

Minimizing Harmful Emissions

If you can't switch to non-polluting heating, please operate your heater as carefully as possible

Burn brightly - don't smoulder

Most heaters produce very little smoke on high burn. Check the chimney and see how far you can turn down the air control without producing visible smoke. Never turn the air control below this level. Keep the air control on high when lighting the fire (or getting the embers going again after a long period without fuel) using plenty of paper and small kindling to reach optimum heat as quickly as possible.

Smoke is wasted heat!

A smouldering fire is too cold to burn the wood properly. Instead it smokes and produces pollution.

Keep 'High and Dry for 25'

When reloading, ensure the fire is hot enough to burn it properly. Turn the air control to high, wait 5 minutes, add dry wood, and keep the air control on high for another 20 minutes so that the fire burns correctly.

Burn only dry, seasoned wood

Never burn rubbish, driftwood, painted or treated wood - they can produce poisonous gases. Store wood in a covered, ventilated area - never out in the rain. If you can't buy seasoned wood, remember that freshly cut wood must be stored for 8-12 months before it is dry enough to burn correctly.

Never overload your heater

If you place too much wood in the fire, the air can't circulate and your fire won't burn correctly. Use several small logs rather than one large one and stack them loosely.

A dirty, smoky chimney shows you don't care

Have the chimney cleaned every year to prevent creosote build up. Even in summer, a dirty creosote-stained chimney tells people you didn't care about their health or the environment. Be considerate. Even when lighting or re-loading your chimney should never ever look like the one on the right!



Woodsmoke Reduction

☀ Let's work together to clean our air

Armidale has a woodsmoke pollution problem that is affecting our health. As shown overleaf, woodsmoke increases the risk of heart and lung disease, causes mouth, throat and lung cancer and reduces the ability of our lungs to fight infection. Let's all work together to clean our air.

"If you can see or smell smoke you are causing a problem for yourself, your family & your neighbours."

NSW EPA

☀ Success in Launceston

Launceston had a similar problem, but is getting on top of it. Residents were extremely concerned about the serious health effects. Over 4,000 woodheaters were removed (2,000 with the help of government subsidies). Pollution levels halved. The effort continues, spurred on by warnings e.g. Dr Michael Aizen of the Australian Medical Association: *"at the moment we see between eight and 17 excess deaths a year in Launceston directly attributable to domestic wood smoke heating"* (ABC 7.30 report, 11/4/07). Launceston soon hopes to reduce pollution to a quarter of previous levels.

☀ Our health is important, too

If Launceston can do it, why can't we? Our health is just as important as the health of people in Launceston. We can't keep smoke pollution out of our homes; the particles are so tiny they enter our homes along with the air we need to breathe. We should also consider our economy. People will be discouraged from retiring here once they know our air pollution increases the risk of dying prematurely from heart and lung diseases. It would be better to encourage environmentally-friendly ways of heating homes, such as passive and active solar systems. This will benefit the local economy and create new jobs for Armidale.

☀ Good neighbours don't smoke

... says the American Lung Association. The NSW EPA website states: *"If you can see or smell smoke you are causing a problem for yourself, your family and your neighbours."* All heaters (new or old) can be operated so they produce very little or no visible smoke, except for brief periods when lighting or reloading. Many people operate heaters carelessly, not realising the effect this has on the health and lifestyle of their neighbours. If you can, switch to non-polluting heating, otherwise please study the tips on the back page on how to operate heaters correctly. If you have an old fashioned rain excluder that forces the smoke in a downward direction, consider replacing it with a modern one that is less likely to affect the health of your neighbours.

What We Can DO

☀️ Design new houses so they don't need woodheaters

The WHO's advises: "there is no safe level of fine particle pollution." *The American Lung Association, the Australian Lung Foundation and the UK Environment Dept all recommend not using woodheating* when there are non-polluting alternatives. The *NSW EPA* recommends that people living on steep slopes or in the bottoms of valleys (i.e. most of Armidale) *consider alternatives to woodheating*.

In the long run, because all woodheaters produce hundreds of times more particle pollution than the alternatives, and all pollution is harmful, we should consider switching to non-polluting heating. New passive solar houses can be as cheap to build as conventional houses, but with only a fraction of the heating costs of buying firewood.

☀️ Consider switching to non-polluting heating

Council offers up to \$700 to replace woodheaters with non-polluting heating. Save money and save the environment! Wood is also becoming expensive - much of it comes from native forests. Firewood collection can deprive native species (even endangered ones) of hollow logs for homes. It is cheaper to use a reverse cycle air conditioner to heat an insulated house than buy firewood. Consider using green electricity to help prevent climate change as well as reducing pollution and protecting our health.

☀️ Check your insulation

If your house was built before 1997 (when Council required all new houses to have adequate insulation), it was probably built without adequate insulation. The best way to make an uninsulated house more comfortable, reduce heating bills and greenhouse gas emissions, is to install adequate insulation.

☀️ Don't suffer in silence

When asked, 16% of Armidale residents in houses that did not use woodheaters said they *often* had problems from other people's woodheaters. In total, 46% sometimes or often had problems. Don't suffer in silence. Our council provides subsidies to remove smoky heaters, will visit problem smokers to show them how to minimise harmful woodsmoke and has the power to fine people who continue to operate woodheaters irresponsibly. Nearly all woodheaters can be operated so they produce little or no visible smoke.

☀️ Don't exercise in high smoke levels

Health authorities recommend avoiding outdoor physical exercise in high pollution levels, including woodsmoke. Consider exercising in clean air at midday instead of at dusk when smoke pollution is building up

☀️ Check your chimney

If your chimney smokes for more than a few minutes a day, see the page on 'Minimizing Harmful Emissions'. Remember smoke is a health hazard. Let's work together to reduce it.

More information is available on-line at these web-sites:-



Woodsmoke & Health

Woodsmoke is a health hazard. We all know about the harm from tobacco smoke and are taking increasing steps to protect our health. Woodsmoke contains many of the same and similar chemicals and is associated with the same and similar health problems, including



- Respiratory diseases
- Colds, flu, bronchiolitis
- Heart attacks
- Mouth, throat, lung cancer
- Cot deaths & reduced IQ of children
- Middle ear infections.

No safe level of fine particles. Just like tobacco smoke, the worst damage is caused by particles so tiny that they infiltrate the smallest recesses of our lungs where they cause inflammation that leads to heart and lung diseases. According to the World Health Organisation (WHO) "*there is no safe level of fine particle pollution.*"



Chemicals in woodsmoke. Woodsmoke contains hundreds of chemicals. Some poison the cilia in our lungs (hair-like structures which clear debris such as mucus and bacteria from our lungs), others cause irritation and several (including chemicals known as PAH or polycyclic aromatic hydrocarbons) are known to cause cancer. Some babies born to pregnant women exposed to PAH from air pollution have measurable genetic damage and a 5 point reduction in IQ at age 5.



Particles extracted from air with substantial amounts of woodsmoke were 30-times more potent in inducing tumours in mice than extracts of cigarette smoke.

Studies also show that woodsmoke reduces the ability of the lungs to fight infection, so we get more colds and flu and require more time off work or school to recover.

www.3sc.net/airqual; www.lungnet.org.au; www.environment.nsw.gov.au/woodsmoke