

Numerous scientific studies from Australia and around the world clearly state that unflued gas heating is harmful to health, particularly to the health of children.

***“There is data available all over the world to say that unflued heaters don't mix very well with good air quality.”***

~ **Len Ferrari,**  
**independent air quality expert**

- A 2004 Adelaide University study published in the International Journal of Epidemiology recommended unflued gas heaters be banned in classrooms as a public health priority.
- A 2005 Hunter New England Area Health Service study in private schools found so-called low-emission (low-NOx) unflued gas heaters produce high levels of nitrogen dioxide, carbon monoxide and formaldehyde known to cause respiratory problems, headaches, drowsiness and induce asthma attacks.
- Following a 2008 DET study conducted at Blackheath Public School, Len Ferrari — a recognised expert on air quality — found one quarter of the test results were well outside of WHO guidelines, and claimed this 25 per cent non-compliance figure would be conservative.

## Facts about Un-flued Gas Heating

For more detailed information concerning Un-flued Gas Heating and its adverse health effects please browse the following [links](#).

- [NSW Public Health Unflued gas heaters in schools](#)
- [WA Department of Health Unflued gas heaters and your health](#)
- [Scientific reports on un-flued gas heating](#)
- [The flawed DET directive](#)

- [The \\_\\_\\_\\_\\_ problem of exhaust fans](#)
- [Warning \\_\\_\\_\\_\\_ statements from gas suppliers and others.](#)

## Gases

**Carbon monoxide:** binds with haemoglobin to reduce the blood's oxygen-carrying capacity. At high concentrations this can be fatal; at lower concentrations **symptoms include headache or loss of concentration**

**Nitrogen dioxide:** an oxidising gas that irritates the lungs. There is evidence that it **suppresses the body's immune system**

At very high levels, nitrogen dioxide can cause fatal swelling of the lungs. At lower levels, symptoms include

**exacerbated asthma and more frequent and more severe respiratory illness**

Australian epidemiological research confirms overseas findings that there is a significant correlation between exposure to nitrogen dioxide and adverse health outcomes, including increased hospital admissions for sufferers of childhood asthma and heart disease.

**Carbon dioxide:** at elevated levels can cause **headaches and may cause changes in respiratory patterns**

**Formaldehyde:** an irritant gas that potentially **affects the skin, eyes and lungs**. Some people can become hypersensitive to its effects, resulting in symptoms at very low concentrations. There is evidence that it is a **nasal carcinogen**

*(Source: Federation of Australian Scientific and Technological Societies Occasional Paper Series Number 5, October 2002, Indoor Air Quality in Australia: a Strategy for Action, pp 9-28.)*

## Scientific Reports

- [Pilotto et al Randomized controlled trial of un-flued gas heater replacement on respiratory health of asthmatic schoolchildren.](#)
- [National Heritage Trust - Unflued Gas Appliances and Air Quality in Australian Homes](#)
- [Brown et al Room chamber assessment of the pollutant emission properties of \(nominally\) low-emission unflued gas heaters.](#)