

Fire Safety: How to Teach an Essential Life Skill

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Summary

Preventable injuries are the leading cause of death for all children and teens, and those with intellectual disabilities are at higher for such injuries, including fire and burns. Teens are an especially important group to reach with effective fire safety skills, because they are approaching an age when many will move into more independent living situations—where their risk increases. This article includes six modules for lessons and classroom activities, discussion prompts and take-home materials that cover the key skills of kitchen safety, smoke alarms and exit plans, and calling 911.

Effective fire prevention and survival skills—life skills that can protect young lives now and also in their future lives—require more than school fire drills, a session of stop, drop and roll, or a mention of pot holders during a cooking lesson. To paraphrase the old observation about communication, **the greatest problem with safety training is the illusion that it has been accomplished.**

Fortunately, effective and practical skills are also very achievable, and can be incorporated into current life skills education.

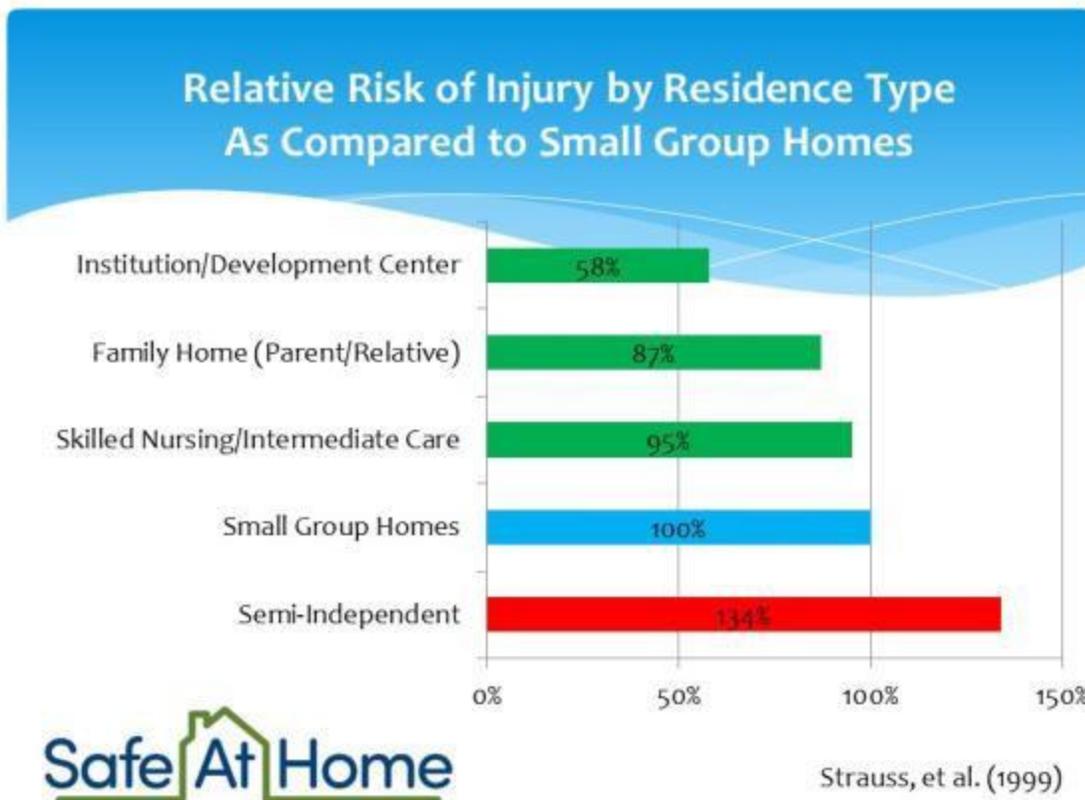
The Risks of Greater Independence

For *all* children and teenagers, unintentional injuries are the number one cause of deathⁱ. Fire is in the top five causes of fatal home injuries for ages 1 to 15, as well as causing thousands of serious burn injuries, destroying homes and displacing countless families.

For people with intellectual disabilities, the risk is even greater. A large, detailed study covering people in California with intellectual disabilities ages 15 – 59 found that people with intellectual disabilities were *four times more likely to die in a fire*, six times more likely to die from a fall and six times more likely to die from drowning than all people in California of the same gender and ageⁱⁱ. The belief that individuals are safer when they are at home is misplaced; 75% of injuries to this population occurred at home, compared to only 33% for the general populationⁱⁱⁱ.

Teens are an especially important group to reach with effective fire safety skills, because they are approaching an age when many will move into more independent living situations. In the trend toward greater self-direction, many of today's teens will choose to live independently or semi-independently, with less intensive supervision and supports. While this choice is a great one for most, it also places them at higher risk for injuries.

In the large California study, the risk of injury for people with intellectual disabilities living in institutional settings was only 58% of the risk for those living in small group homes, while the risk of injury for those in semi-independent living was 34% *greater*. This was true even though individuals moving into semi-independent are typically those with the highest level of function.^{iv}



A number of studies in which people with intellectual disabilities were carefully interviewed and followed over time provide insights into the factors that put them at risk for injuries. These include environmental risks such as the use of candles and space heaters, skill and cognitive deficits, and physical and biological factors.

But another critical risk factor may be the attitudes of the people around them. A study of more than 500 adults with intellectual disabilities living in the community identified the caregiver’s or supervisor’s belief that unintentional injuries are random and unpredictable events as a *primary* risk factor for injuries^v. This belief can undermine motivation to address well-identified, and correctable, injury risk factors.

People with intellectual disabilities are themselves very concerned about home safety, especially fires. A study funded by the New York State Developmental Disabilities Planning Council and conducted by the Strong Center for Developmental Disabilities at the University of Rochester carried out focus groups across five upstate New York counties and New York City.

When asked about their “biggest worry” and what supports were needed, covering basic needs and skill development were among the most commonly mentioned, especially, “learning how to keep safe!”

At a conference for parents of, and agencies working with, people with intellectual disabilities convened by Prevention 1st, a non-profit injury prevention agency, the 100 attendees were asked to rank the importance of 10 common safety concerns and to add others. From the final list of 28 topics, *fire safety was ranked the number one concern* and kitchen/cooking safety was ranked number two.

Lesson Plans That Teach Effective Fire Safety Skills

Fires and the injuries they cause are not unpredictable, and they can be prevented. Very rarely is a fire in the home caused by a random event such as lightning hitting a house, or a gas main exploding. Most often the cause was human behavior.

Perhaps someone left a pan unattended on the stove. Cooking is the leading cause of all home fires (45%) and home fire injuries (42%). Sometimes smoking materials weren’t extinguished properly. Smoking is the leading cause of all home fire deaths (23%). Maybe a space heater was left too close to the drapes. Heating is the second leading cause of home fires, injuries and deaths^{vi}.

Human behavior can also increase risk by ignoring obvious, but important safety precautions, such as having smoke alarms with dead or no batteries, or having no exit plan from the home.

All of these behaviors can be changed. Teens can learn to recognize home hazards, respond appropriately to smoke alarms, and use fire prevention and fire survival (escape) skills.

The following is adapted from the ***Safe at Home: Safety Training for People with Intellectual Disabilities***[™] curriculum developed by Community Health Strategies for Prevention 1st. The six modules include lessons and classroom activities for key topics, as well as ideas for homework and for a final student presentation. Each module takes 30-45 minutes. Repetition and overlap are incorporated across the modules to reinforce learning and retention over time. Links are included to additional online resources for Smartboard use, and for take-home materials.

Students will learn to:

- Have working smoke alarms, and test them regularly. Properly maintained smoke alarms are always ready to warn us if there is a fire, even when we're sleeping.
- Make an exit plan for what to do if the smoke alarm tells us to get out, and to respond immediately.
- Know the meeting place outside, so when we are out of the home we know we are all safe.
- Practice the plan at home, so we are ready if there is a fire.
- Call 911 to get help, especially what we need to tell the 911 operator.
- Students will also learn what we can do to prevent a fire at home. This will include important cooking skills because the kitchen is where most home fires start.

Module 1: Why We Learn About Fire Safety

Classroom Discussion

Discussion prompts:

Have you had a fire in your home? Do you know someone who did? How did it start? Was anyone hurt?

The conclusion of this discussion is that fires do happen at home and we need to be prepared.

Classroom Activity	Homework
Find the smoke alarm in the room.	<ul style="list-style-type: none">• Count the number of working smoke alarms in your home.• Test them. How many are working?• For a more advanced assignment have students note the location of each alarm.

Module 2: Smoke and CO Alarms

Classroom Discussion

First, follow the lead of the students, addressing students' questions and concerns from the previous module and homework.

Discussion prompt:

What is the most important fire safety equipment you have in your home?

The answer is a working smoke alarm. Having even one working smoke alarm doubles the chances of surviving a fire^{vi}. But it's best to have one on every floor of our home and outside of the rooms where we sleep.

Discussion prompt:

When the smoke alarm sounds, what is it telling you to do?

Smoke alarms tell us to get up and leave quickly, following the exit plan we made and practiced with our family.

Additional key points:

- Often we only have minutes to escape – especially if we are awakened by a smoke alarm in the middle of the night.
- We won't know how big the fire is, so the best thing to do is leave immediately.
- We need to be ready if the smoke alarm tells us to leave. We need to work with our family to think about the best way out of the home, and other ways out if the best way is blocked.
- We need to decide where to meet once we're all out. This is important so everyone knows everyone else is safe.
- When the smoke alarm tells us to leave, we need to move quickly but follow the exit plan the family has developed and hopefully practiced. Everyone should meet at the meeting place outside.
- Never go back inside. Tell firefighters if anyone is still inside.

Discussion prompt:

What other alarm should you have in your home?

Carbon monoxide alarms are just as important as smoke alarms. Carbon monoxide is a gas we cannot see or smell but can make us very sick. Sometimes it gets into our homes because of a bad furnace or a blocked chimney. How do we know it's there? We have another type of alarm: a CO alarm. A carbon monoxide alarm is constantly sniffing the air and if it finds carbon monoxide, it warns us just like a smoke alarm warns us of fire.

Discussion prompt:

What do we do when we hear the sound of a CO alarm?

The same thing we do when we hear a smoke alarm. We leave right away, following our exit plan. We meet at our meeting place and call 911.

Classroom Activities	Homework	Parent Handouts
<ul style="list-style-type: none"> • Demonstrate a smoke alarm. • Demonstrate a carbon monoxide (CO) alarm. 	Count the ways out of your home. What are they?	NFPA " Smoke Alarm Safety Tips " and " Carbon Monoxide Alarms "

Module 3: Exit Plans and Meeting Places

Classroom Discussion

First, follow the lead of the students, addressing students' questions and concerns from the previous module and homework.

Discussion prompt:

What are exits? What are all the different kinds of exits?

There are interior doors, exterior doors, front doors, side doors, back doors. There are windows to escape (if on the first floor), and windows to call from to get help and tell firefighters where you are if you can't get out.

Discussion prompt:

What is an exit plan?

It is important to think about how we would get out of our room at school, or out of our homes, when the smoke alarm tells us to leave.

Key points:

- We need to think about all the exits, because the front door might be blocked by fire or smoke.
- We need to know our meeting place, which should be outside.
- When exiting, check the door before opening it by touching it with the *back* of your hand.
- If there is smoke, “get low and go” to the exit.
- We need to practice our fire drill twice a year (The Daylight Saving Time change can be a good reminder). We need to practice to be sure we remember what to do if the smoke alarm tells us to leave, especially if that happens at night when we’re asleep.

Discussion prompt:

How quickly should you leave your home when the smoke alarm sounds?

Reinforce the lesson from Module 2—the answer is always right away! In many instances we only have minutes to escape. If we are awakened by a smoke alarm, we won’t know how far the fire has progressed and the best action is to leave immediately.

Classroom Activities	Homework	Parent Handout
<ul style="list-style-type: none">• Pick the closest exit. Have two staff hold exit signs: one at the closest exit, and one at a more distant exit. Ask the students to pick which exit to take when they hear an alarm.• <u>Smartboard Activity:</u> Use the online game Help Mikey Make It Out at homefiredrill.org.	Know your family’s meeting place.	Escape Planning (free download from NFPA)

Module 4: Calling 911

Classroom Discussion

First, follow the lead of the students, addressing students’ questions and concerns from the previous module and homework.

Discussion prompt:

What is an emergency? What do we do?

If there is a fire in your home, it is very important to get out quickly. Follow your exit plan, go to your meeting place, and THEN call 911 from a cell phone or from a neighbor’s home.

Discussion prompt:

What do you need to say when you call 911?

The 911 operator will need to know:

- your name
- address
- nearest cross street
- your phone number (not all cell phones will display)
- what kind of emergency

Additional key point:

- After talking to the 911 operator, stay on the phone. Don’t hang up. If your directions are not clear or perhaps incorrect, the 911 operator can still find you if you stay on the line, and can ask for more information if needed.

Classroom Activities	Homework	Parent Handouts
Calling 911. Role play with telephone and prompts written out on cards: What is your name? What is your address? What is your cross street? What is your phone number? What is the emergency?	“Calling 911: What You Need to Tell the 911 Operator” (free download from Prevention 1st Safety Resources)	“Calling 911: What You Need to Tell the 911 Operator” (free download from Prevention 1st Safety Resources)

Module 5 – Kitchen Safety

Classroom Discussion

First, follow the lead of the students, addressing students’ questions and concerns from the previous module and homework.

Discussion prompt:

Where do most home fires start?

More fires start in the kitchen than in any other room. In the kitchen we use heat to cook our food. We use very high heat, which can burn us or start a fire, so we need to be very careful.

Additional key points:

- The oven is relatively safe since it is closed when we cook. But we must know how long to cook the food and then set a timer to remind us. If a fire does start because something spills, turn off the oven and leave the oven door closed.
- More dangerous is the cooktop, especially if we are frying. Cooktops get very hot, cook food fast, and are open. If something spills, it can catch fire. If we cook on too high a heat, or for too long, food can catch fire. If papers (like recipes), clothing (loose sleeves), or oven mitts get too close to the burner they too can burn. So we must make sure we:
 - Keep anything that can burn away from the cooktop
 - Wear tight or short sleeves.
 - Clean off grease (which can catch fire).
 - Don’t leave the kitchen when cooking with the cooktop.
- Microwaves can also start fires. The most important thing is to read the directions on anything we cook in the microwave and be sure to set the correct time. Nothing with any kind of metal should go into the microwave, including foil dishes or covers. Finally, be very careful when taking hot food out of the microwave and taking off the cover or wrapping on anything we cooked. Steam can cause serious burns.

Classroom Activities	Homework	Parent Handouts
Choosing microwave-safe items. Ask students to reach in a bag/box holding various kitchen items (mug, ceramic bowl, plastic bowl, bowl with foil, a metal item), select one item and without looking at it, tell if it could be used in a microwave.	Look for fire hazards in the kitchen. These might be metal in the microwave, plastic spoon on a toaster, wooden spoon or towel next to a burner, or pot handle sticking out.	Be Fire Safe in the Kitchen , Kids in the Kitchen , and Cooking Matters: Modeling Kitchen Fire Safety (free downloads from Prevention 1st Safety Resources)

Module 6: Student Presentation Activity

Classroom Discussion

First, follow the lead of the students, addressing students' questions and concerns from the previous module and homework. Review what we learned, and revisit previous discussion questions to evaluate what has been retained. Review key points that have been forgotten or misunderstood. Discuss the final project.

Activity:

Working individually or in small groups, students can create either:

- Poster illustrating one key lesson from one module. The posters can be on display to serve as reminders and/or photographed and put in a fire safety book, perhaps with teacher commentary.
- Skit, i.e. brief role plays of key behavior. Popular skits include: exiting when the alarm sounds; calling 911; what's microwave safe.

A Life Skill That Saves Lives

Fire prevention and fire survival are essential life skills that can and should be part of every young person's education. As they leave the secure environment of their school, greater independence will bring greater risk of injury. But with effective training, they will also leave with the skills they need to protect themselves for a lifetime.

Additional Resources

[play safe! be safe!®](#), a fire safety program developed by BIC Corporation for use with young children, is adaptable for middle and high school students, as was done recently at the Cooke Center for Learning and Development as part of health and safety life skills instruction. The Cooke Center provides special education services for students ages 5 through 21 with mild-to-moderate cognitive or developmental disabilities and severe language-based learning disabilities. Virginia Skar, CCC-SLP, Chair of Adaptive Services, adapted the program to be age-appropriate for their 14- to 18-year-old students by modifying some materials, such as replacing images of children with cutouts of adults. She praised the program for its appropriate learning objectives, interactive and sensory-rich materials, and approach of breaking down techniques into manageable steps.

Smoke Alarms and Noise Sensitivity

For students with special sensitivity to noise, smoke alarms and school fire alarms can be disruptive. This has sometimes discouraged teachers and caregivers from teaching the important skills of recognizing and responding to the alarm. Prevention 1st trainers working regularly with children and young adults with intellectual disabilities have in many cases successfully taught this skill as shown in this email from a participant's parent:

Right after [the trainers] left, Mike and I asked Stephen to test the detectors and he said no. We left, saying it was okay to wait. Not even a minute later, Stephen got out his headphones and started dragging a chair into the hallway. Mike asked what he was doing and he said, “A chair to stand on in the hall.” We deduced he planned on testing the detectors, which he did! He also tested them downstairs. He did very well with the noise, not as scary as he was anticipating. He was very pleased with himself. He works hard to overcome his fears. Thank you both very much for your time and effort! I can see him stretching his boundaries. Stephen read and approved this email.

References

ⁱ CDC data 2015

ⁱⁱ Strauss, D., Shavelle, R., Anderson, T., Baumeister, A. External Causes of Death among Persons with Developmental Disability: The Effect of Residential Placement. *American Journal of Epidemiology*, 1998, 147:855-62.

ⁱⁱⁱ Sherrard, J., Ozanne-Smith, J., Staines, C. (2004). Prevention of unintentional injury to people with intellectual disability: a review of the evidence. *Journal of Intellectual Disability Research*, 48(7), 639-645.

^{iv} Strauss 1998. To simplify the comparisons, community care, “small group homes and larger board and care facilities serving seven or more people,” were used as the standard.

^v Finlayson, J., Morrison, J., Jackson, A., Mantry, D., Cooper, S. (2010) Injuries, falls and accidents among adults with intellectual disability. Prospective cohort study. *Journal of Intellectual Disability Research*. 54(11), 966-980.

^{vi} National Fire Protection Association data.

^{vii} *Smoke Alarms in U.S. Home Fires*, March 2014 NFPA Fire Analysis and Research, Quincy, MA.

About the Authors

Molly Clifford is Executive Director of Community Health Strategies, a company providing research-based programs and training to reduce the incidences of unintentional injuries. She previously served as Director of Fire Administration for the Rochester, N.Y. Fire Department (RFD) and as the City of Rochester representative on the City-County Council for People with Disabilities.

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