

Know How to Get Out -- Fast

Why is it so important to plan, and practice, several fire escape routes from your home? In a real fire, it's vital to start moving the moment the smoke detector goes off and there may be no time to hesitate or find an alternate route if your most obvious escape path is blocked. How much time do you have? It varies, but the following story illustrates just how quickly the situation can become deadly.

Six-year-old Zack comes home from school. His mother, Marge, greets him in the kitchen with a peanut butter and jelly sandwich and a glass of milk—his favorite snack. As Zack tells his mother about his day, she puts a pot roast into the oven to slow cook for dinner. Then Marge goes upstairs to sort clothes. Zack heads to the living room where the family dog usually naps. In the living room he finds a book of matches has been left out on the coffee table.

Remembering how his mother lit a candle at dinner the night before, Zack picks up the matches. He ignites one and watches it burn for a few moments before shaking it out. Pleased with his mastery, Zack lights a second match. Suddenly, it flares up and stings Zack's finger. He shakes his hand. The match drops onto a sofa cushion and a burn spot immediately appears.

(0:00) Scared he will be scolded for the burn mark, Zack quickly leaves the living room, the dog trailing at his heels. Zack is careful to close the pocket doors to the living room to hide the burnt cushion. He and the dog run outside to hide in the backyard.

(0:30) Within 30 seconds: A small, rapidly spreading flame is visible on the cushion.

(1:04) In another 34 seconds: The entire sofa cushion is burning. Smoke is filling the living room.

(1:35) One minute and 35 seconds after the fire ignites: The temperature in the area around the sofa exceeds **190 degrees F**. The **smoke layer descends rapidly** from the living room ceiling.

(1:50) One minute and 50 seconds after ignition: The smoke detector in the downstairs hallway goes off. Hearing the alarm, Marge first thinks: "What's that noise?" Then she realizes the smoke detector has alarmed, but she does not see or smell smoke. She guesses the oven may be smoking a little from burnt food on the oven floor -- it's happened before. She finishes folding Zack's last two tee-shirts before leaving the bedroom.

(2:30) 40 seconds after the smoke detector alarmed: At the top of the stairs, Marge finally smells smoke--a stinging, acrid smoke she knows is not from the oven. She panics. "Where's Zack?" "Where's the dog?" "Where's the fire?" By now the temperature above the sofa is over **400 degrees F**. Marge runs down the stairs and into the front hall, looking wildly in all directions and calling for Zack. ***Panic-stricken, Marge is unable to organize her thoughts.*** She pulls open the pocket doors.

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(2:48) Smoke pours into other rooms in the house.

(3:03) Another 15 seconds pass: The temperature above the living room floor is over **500 degrees F**. **No one can survive in the living room now.** Marge moves down the hallway frantically searching for Zack. **She cannot breathe standing up and can see the floor only when on her knees. She is now completely disoriented.**

(3:20) One minute and 30 seconds since the smoke detector alarmed: **Smoke fills the upstairs hallway from floor to ceiling.** If Marge were still upstairs, escape from the second story would be very difficult.

(3:41) 21 more seconds pass: **A surge of energy called a 'flashover' ignites everything in the living room.** The temperature is now **1400 degrees F**. In the hallway, Marge is fighting for her life.

(3:50) 9 more seconds go by: The front of the house's first floor is **engulfed in flames, blocking the front door.** Marge crawls through the kitchen toward the sound of people screaming outside. She manages to get to the back door and is dragged out of the burning house by neighbors. Marge hysterically screams, "Where's Zack?" Has anyone seen my baby?" "I think he's still in the house!"

Zack, who has been hiding in the backyard all this time, is reunited with his mother.

(4:33) 2 minutes and 43 seconds after the smoke detector alarms: **Flames are visible from the house's exterior. If anyone were still inside, rescue might not be possible.**

The timeline above is based on the speed of an actual fire recorded by the City of Phoenix Fire Service (<http://phoenix.gov/FIRE/firedril.html#FIRE>). The actions and thoughts of Zack and Marge are drawn from hundreds of incidents experienced by Lt. Robert Crandall, formerly a fire investigator with the Rochester Fire Department.

"I've put out this same fire hundreds of times," Lt. Crandall says of this story. "Firefighters practice every day in order to know what to do in an emergency. Families need to practice at least twice a year. When you have a plan and you've practiced it, you don't panic, you just do what you need to do."

Remember:

- *Have a fire escape plan, with two possible exits from every room of your home.*
- *When the smoke detector alarms, get out and stay out.*
- *Have a designated meeting place well away from the building.*

For more information visit our [Newsroom Archive](#) for:

- [Is Your Smoke Detector Working?](#)
- *When the Smoke Detector Activates:* [Get Out! Stay Out!](#)