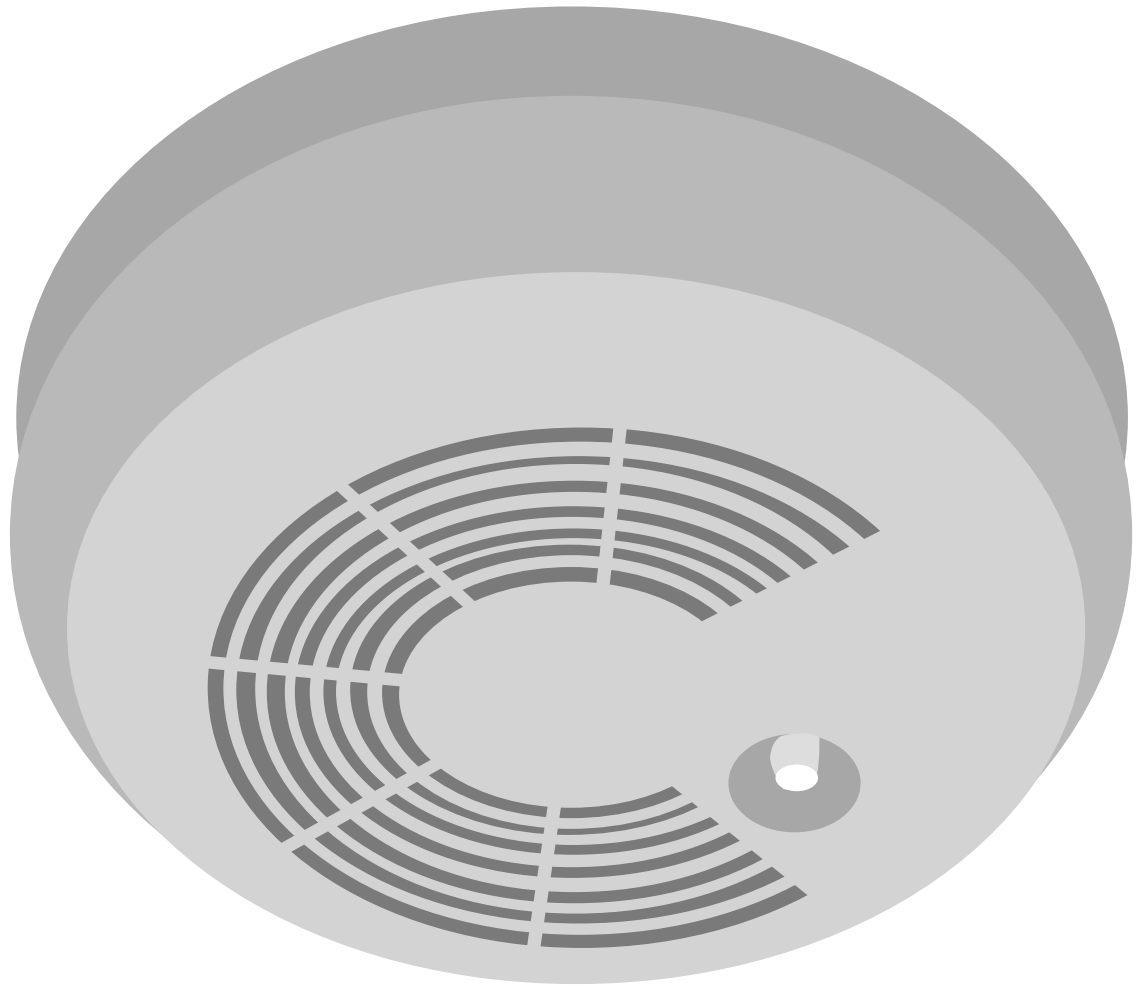
© JHU CAIH
2021-2022

Smoke Alarm Testing

Testing Smoke Alarms

Testing smoke alarms let you know that they are working!

- Smoke alarms should be maintained according to manufacturer's instructions. Never paint smoke alarms. Test smoke alarms at least once a month using the test button.
- Make sure everyone in the home understands the sound of the smoke alarm and knows how to respond.
- Follow manufacturer's instructions for cleaning to keep smoke alarms working well. The instructions are included in the package or can be found on the Internet.
- **Smoke alarms with non-replaceable 10-year batteries are designed to remain effective for up to 10 years.** If the alarm chirps, this is a 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 manufacturer's list of batteries on the back of the alarm or manufacturer's instructions. Manufacturer's instructions are specific to the batteries (brand and model) that must be used. The smoke alarm may not work properly if a different kind of battery is used.



Smoke Alarm Main Messages

Installing Smoke Alarms

Every home needs a working smoke alarm.

- Having at least one working smoke alarm can cut your risk of dying in a home fire in half!
- You should have at least one working smoke alarm on every level of your home - even the basement.
- You will need more smoke alarms where people sleep. Put smoke alarms inside and outside all places where people sleep.
- Remember, smoke rises. Place smoke alarms on the ceiling or high on a wall, away from outside windows and doors.

Replacing Smoke Alarms

Replace smoke alarms every 10 years.

- Before you install the alarms, write the date inside the cover as a reminder of how old it is and when you should replace it.
- After you install a smoke alarm, make sure it's working by pushing the test button. If it beeps, you're good to go!
- Do not install smoke alarms too close to your kitchen, bathroom, or wood burning stove. The cooking smoke and steam can make the alarm start beeping when there isn't an emergency.
- When replacing a battery, follow manufacturer's list of batteries on the back of the alarm or manufacturer's instructions. Manufacturer's instructions are specific to the batteries (brand and model) that must be used. The smoke alarm may not work properly if a different kind of battery is used.



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

**Johns Hopkins Center for
Injury Research and Policy**

Congratulations!

You have made your family safer by participating in the Smoke Alarm Program.



Key Messages



Fire and Carbon Monoxide can be deadly.



Smoke Alarms have been installed in your home.



Your smoke alarm batteries last 10 years.

Do not change them!



Do not take down the smoke alarms.



Safety Steps

Talk to your family about the dangers of fire and carbon monoxide. If there are questions you can't answer, reach out to the person who installed your smoke alarms.

Have a family meeting:

- Tell everyone about the dangers of fire and carbon monoxide.
- Make sure everyone in the home knows not to change these smoke alarm batteries.
- Show everyone how to use the hush button on the smoke alarm.
- Create and practice a fire escape plan.

For tips on this process, read the information on the next page.



Questions?

Savannah Burke, email: sburke27@jhu.edu. Phone: 505-368-4234

Kim Yazzie, email: kyazzie1@jhu.edu. Phone: 505-368-4054



JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

**Johns Hopkins Center for
Injury Research and Policy**

Fire Prevention

- **Home fires are a serious problem.**
 - Home fires are a preventable cause of injury or death.
 - Most fire-related deaths happen during sleep, between midnight and 6am.
 - Fires are fast. Families may only have up to two minutes to get to a safe place outside.
- **How do we prevent injuries from fire?**
 - Have a working smoke alarm
 - Create and practice a fire escape plan

Smoke Alarms

- **Smoke alarms will help protect your family and keep them safe.**
 - Smoke makes it hard to breathe.
 - Smoke alarms make a loud noise when there is smoke in the home.
 - A smoke alarm's job is to give people an early warning and wake them up if a fire starts while they are sleeping.
 - Every home should have at least one working smoke alarm on each level of the home.
 - Smoke rises to the ceiling. Put smoke alarms on the ceiling or high on the wall.
- **What to do if a smoke alarm goes off when there is not a fire, like when someone is cooking?**
 - Don't take the battery out of the alarm. The alarm will not work if the battery is missing.
 - Press the hush button or fan away the smoke if the alarm goes off while you are cooking or showering.
 - Make sure to fan away the smoke or steam from the alarm. Consider opening windows or doors for a few moments to let the room air out.
- **Make sure your smoke alarms work.**
 - You are not safe if the smoke alarms aren't working.
 - Make sure the smoke alarm always has a working battery.
 - These smoke alarms have batteries that last up to 10 years. 10-year lithium batteries are a new technology that makes it easier to keep your smoke alarms working for longer.
 - Smoke alarms do not last forever. Get new smoke alarms every 10 years.

Fire Escape Planning

- **A fire escape plan helps you and your family get to safety in the event that a fire occurs inside the home.**
 - If a fire starts, you have **two minutes** to get to safety.
 - Call 911 or tribal emergency numbers **after** everyone is outside.
 - Think about how you describe where you live so emergency services can find you.
 - Sometimes it will take them a long time to get to your home. Local authorities may tell you to evacuate. Follow their guidance once outside of the home.
 - Everyone in your household should know of two ways to escape from each room of the house.
 - Think about escaping room by room.
 - Identify specific safety roles for adults.
 - Choose a safe place to meet outside.
 - Inform others in your home of your fire escape plan, including elders, children, and overnight guests.

