



Australian Government

Department of the Environment and Water Resources

Hot Tips

For cleaner wood heating

*A guide to using your woodheater
for maximum heat and
minimum pollution*





Woodheaters – the facts are clear

A woodheater can be a convenient, economical and attractive way to warm your home. However, excessive smoke from woodheaters is a major contributor to air pollution in some areas. Smoke can be a nuisance to your neighbours and contains pollutants that are known health hazards.

This brochure shows you simple ways to minimise the smoke produced by your woodheater. With a little planning and consideration, you can operate your woodheater to produce efficient heat with less smoke. This will help to improve the air quality in your community, and will also save on the costs of running your woodheater.



HOT TIP — Help to improve the air quality in your community by operating your woodheater so that it produces efficient heat with less smoke.

Get it right from the start

Starting your woodheater the right way will help you establish a hot, efficient fire with minimal smoke. Just follow these steps:



1 open the air controls fully and leave them open for 20 minutes after lighting the fire to allow good air flow into the heater

2 get the fire hot as quickly as possible by using dry kindling and plenty of paper or fire starters underneath

3 place wood into the heater allowing at least 2cm space around pieces to promote good air circulation.

Keep it burning brightly

To keep your fire burning brightly and reduce smoke emissions, just:

- **wait for the fire to be fully established** before adding extra fuel
- **allow the air to circulate** by ensuring that added pieces of wood are placed with spaces between them
- **open the air controls fully** for a few minutes before adding fuel and, after reloading, wait until the fire is burning fiercely before turning the air controls down
- **don't overload your heater** - instead use several medium-sized pieces of wood to allow for good combustion
- **clean your flue or chimney** at least once a year to remove tar and soot build-up - this will increase the heat of your fire and reduce smoke emissions.





Dark, smouldering fuel and a lot of smoke indicate the fuel is not being fully burnt. Poorly burning fuel leads to excess smoke and inefficient heating. **You can tell that the fire is burning well if the coals are glowing and there are bright swirling flames.**

About 15 minutes after lighting or loading fuel into the fire your chimney should be giving off a heat haze, with no visible smoke. **Go outside occasionally to check the chimney smoke.**



HOT TIP — You can tell that the fire is burning well if the coals are glowing and there are bright swirling flames.

Overnight burning

Leaving your fire to smoulder throughout the night is not recommended, as it will produce a large amount of smoke that will drift through your neighbourhood.

If you must burn overnight, add several medium-sized pieces of wood to a well-established fire. Ensure the air vents are sufficiently open before leaving the fire so that it has a flame all night.



Use the right fuel for the wood heater

Using the right fuel will create a cleaner, hotter and more efficient fire.

- **Always burn dry and well-seasoned wood.** This kind of wood may give a sharp ‘cracking’ sound when pieces are struck together, or will have visible cracks from the centre of the log. If timber is unseasoned it may be cool to the touch or may still have green bark attached. Wood that gives off steam or water when being burnt is not sufficiently dry.

If you have unseasoned wood, split and stack the wood in a criss-cross pattern to allow for maximum air circulation. Don't totally cover the woodpile with plastic as this creates a high humidity environment and will draw moisture out of the soil into the wood.



Friendly fuel

Dead trees and fallen timber can be very important habitats for many kinds of birds, mammals, reptiles and insects.

To ensure your fuel collection is not harming these habitats, obtain your wood from an environmentally sustainable source.

One way you can do this is to buy from a merchant certified under the National Code of Practice for Firewood Merchants. Visit www.environment.gov.au/land/publications/firewood-code

Look for this logo when purchasing wood.



The Firewood Association of Australia (FAA) is a not-for-profit organisation that gives accreditation to firewood suppliers who source their wood in sustainable ways.

An FAA licensed supplier can also advise you if the wood you are buying is dry and ready for burning or needs further seasoning.



HOT TIP – Don't burn rubbish or treated wood – this will create both unpleasant odours and toxic fumes.

Improving your woodheater efficiency

A woodheater can deteriorate over its lifespan, and this can greatly affect its efficiency.



If your heating is more than 10 years old or is giving off excessive smoke you should consider replacing it.

Some states have incentive schemes to encourage householders to upgrade to a newer woodheater or switch to an alternative source of heating. Ask your environment protection agency or local council for more information.

You could also consider improving your home insulation. **If your ceiling is not insulated you can lose a third of your heat through your roof!** Other areas of heat loss are windows and doors. Close doors to rooms you don't need to heat, and use thick curtains with pelmets to trap heat.

Buying and installing a woodheater

Buy a woodheater that produces the right amount of heat for your house. A woodheater that produces more heat than required and is then turned down to a low setting will waste energy and increase heating costs and pollution. It is better to operate a smaller woodheater at its full capacity than a larger one at a lower capacity.



HOT TIP – Check with your local council before having your woodheater installed.

Building codes require approval for the installation of a new or second hand woodheater. Make sure it is installed in accordance with manufacturers' instructions and installation standards AS/NZS 2918.

For more information

www.environment.gov.au/atmosphere/airquality/woodsmoke/

Australian Government Department of the Environment and
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Community Information Unit

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Tips to reduce smoke from your woodheater

- 1** Always use dry, well-seasoned wood in your woodheater
- 2** Get a hot fire going quickly and use plenty of paper and small kindling to start
- 3** Open air controls fully when lighting and loading, and keep air controls open enough to ensure your fire is burning brightly
- 4** Use larger pieces of wood once the fire is well-established
- 5** Check your chimney or flue at least once every evening to make sure your fire is not smoking excessively

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