

SMOKY FIRES ARE A WASTE

**USE DRY FIREWOOD
AND BURN EFFICIENTLY**



Photo: Gary Elthie

**Tips and Information
to Save Money
and Protect Your
Family's Health**

Reduce Smoke and Generate More Heat

Use Dry Firewood

Fires built with dry firewood use less fuel, generate more heat and release a minimal amount of smoke. Burning wood that contains more than 20% moisture creates excessive smoke and creosote buildup. Burning wet firewood wastes fuel because energy is used to burn off moisture instead of heating your home. The smoke inside and outside the home is a health risk to your family and neighbors.

Burn Efficiently

An efficient fire is built with dry firewood and ample airflow. These factors allow the fire to get hot enough to completely burn the wood and produce heat that can warm your home. If there is insufficient airflow, small unburned particles move up the chimney as wasted fuel and pollution.

Only burn firewood that has
been stored — out of the wet
weather — for more than
6-12 months.



Properly dried
wood has cracks on
the ends and sounds
hollow when knocked
against another piece
of wood.

Protect Your Family's Health

Wood Smoke Impacts

Small particles and pollutants in wood smoke can trigger asthma attacks. Wood smoke can also be linked to heart attacks in people with heart disease.

Even occasional exposure to wood smoke can cause watery eyes, stuffy noses and chest tightness. Everyone may experience symptoms, but children and elders are especially vulnerable.

In addition to the smoke released inside the home, studies show an estimated 70% of smoke from chimneys can re-enter a home or neighborhood dwellings.*

By using dry firewood and operating a wood stove efficiently, you are helping to protect the health of your family and neighbors.



American Indian
and Alaska Native children are
40% more likely to have asthma than non-natives*

http://www.epa.gov/region10/pdf/tribal/airquality/research_and_statistics.pdf

DRY FIREWOOD HAS LESS THAN 20%
MOISTURE CONTENT.

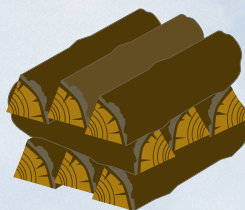
Drying Firewood

4 STEPS



STEP 1

SPLIT



STEP 2

STACK

DRYING BASICS

Split wood dries much faster.

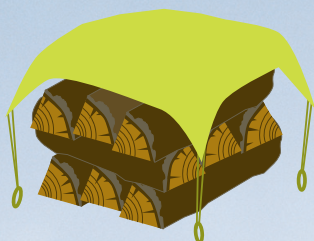
- Split firewood so that it fits in your stove with 3 inches to spare and so that it is no more than 6 inches in diameter.
- Split small pieces for kindling.

Properly stacked wood allows air to circulate around the wood.

- Build the firewood stack away from buildings.
- Keep wood off the ground. Stack it on rails or build a wood shed.
- Stack the wood in alternating directions with the split side down.

Two Dry Firewood Tests

How do you know if firewood is dry? The low-tech way is to knock a few pieces of wood together and listen for a sharp ringing sound. Or, buy an inexpensive moisture meter from the hardware store to get the actual moisture content percentage.



STEP 3
COVER



STEP 4
STORE

Keep rain and snow off by covering the stack correctly.

- Stack wood in a covered structure or use a tarp to cover the top of the woodpile.
- Keep the sides of the pile open so air can circulate.
- Raise the cover slightly off the wood so moisture escapes.
- In dry months, remove the tarp to speed up the drying process.

Wood should dry for 6 to 12 months.

- Be sure to plan ahead. It takes time for wood to dry.
- Softwoods can take almost 6 months and hardwoods take up to 12 months to dry.
- Determine if wood is dry by testing it with a moisture meter (no more than 20% moisture content), or by looking for cracked ends and a sharp ringing sound when knocked together.

Efficient Woodburning

3 STEPS

WOODBURNING BASICS

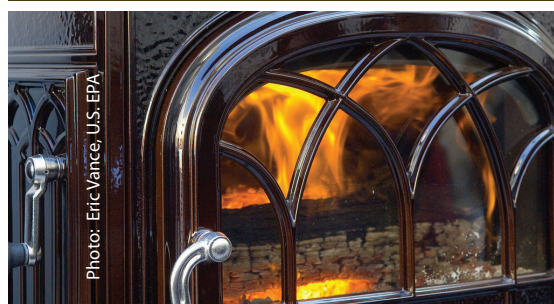
Burning wood efficiently will save work, time and money. But most importantly, it will keep the air in your home and in your neighborhood cleaner. This is an important action that will protect everyone's health, especially elders and children.



STEP 1 START IT HOT

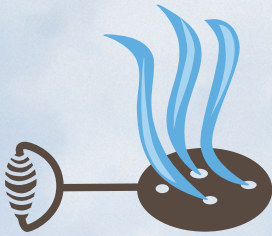
- Start with a small fire. Use dry kindling and a few pieces of wood (no more than 20% moisture content).
- Completely open the damper or air control to give the fire plenty of air. Older stoves may need the door slightly open at startup.
- Get the chimney or flue hot. Add kindling if necessary.
- Gradually add larger pieces of split, dry firewood.
- Close the door to heat the stove and flue (15-30 minutes depending on the stove).

Photo: Eric Vance, U.S. EPA



Take the Chimney Test:

Go outdoors and look at the top of your chimney 15 minutes after starting the fire. If you see smoke, then you need to adjust how you heat with wood. You should only see heat waves and wisps of smoke.



STEP 2

ADJUST AIRFLOW SLOWLY



STEP 3

CREATE DRAFT TO REFUEL

- Once the stove is fully-heated, add dry firewood.
- Keep space between firewood when adding more fuel to the fire.
- Gradually close the air controls because closing down too quickly can smolder the fire.
- A smoldering fire, “dirty” glass doors or smoke from the chimney are all signs that the fire needs more air or that the firewood is too moist.
- When more firewood is needed, fully open the air control to create a draft in the chimney first.
- Open the door slowly to prevent smoke from entering the room.
- Add wood and adjust burn rates by adding or reducing airflow.

Note: Steps are for non-catalytic stoves. See the stove instruction manual (if available) for further details.

Wood Stove Safety and Maintenance

To produce minimal amounts of smoke indoors and out, a wood stove needs to be well maintained.

- ☐ Have stove and chimney inspected and serviced annually. Inspections should check for leaks, creosote and other issues.
- ☐ Start fires with only newspaper and dry kindling.
- ☐ Keep doors closed unless loading or stoking the fire.
- ☐ Regularly remove ashes in a metal container with a cover. Embers can remain hot for days and pose a fire hazard. Store the metal container away from your home, wood structures or flammable materials.
- ☐ Never burn garbage, treated lumber, particle board, railroad ties, painted wood or driftwood. These can damage a stove and create health issues.



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