

# HARD FACTS ABOUT HOW HOMES BURN: HOW TO SAVE YOUR HOUSE AND YOUR LIFE

*These facts about how homes burn in wildfires are based on decades of research by scientists Steve Quarles of the Insurance Institute for Business & Home Safety<sup>(1)</sup> and Jack Cohen of the U.S. Forest Service<sup>(2)</sup>. The advice on staying safe is based on real experience.*

*This sheet deals with only one of two major aspects of preparing for fires. → It's also important to create a fire buffer zone of 30-100 feet around your home, by pruning or thinning trees and bushes, removing dead grass and weeds, raking up debris, and moving all flammable items away from buildings.<sup>(3)</sup>*

## YOUR HOME AND "THE LITTLE THINGS"

- **Homes are much more likely to burn due to small flying embers than by contact with large flames.** Embers may be burning leaves, twigs, pine needles, or shingles from wood shake roofs. If they land on anything flammable, chances are they will start a fire.

- **Pushed by winds, burning embers often get inside attic vents – and ignite homes from the inside.** They may smolder in sawdust, newspapers, or insulation for hours before starting to flame and spread.

- Sometimes those fires aren't visible from outside until several hours after the main fire passes. *If no one is present to put out these fires while they are small, the home will burn down. This is a major reason that so many homes are lost in wildfires.*

→ Cover all vents with metal mesh with openings of 1/8" or less, to keep embers out. This is the single most important, and least expensive, way to save your home from burning due to intruding embers. Vents designed to trap embers are also available.

- **Burning embers can also land on the roof or in gutters.** Gutters and roof valleys full of dead leaves, needles, and twigs are major culprits for carrying fires to flammable sub-roofing materials. → Clean debris from gutters and roof every week during fire season.

- **The roof is the most vulnerable part of your home.** → If your house has a wood shake roof, replace it immediately! If the roof is damaged or has openings embers could enter, repair it and seal all the openings.

- **Embers can also blow onto your deck or porch, or under it.** If embers land on something flammable, they can start a fire. → Keep your deck, and the area under it, free of all flammable materials at all times.

- **The worst hazards are little things that ignite quickly, then catch larger objects on fire** – weeds, leaves, pine needles, wood scraps, jute doormats, wooden planter boxes, lawn chair cushions, etc.

→ **Keep the area within 5 feet of your foundation and walls** free of flammable materials. This is crucial.

→ **Separate wooden fences from your house by wide metal gates:** a burning fence can ignite your house.

- Large tree trunks close to your house are not a fire hazard – think how long it would take a green log to ignite in your fireplace! But the leaves, needles, and twigs that trees drop are a major problem. → **Keep your big trees, but prune branches back from your roof, and clean your roof and gutters frequently.**

## STAYING SAFE IN A FIRE

- **Most of the people who have died in wildfires were trying to evacuate but left too late.**

- **It is safer to stay inside your home during a wildfire than to be caught in your car.** → **Don't try to evacuate if there's any risk of not making it to safety.**

- Even a house with wood siding can provide shelter against heat and flames. How? Because it takes high sustained heat to ignite the wood. The same heat that causes humans second-degree burns in 5 seconds would take 27 minutes to catch a wooden wall on fire.

→ **If you start to evacuate and see that your route is blocked, return home, shut all windows, doors, and vents, and stay inside until the fire passes.** Then check inside and outside your house for small fires.

- **Losing your home can cause major life disruption for a year or more. Don't let it happen to you.**

- **Losing your life or that of a loved one can cause heartache forever. Be prepared – and live!**

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<sup>(1)</sup> See, for instance, <https://www.disastersafety.org/blog/reduce-your-risk-from-wildfire-embers>

<sup>(2)</sup> See <http://firelab.org/profile/cohen-jack>

<sup>(3)</sup> See <http://anrcatalog.ucdavis.edu/pdf/8228.pdf>