



Massey News

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News from the campuses of Massey University

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Research breakthrough on causes of asthma



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WELLINGTON – Pioneering research by the University's Centre for Public Health Research has debunked the widely-held belief that most asthma is caused by exposure to allergens such as house dust mites and cats.

Centre Director Professor Neil Pearce says at most, only about one-half of asthma cases are caused by allergic inflammation of the airways. The other half are caused by non-allergic mechanisms.

The collaborative research has been undertaken by Dr Jeroen Douwes and Professor Pearce at the Centre for Public Health Research, together with Dr Peter Gibson (John Hunter Hospital, Newcastle, Australia) and Dr Juha Pekkanen (National Public Health Institute, Kuopio, Finland).

The team re-analysed 22 research papers published internationally to produce the findings, and the results were published in this month's edition of the British Medical Association's journal *Thorax*. The journal also carried its own editorial on the findings, supporting the study's conclusions.

"For the past 20 years we've been focused on the idea that allergens cause asthma, so preventing asthma meant reducing exposure to allergens. We thought that if we fitted plastic covers to our mattresses, threw out our carpets and gave away the cat, the problem would be solved," says

Professor Pearce.

"But this latest research shows that although allergen exposure may cause asthma in some cases, it is not the overwhelming cause that it's been hyped up to be. This misguided approach has meant we have lost valuable time and wasted valuable resources."

Professor Pearce says the allergic response mechanism was always thought to be the reason babies became asthmatics in the first place. The Centre's findings have now put those beliefs open to question.

"If you're having a baby, you're supposed to get rid of the cat, but quite a few studies have shown that having a cat early in life actually protects against asthma. Certainly there is little evidence that exposure to allergens early in life actually causes asthma, and if it does then it can only account for, at most, half of the cases."

Professor Pearce says several 'myths'



Professor Neil Pearce.

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Te Kunenga ki Pūrehuroa



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Research debunks asthma myths

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always get repeated in the asthma debate and none is helpful.

“It is often claimed that we have the highest asthma rates, with the greatest severity, in the world, but in fact we’re about the same as the other English-speaking countries.

“We’ve spent 20 years trying to find out what is unique about New Zealand, when in fact, we should be trying to find out what we have in common with other English-speaking countries. Why is it, for example, that cities such as Tucson in the US have virtually no dust mites at all, yet their asthma rates are the same as ours?”

With New Zealand’s 600,000 asthmatics currently creating an economic burden of \$800 million per annum, the accurate targeting of both prevention and treatment is fundamental.

“This new research shows that non-allergic

mechanisms cause at least one-half of asthma cases, but we still don’t know what these mechanisms are because all of the attention has been focused on allergens. If half of all asthma cases occur through non-allergic mechanisms, then telling those people to throw out the carpets and get rid of the cat will be of no benefit at all,” he says.

“More importantly, if we want to prevent people getting asthma in the first place, then we need to know what these non-allergic causes of asthma are.”

The Centre is now focusing much of its Health Research Council funding into learning more about these non-allergic mechanisms. Collaborative studies are under way with the Malaghan Institute of Medical Research to investigate the basic processes involved in non-allergic asthma.

A three-year study has also begun on why children living on farms are less likely to contract asthma.