

# Heater swap could save millions on asthma: study

Marked improvements for sufferers when unflued gas heaters removed from homes

by Simon Collins  
social issues reporter

A ground-breaking study has found that getting rid of unflued gas heaters can reduce the cost of treating asthma symptoms by about as much as the millions of dollars the country spends every year on new asthma medication.

A third of New Zealand homes have bought the \$80 unflued gas heaters, which cost about \$50 to fill up at petrol stations, because they have traditionally been cheaper than electricity.

But the study by a team from Auckland, Massey, Otago and Victoria universities and the Building Research Association (Branz) says the heaters worsen asthma symptoms by pumping out nitrogen dioxide, formaldehyde, carbon monoxide and water vapour, making homes both noxious and damp.

By replacing them with better heating in 175 asthma-affected homes, the team:

- Cut days off school for the children affected with asthma by an average of 1.8 days each a year.
- Cut asthma-related visits to the doctor by 0.4 visits, and visits to the pharmacy by 0.25 visits, per child per year.
- Cut the number of colds and flus by an average of 0.5 per child per year.

Wellington Medical School professor Philippa Howden-Chapman, who led the team, said the reductions were comparable with the effects of medication.

"We spend a huge amount of money on asthma medicines," she said.

"These effects, for example two more days at school with cleaner, more sustainable heating, are the same as for a new asthma medicine.

"They are small effects but very significant when you think that a quarter of the population with children has asthma. If all our homes were properly insulated and had clean-burning, sustainable heating, I think we would have a noticeable reduction in asthma."

Another member of the team, Auckland University Clinical Trials Unit director Dr Chris Bullen, told a Habitat for Humanity seminar yesterday that the team's previous studies had found that insulating homes also reduced time off school for children and time off work for their parents, and reduced hospital-

isations. "For every \$1 you invested in insulation, you'd get a health and net societal return of \$2," he said.

Dr Howden-Chapman said unflued gas heaters were also dangerous because they used an open flame, and were banned in some countries.

"We have a very deregulated economy," she said. "They started coming in the mid-1980s and gained very rapid market penetration.

"People think it's a cheap way of heating the house, particularly because there was no requirement under existing legislation for landlords to provide any heating. It's often tenants who cart them from one flat to another.

"If we had decent-quality targets for existing buildings, landlords would be required to have heating and insulate their flats."

In fact, she said, the gas heaters were no longer cheap anyway because the price of gas had gone up.

The researchers recruited 409 families with asthma in Porirua, the Hutt Valley, Christchurch, Dunedin and Bluff in 2005. They installed new heating in half of them before the winter of 2006 and measured the differences between those with unflued gas heaters and those with the better heating types.

The families that didn't get the better heating in 2006 got it instead at the end of the trial last year.

Families were offered flued gas burners, wood-pellet burners or heat pumps, and most chose the heat pumps.

Dr Howden-Chapman said these three were better value for money, and emitted less greenhouse gases.

She praised a current Government programme which gives landlords a 60 per cent subsidy to insulate rental properties, but said it was still hard to get landlords to take it up.

"There should be a time frame that landlords have two years to do it or there is going to be a regulation."

The Government also pays 10 per cent of the cost plus an interest subsidy for homeowners earning under \$100,000 a year to install insulation and "clean heating" in houses built before 1978.

» ON THE WEB  
[www.bmj.com](http://www.bmj.com)  
[www.eeca.govt.nz](http://www.eeca.govt.nz)