

**THE NZ JOURNAL OF RESPIRATORY HEALTH**  
August 2007



**SPECIAL FEATURE:**

- The history of asthma
- Asthma and house dust mites
- Goal setting with COPD
- Youth health and asthma in NZ



ISSN 1176-7847

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**PUBLISHER**  
Asthma New Zealand  
- The Lung Association  
581 Mt Eden Road, Mt Eden,  
Auckland 1024  
P.O. Box 67066, Mt Eden, Auckland 1349

**CONTACT**  
Phone: 09 623 0236 Fax: 09 623 0774  
Email: [anz@asthma-nz.org.nz](mailto:anz@asthma-nz.org.nz)

**PRODUCTION & ADVERTISING**  
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# editorial

## Dear Readers

There are approximately 250,000 children and adults with asthma in the Auckland region (1 in 4 are children, 1 in 6 adults). The four Respiratory Nurse Educators who work for Asthma Auckland are professionally qualified asthma nurses; all have successfully completed the Asthma and COPD Courses run by the Unitec Institute of Technology/Asthma New Zealand training combination.

As I look around New Zealand I see many nurses calling themselves respiratory or asthma nurse education specialists. They have attended the "odd" course now and then, some picking up an "attendance" certificate for a one-day course etc. These are not approved educational training courses supported by a tertiary institute or university.

If the issues of asthma and COPD are to be addressed properly and professionally, then there must be change. Asthma New Zealand advocates the following:-

- Adults and children with asthma must take ownership of their asthma in order to control it effectively and qualitatively.
- Asthma educators must be tertiary qualified in asthma and COPD. This tertiary qualification must be attained through an educationally recognised tertiary institute or university.
- It is recognised that asthma education and training is essentially about changing perceptions, changing behaviours, and the

upskilling of adults and children with asthma. This cannot be done in a 10 minute interview with a GP, or practice nurse, every three months.

- In Britain and the United States, asthma education is provided through nurse-led asthma clinics. The nurses are tertiary qualified and work with groups of people with asthma over a considerable period of time. Some of the educational opportunities available involve in-depth asthma education provision, goal setting, behavioural change techniques etc.
- Britain has had these clinics for some ten years, and the U.S. eight years. There has been a decrease of 11.8% in medication costs despite increasing medication costs.
- New Zealand now has the ability to establish nurse-led asthma clinics. It has tertiary approved asthma education courses. Some 700 nurses across New Zealand are professional trained asthma nurse educators.

### What is needed to make this happen?

- "Buy-in" from Primary Healthcare Organisations.
- Support from General Practitioners.
- Funding from the Ministry of Health for "set-up" costs.

Please support Asthma New Zealand by writing to your Member of Parliament, to your local Primary Healthcare Organisation, and to the Ministry of Health.

G.A. Hanna  
Executive Director



## Asthma Nursing Course Information

Applications are now invited from registered nurses wanting to enrol in the Asthma New Zealand/Unitec Asthma Nursing Course for February 2008. The programme is offered by distance learning. The primary aim of the Asthma Nursing Course is to provide nursing health professionals with a high level of evidence-based asthma knowledge that promotes best practice and is consistent with national policy.

In the five years since the commencement of the Asthma Nursing Course, 594 nurses have enrolled over 15 intakes. Many applicants had not undertaken any additional study since completing their initial nursing education, and for some this had been many years. While most find the Asthma course to be challenging, they enjoy the learning experience as it provides necessary knowledge that supports their role and scope of practice.

Asthma New Zealand in association with Unitec New Zealand offers this course within Unitec's Bachelor of Nursing Programme. It is a level 7 24 credit course. A grant towards the cost may be available for students.

For an enrolment form for the 1<sup>st</sup> Semester 2008 Asthma Nursing Course please contact:

Ann or Swarna  
**Asthma New Zealand - the Lung Association**  
P O Box 67- 066, Mt Eden, Auckland 1349  
Phone: 09 623 0236 - Ex 804  
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The closing date for 1<sup>st</sup> Semester 2008 enrolment is 30<sup>th</sup> January 2008

# The History of Asthma

Compiled by Ann Wheat

For some asthma is a condition that they have lived with for most of their lives, for others it is a new experience that one has to come to terms with. The signs and symptoms of asthma are well known, coughing, wheezing, shortness of breath and chest tightness being the main ones to look out for.

As we know asthma can develop at any age but often it first presents in childhood. The severity of the condition can vary from person to person from very mild to very severe and in fact can change with time.

We know that there are around 700,000 people with asthma in New Zealand (Holt & Beasley, 2002).

Today the mainstay of asthma treatment is preventers, such as Flixotide, Beclazone and Pulmicort, but it is hard to believe that these have only been around since 1972 (FraserHealth, 2007 taken from Rosenheck's article Asthma Then and Now); short acting beta agonists, such as Ventolin, Salamol and Bricanyl; long acting beta agonists, such as Serevent, Foradil and Oxis; and finally the latest medication available in New Zealand, the combination medications of Seretide and Symbicort. All are given by various inhaled devices, such as the metered dose inhaler, turbuhaler, accuhaler or Aerolizer.

As well as medication, asthma can be helped by reducing the load that allergies play in this condition. Trigger management therefore has a very important role in keeping asthma under good control.

- Reducing dust mite exposure by using

barrier covers on beds, damp dusting, using a HEPA filtered vacuum cleaner, reducing soft toys on beds etc

- Keeping cats off beds and out of bedrooms, keeping them off furniture and if possible outside, feeding them in one room only, washing the cat weekly (check with the vet)

- Reducing condensation, by using a dehumidifier, not having a lot of pot plants, using extractor fans in bathroom and kitchen

- Avoiding pollen triggers, by staying indoors in the early morning or late in the afternoon, not hanging washing outside during these times, showering and changing clothes after being outside

These are just a few of the ways to reduce allergen load.

## So how long has asthma been known?

Asthma was first mentioned as long ago as 2700 years ago by Homer, who described a warrior who died at the end of a furious battle with "asthma and perspiration" (Marketos & Ballas, 1982). But it was Hippocrates (460 – 357BC) who first wrote about asthma when he described the condition as "spasms" of the lung. Galen

(130 – 201AD) was the first to discover that asthma was caused by bronchial obstruction and treated it with owl's blood in wine (Fraser Health, 2002). He was also aware that there were triggers for asthma and mentioned that dyspnea was produced from gymnastic exercises or other strong effort (Marketos & Ballas, 1982)

At about 500 years AD, the Greek physician Arataeus, was the first to talk about the chronic nature of asthma (Marketos & Ballas, 1982) and he also clearly described asthma in terms that can be recognized today although with a broader meaning than is found today. He was the first to mention that women were more prone to asthma than men because they are "humid and cold"; but he felt that men "die of it more speedily" and children had a better recovery (Marketos & Ballas, 1982). Unfortunately his treatment methods have not been preserved.

It was not until Maimonides, (1135 – 1204 AD), that a connection was made between asthma and the environment (University of Washington, 2004). He advised a patient to move to a dry climate, avoid polluted city environments and eat certain foods, including chicken soup.

John Floyer (1649 – 1734) an English doctor made an accurate list of some of the triggers of asthma. The list included heredity, exercise,

air pollution, tobacco smoke, some occupations and infections (University of Washington, 2004). Although he knew what caused asthma, his treatment was not as accurate as he advised patients to put strong chemicals on their skins to form blisters and also to take lots of cold baths.

It was shortly after this in the early 1800's that doctors began to better understand the respiratory system and how it worked. They developed new tools and in 1816, Laennec a French doctor developed the stethoscope (a rolled up piece of paper) (Fraser Health, 2002, University of Washington, 2004). In 1844, a British surgeon called Hutchinson developed the spirometer.

In 1850, Gerhardt recognized that asthma could be triggered by chemical odours, strong perfumes and changes in humidity and temperature (Alter, n.d.). In 1864, Dr Henry Hyde Salter discovered that animal dander was another trigger for asthma (Fraser Health, 2002).

Around the 1900's, it was discovered that asthma and hay fever were closely related, but many doctors at that time thought that asthma was a purely psychosomatic disorder and this hampered research on the condition for quite some while (Alter, n.d.).

Finally it was not until the 1960's that researchers discovered the fact that asthma was an inflammatory disease and not just constriction of the airways and that people with asthma have a sensitive immune system which reacts to airborne allergens (Fraser Health, 2002). It is only recently that it has been discovered that there are now several different phenotypes of asthma including eosinophil, neutrophilic, combination of both and a group with neither (Wheat, 2007).

What were the treatments for Asthma? Some of the very earliest treatments for asthma recorded included the use of swallowing a mixture of figs, grapes, beer, frankincense and even camel or crocodile dung!! In ancient Rome (509 – 476 BC), doctors recommended the use of vinegar, millipedes, and ground up fox lungs (University of Washington, 2004). As time progressed, in the middle ages asthma was treated with complicated potions containing, exotic ingredients like animal bones, pearls and goose dung. Later still, bleeding became a recognized treatment but this often only made patients weak, tired and even sicker (University of Washington, 2004). By the 1800's the treatment of asthma was still ineffective with patients being advised to drink alcohol, smoke tobacco or eat garlic. Cocaine and morphine were also

considered to be asthma cures. (Fraser Health, 2002). In the late 1800's atropine, which is derived from the deadly nightshade plant, was added to cigarettes to help treat asthma. In 1901 a Japanese scientist, Takamine, purified adrenaline found in the suprarenal glands of sheep (discovered in 1898) thus producing the first effective bronchodilator. (Fraser Health, 2002).

But it is worth noting that as long as five thousand years ago the Chinese used the herb Ma Huang to treat asthma. But it was not until the 1900's that scientists isolated the chemical in Ma Huang. It is called ephedrine and it is still used today in some medications (University of Washington, 2004).

## Conclusion

Having researched this topic, I am glad that we live in the 21<sup>st</sup> century and not way back when some of the treatments for asthma would have been most unpleasant. Asthma research is still ongoing and it will be interesting to see what treatments and discoveries are made in the next fifty or so years. Maybe eventually they will discover why only some people have asthma and then maybe a cure for asthma could be developed.



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# Asthma and House Dust Mites

## Definition

"Asthma is an inflammation of the airways which is common and persistent. This inflammation causes variable obstruction and irritability of air ways, leading to cough, wheeze and tightness of the chest, often worse at night."

Asthma is very common, but these days it can be treated effectively. Unfortunately many children get inadequate treatment for their asthma or no treatment at all, because the diagnosis of asthma is not made. The main symptoms to look out for with asthma are cough, wheeze and shortness of breath.

Asthma is becoming more common, and more severe, although nobody is certain why. Research is going into links between asthma trends and environmental pollution, but so far no hard information is available. Although it may seem common sense to think that air pollution and asthma must be linked, it might not be so simple. New Zealand is not noted for industrial pollution, but has more asthma sufferers per head of population than any other developed country.

## Dust Mites in the Home

### What are dust mites?

Dust mites are tiny bugs that live in your home. They measure about 1/100th of an inch in length. Dust mites feed off pet and human dander (dust), and their waste is

a major cause of allergies and asthma. In children who have asthma, dust mites can cause them to wheeze more and need more asthma medicine. So, cutting down the number of dust mites in the home is an important step if your child has allergies or asthma. The presence of dust mites is not related to the cleanliness of your house. All homes in New Zealand have dust mites.

About 75% of all people with asthma have house dust mite allergies.

Dust mites love warm, humid areas filled with dust. Bed pillows, mattresses, carpets and furniture are great places for them to live. Cleaning each one of these places can make a real difference in the number of dust mites in your home. Dust control in the home has helped some individuals who have asthma, and you may feel determined enough to give it a try. It won't do any harm but it is hard work and costs money.

House dust mites are the most common trigger of asthma. These are the mites that live in house dust. It is the feces of the dust mite that is the actual allergen that causes breathing problems. Dust mites produce faeces about 20 times a day. Aside from being an allergen, the faeces of the dust mite is light enough to float

in the air, so it is easily inhaled by those of us who occupy homes and buildings. Then, when you consider there are about 40,000 dust mites per speck of dust, you can imagine (even if you'd rather not) just how many of this dust mite faeces enter your respiratory tract. Your indoor environment is especially vulnerable to

dust mites if you live in a humid area, or if your home is subject to humid conditions for whatever reason. Humid environments create the ideal habitation for dust mites, primarily since they result in a greater food supply for dust mites. Staples of a dust mite diet include plant materials, molds and fungi, all of which thrive in humid conditions.



### What do I do first?

Start in the bedroom. Most of the dust mites in your house live in your mattress. Put it in an airtight plastic cover or you can buy mite guard covers from your local asthma society. Wash your sheets and blankets in very hot water every week. The water used to wash your sheets and blankets should be 54°C. This temperature is higher than you may want for your water heater, because water over 49°C can burn children if they turn on the hot water by themselves. If you don't want to set your water heater at this temperature, you can wash your sheets and blankets at commercial laundries. Your bedroom should have a hardwood, tile or linoleum floor instead of carpet. Dust mites can grow rapidly in carpet. If you must use carpet, try not to place it on concrete because the warm space between a rug and concrete is a good place for mites to live.

### I don't want to rip out my carpet. Is there anything I can do to treat it?

Since 1920, house environments have changed in many ways; the use of central heating systems has increased, windows are tighter, and fitted carpets have become very widely accepted. These factors have improved conditions for the growth of mites.



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## Seven ways to reduce house dust mites

### 1. Encasings.

Bedding is the favorite home of the dust mite. This being the case, you should encase your bedding and pillows with dust mite barrier covers.

### 2. Washing

Wash clothes and bedding regularly. Washing in 60°C water is effective.

### 3. Dry Cleaning

Dry cleaning kills all dust mites.

### 4. Heating

Any type of heating will help minimize dust mites. Some examples include steam-cleaning carpets, tumble-drying, direct sunlight

exposure, and electric blankets.

### 5. Air Conditioning

Air conditioning will dry out your indoor environment, which will reduce the food supply for dust mites, resulting in reduced dust mite populations.

### 6. Dehumidifier

A household appliance that reduces the level of humidity in air. A good dehumidifier will help remove dust, pollens and smoke from the air by utilising an Air Purification system. Removal of these from our surroundings can be of benefit to asthma/allergy sufferers and those with respiratory problems.

If we are able to control the level of humidity in our homes we will be much more effective in reducing dust mite activity. If we can slow down dust mite activity we can help decrease the risk of Asthma and some allergies. Each of us will produce approximately 2.5 litres per day of moisture through normal household activities - cooking, washing, showering, and even breathing. Add to this the fact that "flue-less" gas heaters can produce up to two litres of moisture for every litre of gas burnt, and it soon adds up. A further advantage is that reducing the amount of moisture in the air results in lower heating bills as dry air is easier to heat than moist air!

### 7. Air Purifier

Despite your best efforts to remove dust mites from your home or other indoor environment, dust mites are simply too numerous and reproduce too frequently to keep their numbers lowered without the aid of an air purifier. Keep in mind though, an air filter might not make that much of a difference. First of all, most dust mites are too small to be captured by even the best of filters. In addition, most dust mites will not even pass through the filter's screen anyway. The reality is that most pollutants in a given room or home will not pass through a small, stationary filter.

Remember - these hints will reduce, but not eliminate, the house dust mite.

Reference:

[Wikipedia. The Free Encyclopedia](http://Wikipedia.The Free Encyclopedia)

Allergen Barrier Bedding Covers – MiteGuard

Burden of Asthma in New Zealand – Dr Shaun Holt & Professor Richard Beasley

[www.naturrobiotech.co.nz](http://www.naturrobiotech.co.nz)

To exterminate and prevent reinfestation of house dust mites, ecological control such as stringent cleaning measures and humidity control is recommended, but most people want to depend on chemical control because its use is very difficult and troublesome. Although synthetic acaricides are effective control agents, they may be highly toxic to mammals including humans.

- Asthma New Zealand -the Lung Association has recently recommended a natural organic based dust mite control product called Allerzero. This product kills dust mites simply and safely through the action of Cinnamon.
- Another idea is to spray the rug with a solution of 3% tannic acid every 2 months to make the dust mite waste less bothersome. However, tannic acid itself can be irritating and it can't help as much as removing the carpet.

### What else can I do?

Vacuuming your carpets and upholstery every week can help. Vacuums with high-efficiency filters pick up more dust mites, but even standard vacuums work well enough. Plastic or wood furniture that doesn't have much padding can also help keep down the number of dust mites in your home. Because dust mites love warm, humid places, keeping the humidity low by using a dehumidifier and running your air conditioner makes a difference. Special air filters can help reduce dust mites in the air. Replace divan beds with slatted wooden beds & if possible replace any feather pillows with synthetic ones.



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### Attention! All Children in Auckland Who Have Asthma



- ⇒ **Is your child between 6 - 13 years?**
- ⇒ **Does your child have asthma?**
- ⇒ **Do you live in the Auckland area?**

If you answer **yes** to these three questions please contact Asthma New Zealand-the Lung Association.

#### Why?

Because Asthma New Zealand needs volunteers to participate in a study which is looking at the benefits to children who have asthma of taking a natural product made from a marine substance. As the product contains no protein it is safe for those who have a shell fish and/or fish allergy.

Taking part in this study may help reduce the participant's use of asthma medication and the knowledge gained may help other asthma children with asthma gain better control of their asthma.

The study is - A double blind, randomised controlled trial in children with chronic obstructive asthma and will be conducted in compliance with the protocol, Interim Good Clinical Research Practice Guidelines (Medsafe, 1998) and the regulatory requirements of New Zealand. We require children who are between 6 and 13 years of age, with proven chronic obstructive asthma.

The diagnosis of asthma will be according to standard guidelines accepted by the National Asthma Council of Australia. The children must be able to swallow capsules in order to participate, as there is no alternative form of study medication. The child's parent or guardian will provide written Informed Consent before enrolling the child in the trial. Where possible (given the child's age) the child's consent will also be obtained.

**The trial lasts for six months and involves a total of eight visits. A generous incentive of vouchers will be provided at each visit to the Asthma Centre in Mt Eden.**

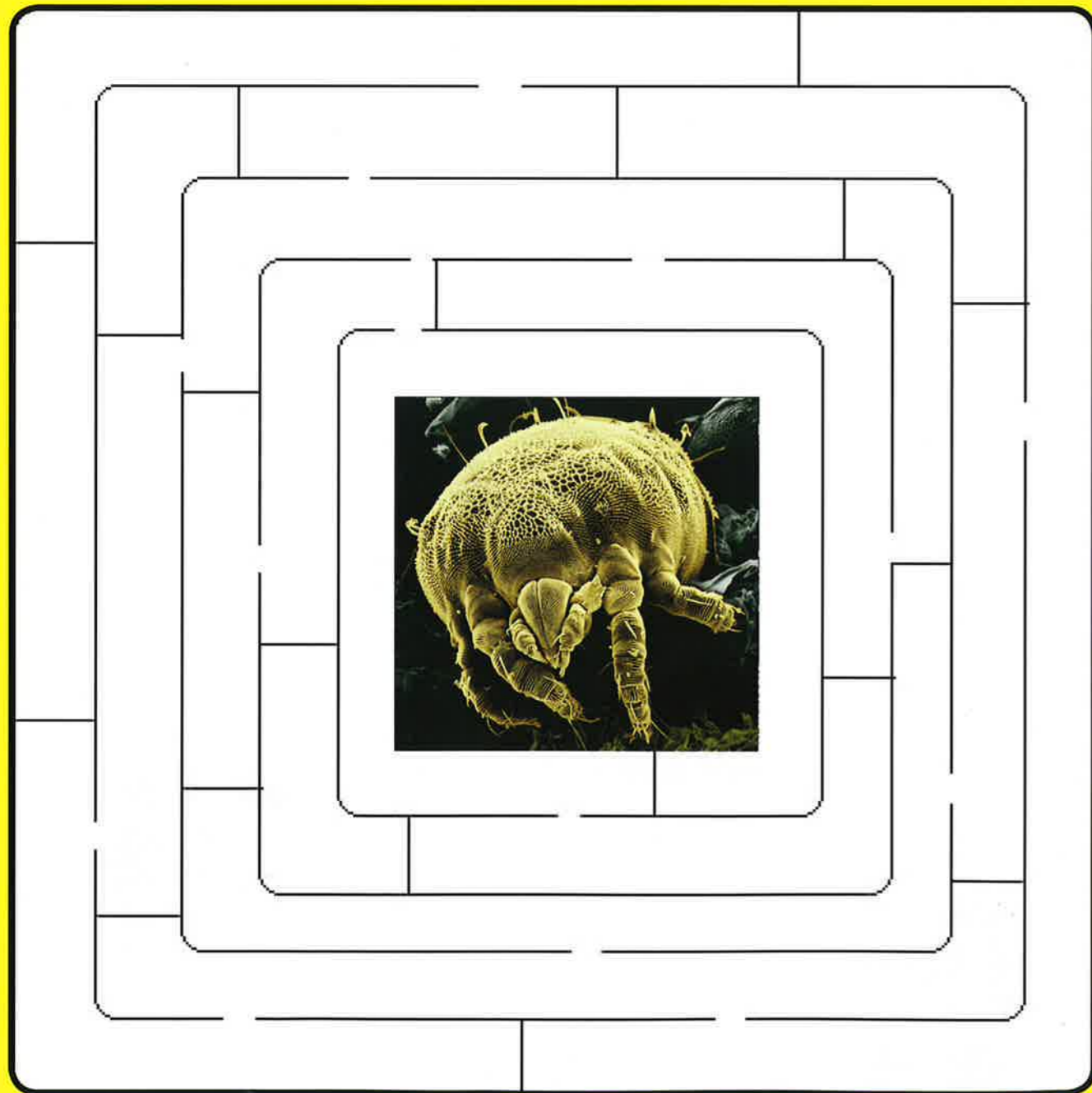
If you are interested in enrolling in the study or want to know more please contact:  
Asthma New Zealand-the Lung Association on either phone: 09 623 0236, Debra, Ann or Heather or email [debral@asthma-nz.org.nz](mailto:debral@asthma-nz.org.nz)



# Kids Challenge



This is a dust mite who wants to find the way to the carpet... are you going to help him or not?



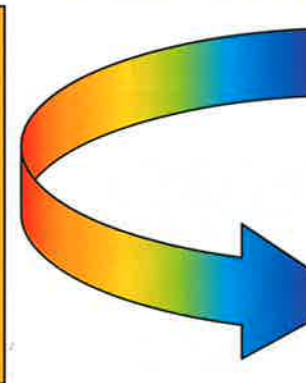
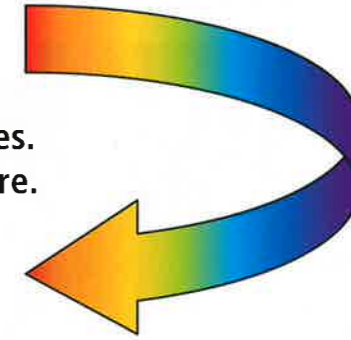
These are something to do with asthma. (Hints -- First few are asthma triggers & then the devices)



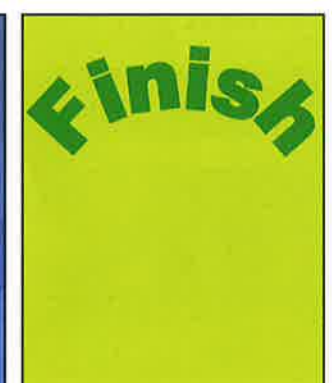
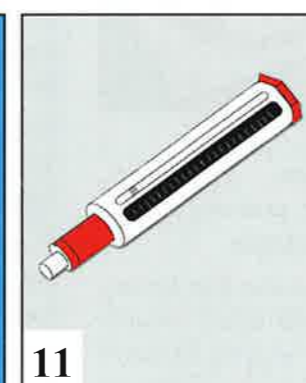
**DIRECTIONS:**

Roll the dice.  
Jump forward that number of squares.  
Say and spell the word on that square.  
If you are wrong,  
return to start.

**Good luck.!!!**



- 1. Dog
- 2. Cat
- 3. Dust mite
- 4. Bird
- 5. Rabbit
- 6. Cigarette
- 7. Flowers
- 8. Sports
- 9. Blue Puffers Reliever
- 10. Orange Puffers Preventer
- 11. Peak Flow Meter
- 12. Spacer





# North & South



## NEWS FROM AROUND THE REGIONS

### EVENTS IN THE NORTHERN REGION...

Asthma Educators Debra, Anne, Annemarie and Heather were in action from the 26th to the 30th of March at the **Whangaparaoa Health Expo**. The event was held in the main shopping mall out on the Whangaparaoa peninsula, just north of Auckland in the Rodney District. Over the course of the week, many locals stopped to chat about their concerns and to receive advice, brochures and information.



To mark **World Asthma Day** on Tuesday 1<sup>st</sup> May 2007, Asthma Educators Annemarie and Heather erected a display stand at St Lukes Shopping Centre in Mount Albert, Auckland City. St Lukes is part of the Westfield Group and each mall has a display site which is available free of charge to community groups. As the site was adjacent to Pumpkin Patch and near the food hall, there was a steady stream of shoppers who took the opportunity to stop and ask for free advice relating to their asthma and other breathing problems.



From the 22<sup>nd</sup> to the 29<sup>th</sup> April 2007, Asthma Educator Heather McMillan and volunteer Irena Dahlstrom took the Mobile Education Unit to Northland where they spent the week providing educational services to the local communities. The blue bus visited school children in Kaitaia and Kaikohe. Education clinics were also held in Waitangi, Kaikohe, Kawakawa and at the **Mana Wahine** celebrations in Kaitaia.



#### Smoking Cessation Practitioner Training Programme provided by the National Heart Foundation.

Two asthma nurse educators from Asthma Auckland (Heather and Debra) recently attended a two day smoking cessation



On Saturday 16<sup>th</sup> June, Debra and Heather travelled to Te Hana, a small community a few kilometers north of Wellsford in the Rodney District. There they attended the **Matariki Health Expo**, setting up a display stand. All those attending the Expo were able to approach the Asthma Educators for free advice and assistance relating to asthma and COPD.

course to gain the skills necessary in assisting clients with respiratory conditions and their families in stopping smoking.

Certification following the course will enable these nurses to gain registration for the issuing of exchange cards for nicotine patches and gum which is part of the programme funded by the Ministry of Health.

To be eligible for the exchange cards there must be a commitment from the client to stop smoking completely.

In addition to the exchange cards, advice and support will be provided either by appointments or telephone follow ups.

It is the intention of Asthma Auckland to

have all asthma educators competent in offering advice and support to the clients/family who currently smoke.

Smoke cessation resources/pamphlets are available free of charge to the public online at [www.healthed.govt.nz](http://www.healthed.govt.nz)

### Helping our best friends

Asthma Auckland was recently approached by a local vet for help with treating a dog with pneumonia. Huggles, a much loved pet, was to be treated with nebulized saline but the vet needed a nebulizer to be able to do so. Following much discussion, it was decided to use a nebulizer bowl and tubing only which could be attached to oxygen for nebulization. After 6 days of treatment with nebulized saline two to three times a day, plus the use of antibiotics, Huggles was allowed home and is now doing well.



Huggles on the Nebulizer

### Nursing Students work with Asthma Auckland



Meeden Aliping, Clare Hancock and Kelly Bradey are three Auckland University 3rd year nursing students who, as part of their community orientated promotion course placement, worked with Asthma Auckland's Educator Ann Wheat to develop a brochure on Chronic Obstructive Pulmonary Disease (COPD). In addition to the brochure, at their own suggestion, the three students also designed a poster.

from Asthma Auckland. Their designs were very well received and the students successfully completed the project and passed the course.

The course is intended to benefit participating community organisations whilst simultaneously expanding the health promotion skills and knowledge of the students. It also provides them with the opportunity to engage in community experience. The students negotiate, plan, deliver and evaluate a specific intervention that contributes to each organisation's strategic plan to meet population health objectives.

They approached this project enthusiastically and, to conclude, presented it to their class in the presence of the Asthma Nurse Educators





# Goal setting with COPD

Compiled by Debra Leutenegger

## What does goal setting mean?

The definition according to the Wikipedia on the web states:

*"Goal Setting involves setting a clear objective and ensuring that every participant is clearly aware of what is expected from him or her, if this objective is to be achieved. This has a couple of advantages in that, assuming that the goal is reasonably challenging, all participants will have to put a substantial effort to achieve that goal. Second, because every member is aware of what is expected of him or her (high role perception), little room is left of inadequate effort going unnoticed."*

## Why should I have goals?

This is a difficult question to answer but if you take time to think about it there wouldn't be many people who haven't had a goal to aspire to or work towards. It may have been shooting your first goal in a game of soccer or netball, or getting an "A" in schoolwork or a promotion in a job. Everyone has goals, however not many take the time to write them down, think more deeply about ways of achieving those goals and therefore many of us will never reach our potential in the different areas of our lives.

## How do I set my goals?

Goals should be set using the criteria of SMART Goals. This ensures that the goals being set are:

- S = Specific
- M = Measurable
- A = Attainable
- R = Realistic
- T = Timely

**Specific** goals relate to what you are going to do, why you are doing it and how it will be done. What do you want to accomplish or improve?

If you can't measure it, you can't manage it. It needs to be **measurable** so that you can see the change occur. There are often several short-term or small measurements that are part of achieving the overall goal and this makes a large goal easier to achieve.

Firstly identifying goals that are the most important to you, (and/or your family) spend time to develop strategies to make the goal **attainable**. You need to develop attitudes, abilities, skills, and obtain any assistance required to achieve your goal.

**Realistic**, means "do-able." A realistic goal should stretch and challenge the skills and knowledge of the person. It shouldn't be taking the easy road, but the road of satisfaction when the goal is achieved. Devising a plan to reach that goal e.g. if you want to be able to walk a greater distance without becoming excessively breathless, increase your distance each day by one letter box, or a lamp post. This may be more realistic than having the goal of walking 5km every day.

Goals require a **time-frame** in which to achieve them. Setting a target or end-point to a goal encourages commitment to working towards and achieving the goal that was set. It may be one week,

one month or even longer depending on the goal. If a time limit is not set, then there is no urgency to start taking action towards achieving the goal.

Example of goal-setting that Noel Vail (permission given by Noel), a North Shore COPD support group member set for himself was:

After moving into a new home the garden was Noel's first challenge. It was overgrown and "out of control". The thought of extensive labour and energy required to do the gardening could have been overwhelming if one thought of the garden as one large area.

The frequency of breathlessness due to having COPD and with exertion Noel's breathlessness increases you may think that this was an impossible task and would require the assistance of others. Taking up the challenge Noel decided to set his goal of having a beautiful garden with all the weeds pulled out, the soil turned and new plants added.

By tackling the goal in "bite" sized portions it made the goal more attainable for Noel. He had short-term goals of a small area being done each week, with short periods each day spent in the garden. He took regular breaks when tired and breathless. Today Noel has a garden that most of us would take pleasure in.

Remember:

Goals don't have to be accomplished in a day, a week, or even a year. Have a variety of goals some of which are for pleasure (e.g. Going on a holiday) for personal health reasons, for satisfaction and to give you purpose to life.

Take time to write down your goals TODAY!

References:

Noel Vail

[en.wikipedia.org/wiki/Goal\\_setting](http://en.wikipedia.org/wiki/Goal_setting)

<http://www.goal-setting-guide.com/smart-goals.html>

## Goal setting with COPD

### Noel Vail

As Noel Vail watched his home of 34 years burning to the ground, he could never have envisaged it would be a "blessing in disguise."

The 71-year-old from Milford suffers from emphysema, and air pollution had left him a prisoner. His home was located near a busy road, beside the local marina.

In summer, fumes from the nearby boat yard attacked his lungs. In winter, smoke from surrounding home fires left him gasping. "It used to just choke me, it really did."

Toxic fumes wafting from the constant traffic was Noel's daily enemy. "The buses used to pull up on a rise just outside my flat, and when they accelerated away they blew diesel fumes down into my home."

His condition got so bad that he had to use his wheel chair more, and was no longer able to attend Asthma Society meetings. It was a struggle to walk more than a couple of metres.

Then he was thrown a lifeline. Eight months



ago the war veteran was offered a house in Bayswater. At first reluctant to leave his old neighbourhood, he now realises that decision was a lifeline. "My doctor said to me, 'you look so much better, I think it is a blessing in disguise you had that fire,' and I think so."

Close to the sea, his new home has a constant breeze and cleaner air.

"I have no problems here. My health picked up a lot when I came here," says Noel.

Although he is still very sick his health has improved, giving him extra precious time to spend with his family. "I've only recently found my daughter after a 36-years search so time now is very important to me. It's time I can spend with my daughter and my grandchildren.

"I lost everything pretty much, but if it gives you another two years of life even, it's worth it."

There are places he wouldn't dare visit. "I wouldn't go into the city – I haven't been into the city for 25 years. I would choke in there with the exhaust fumes."

Article and Photos courtesy of the ARC.

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## YOUTH HEALTH AND ASTHMA IN NEW ZEALAND

Compiled by Annemarie Dobson.

"Hanging with friends at bus-stops, talking in their own language, wearing similar clothes, complaining, dyeing their hair astonishing colours such as pink and purple and blue – the elderly generation have nothing in common with the youth of today!" (DKPhatgnat, 2005).

This statement challenges our perceptions of youth. We often listen to and judge youth through our exposure to the print media and television, but that is a view that describes only a small section of the youthful population.

Most New Zealand students are healthy and are positive about how important their families are to them (Adolescent Health Research Group, 2003). However, in the same study, which was reported in the New Zealand Medical Journal, asthma was noted as being the most common chronic illness documented by the students. The World Health Organization identified the critical need for more study into New Zealand teenagers and their health needs. New Zealand youth have some of the highest rates of unplanned pregnancy, suicide and self harm in the western world.

In addition, the World Health Organization stated that there was a scarcity of information about the healthiness of Maori and Pacific Youth.

Due to the evolving awareness of the importance of adolescent health by government departments, school students now have increased options to improve their own health by attending their school Health Centre.

Poor health choices made in adolescence can affect a student's future health patterns. (Adolescent Health Research Group, 2003)

Presently, a new survey is under way in randomly selected Secondary Schools in New Zealand. The survey is called YOUTH '07. National Health and Wellbeing of New Zealand Secondary School Students. Sue Grant, the coordinator of the Survey, says "we are following up on the last survey and also looking for new trends and insights into the wellbeing of adolescents in New Zealand".

So what services are available for school students in Auckland?

Most high schools have a Registered Nurse on site for the school day. Some schools have a full service Health Centre where students have access to a range of health services including dental care, social workers, doctors, physiotherapists and an asthma nurse educator.

The asthma nurse offers the 3+ School Programme Plan. The school programme offers nursing assessment and asthma education for students.

This includes a confidential assessment allowing the student to discuss any concerns about their own asthma management.

To enhance the young person's responsibility for their asthma, the nurse delivers a quick assessment and education for the student. This includes a health assessment, demonstration of inhaler technique and measurement of the peak flow rate. The student is then given relevant information to take home and read.

The student is seen again in one months time and then for the last time in five months. The student is welcome to come and check with the nurse at any time and the school nurse is also able to refer students where they see a need.

So what can we do at home to support the young person with asthma?

The most common barrier reported in the survey (Adolescent health research group, 2003) to accessing healthcare by students was in not wanting to make a fuss. So at home checking how the asthma is going, and being relaxed in offering any healthcare needed for the youth. It is interesting to note in a study by Kyngas et al, that the help and encouragement of caregivers influences the student's motivation to care for themselves appropriately and make the right decisions at the right time.

Encouraging regular exercise helps lung development and improved lung function protects against asthma and other illness.

Do you smoke? Smoking is an airway irritant and interferes with the efficiency of inhaler medications. If your teenager smokes, explain to them that their inhaler will not work as well and

help may be available at school. Ask your school nurse. There is even a school nurse website: [www.schoolnurse.org.nz](http://www.schoolnurse.org.nz)

-some other useful websites include

- [www.youth2000](http://www.youth2000)
- [www.youthaffairs.govt.nz](http://www.youthaffairs.govt.nz)
- [www.urge.org.nz](http://www.urge.org.nz)
- [www.nzaahd.org.nz](http://www.nzaahd.org.nz)
- [www.spinz.org.nz](http://www.spinz.org.nz)
- [www.theword.org.nz](http://www.theword.org.nz)
- [www.mentalhealth.org.nz](http://www.mentalhealth.org.nz)

So it will be interesting to see the results of the Youth '07 survey. Meanwhile, you can support your youth at home by communicating openly with them about their issues. You can check what services are available at your local high school by having a talk with your local school nurse. There may also be other services available in your community, so ring your local Information Centre or Citizens Advice Bureau. You may be surprised at what you find. If you live in Auckland, Asthma Nurse Educators are also available to visit at home. The nurses are also available on the telephone if you have any questions.

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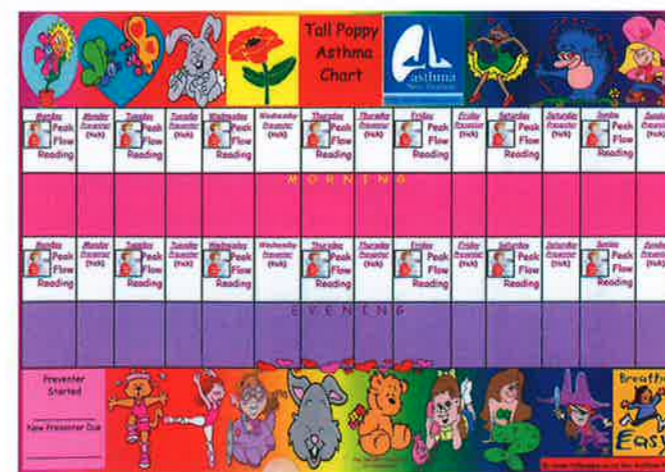
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## Increased Risk of Childhood Asthma From Antibiotic Use in Early Life\*

Anita L. Kozyrskyj, PhD; Pierre Ernst, MD and Allan B. Becker, MD

\*From the Faculty of Pharmacy (Dr. Kozyrskyj), University of Manitoba, Winnipeg, MB, Canada; the Division of Clinical Epidemiology (Dr. Ernst), Royal Victoria Hospital, Montreal, QC, Canada; and the Department of Pediatrics and Child Health (Dr. Becker), Faculty of Medicine, University of Manitoba, Winnipeg, MB, Canada.

Correspondence to: Anita Kozyrskyj, PhD, 210 Pharmacy Building, Winnipeg, MB, Canada R3T 2N2; e-mail: kozyrsk@cc.umanitoba.ca

### ABSTRACT

**BACKGROUND:** To address the major methodological issues of reverse causation

and selection bias in epidemiologic studies of antibiotic use in early life and the development of asthma, we undertook a cohort study of this association in a complete population of children.

**METHODS:** Using the health-care and prescription databases of Manitoba, Canada, this longitudinal study assessed the association between antibiotic prescription use during the first year of life and asthma at age 7 years in a 1995 birth cohort of 13,116 children.

**RESULTS:** Independent of well-known asthma risk factors, asthma was significantly more likely to develop in children who had received antibiotics in the first year of life at age 7 years.

The association with asthma was observed for antibiotic use in non-respiratory tract infections (adjusted odds ratio [OR], 1.86; 95% confidence interval [CI], 1.02 to 3.37). The risk of asthma was highest in children receiving more than four courses of antibiotics (adjusted OR, 1.46; 95% CI, 1.14 to 1.88), especially among rural children, and in the absence of maternal asthma or a dog in the birth year. Broad-spectrum (BS) cephalosporin use was more common in these subpopulations of children.

**CONCLUSIONS:** Antibiotic use in early life was associated with the development of childhood asthma, a risk that may be reduced by avoiding the use of BS cephalosporins.

## Persistent Rhinitis and Its Relationship to Exhaled Nitric Oxide and Asthma\*

A Clinical Study of a Consecutive Series of Patients

Giovanni Rolla, MD, FCCP; Giuseppe Guida, MD; Enrico Heffler, MD; Iuliana Badiu, MD; Luisa Bommarito, MD; Antonella De Stefani, MD; Antonio Usai, MD; Domenico Cosseddu, MD; Franco Nebiolo, MD and Caterina Bucca, MD

Italy.

Correspondence to: Giovanni Rolla, MD, FCCP, Allergologia e Immunologia Clinica, Ospedale Mauriziano Umberto I, Largo Turati 62-10128 Torino, Italy; e-mail: grolla@mauriziano.it

### ABSTRACT

**BACKGROUND:** Rhinitis and asthma represent the manifestation of one syndrome. Our hypothesis is that in patients with symptoms of persistent rhinitis, lower airway inflammation, lower respiratory symptoms, and lung function abnormalities compatible with asthma are more

frequently associated with the diagnosis of allergic rhinitis (AR) and chronic rhinosinusitis (CRS) than with nonallergic rhinitis (NAR).

**METHODS:** One hundred eight of 590 consecutive patients referred in 1 year for rhinitis were enrolled on the basis of nasal symptoms lasting > 4 weeks. Asthma was diagnosed on the basis of symptoms and a positive bronchodilation testing result and/or methacholine hyperresponsiveness. Exhaled nitric oxide (FENO) was measured with the single exhalation method at 50 mL/s.

**RESULTS:** AR was diagnosed in 39%, NAR in

21%, and CRS in 40%. The prevalence of asthma was significantly higher in AR patients (33%) and CRS patients (42%) than in NAR patients (8.7%) [ $p = 0.036$  and  $p = 0.005$ , respectively]. FENO was significantly higher in patients with AR and CRS compared to patients with NAR (44.3 parts per billion [ppb]; 95% confidence interval [CI], 34

to 54 ppb; and 53 ppb; 95% CI, 42 to 64 ppb; vs 22 ppb; 95% CI, 18 to 27 ppb;  $p = 0.002$  and  $p = 0.001$ , respectively). Patients with asthma had FENO values significantly higher than patients without asthma (64 ppb; 95% CI, 51 to 77 ppb; vs 33.3 ppb; 95% CI, 28 to 39 ppb;  $p < 0.001$ ).

**CONCLUSIONS:** The diagnostic classification of persistent rhinitis helps to predict lower airway inflammation (increased FENO) and prevalence of asthma: AR and CRS are associated with higher mean FENO values and higher prevalence of asthma than NAR.

## Asthma Prevalence, Family Size, and Birth Order\*

Shmuel Goldberg, MD†; Eran Israeli, MD†; Shepard Schwartz, MD; Tzipora Shochat, MSc; Gabriel Izbicki, MD; Ori Toker-Maimon, MD; Eyal Klement, DVM and Elie Picard, MD

\*From the Departments of Pediatric Pulmonology (Drs. Goldberg and Picard) and Pediatrics (Drs. Schwartz and Toker-Maimon), and the Institute of Pulmonology (Dr. Izbicki), Shaare Zedek Medical Center; the Department of Medicine (Dr. Israeli), Hebrew University-Hadassah Medical Center; and the Israel Defense Forces Medical Corps (Mr. Shochat and Dr. Klement), Jerusalem, Israel.† These authors contributed equally to the study.

Correspondence to: Shmuel Goldberg, MD, Pediatric Pulmonology, Shaare Zedek Medical Center, PO Box 3235, Jerusalem 91301, Israel; e-mail: sgoldberg@szmc.org.il

### ABSTRACT

**BACKGROUND:** Asthma prevalence may be reduced in large families. The hygiene hypothesis suggests that older siblings protect their younger

siblings from asthma through a modulating effect on the still-maturing immune system. If the hygiene hypothesis is correct, asthma prevalence should be inversely related to birth order. The objective of this study was to examine the relationship between asthma prevalence, and family size and birth order.

**METHODS:** The medical records of 531,116 Israeli military conscripts were reviewed. The association between number of children in the family and the prevalence of asthma, and between birth order and the prevalence of asthma was assessed. Odds ratios for asthma by birth order and family size, adjusted for each other, were calculated.

**RESULTS:** Asthma was diagnosed in 26,833 male subjects (8.6%) and 15,079 female subjects (6.9%). Asthma prevalence was inversely related

to the number of children in the family ( $p < 0.001$ ). Among subjects who were the only child in the family, the prevalence of asthma was 7.3%. The prevalence increased to 8.95% among subjects from families with three siblings, and then progressively decreased as the number of siblings increased, and reached a trough of 0.58% in conscripts from families of 15 to 20 siblings. Asthma prevalence was similar for all birth orders.

**CONCLUSIONS:** In families with four or more children, asthma prevalence is inversely related to the number of children in the family. Asthma prevalence is similar for all birth orders. The similar asthma prevalence for all birth orders challenges the hygiene hypothesis as the mechanism for the decreased asthma prevalence in large families.

## The Association Between Small Airway Obstruction and Emphysema Phenotypes in COPD\*

Won-Dong Kim, MD, FCCP; Sean H. Ling, BSc; Harvey O. Coxson, PhD; John C. English, MD, FCCP; John Yee, MD; Robert D. Levy, MD, FCCP; Peter D. Paré, MD and James C. Hogg, MD, PhD, FCCP

\*From the Division of Pulmonary and Critical Care Medicine (Dr. Kim), Department of Internal Medicine, University of Ulsan College of Medicine, Seoul, Republic of Korea; The James Hogg iCAPTURE Center for Cardiovascular and Pulmonary Research, St. Paul's Hospital (Mr. Ling and Drs. Coxson, Levy, Paré and Hogg), the Department of Surgery (Dr. Yee), and the Department of Pathology (Dr. English), Vancouver General Hospital, University of British Columbia, Vancouver, Canada.

**CORRESPONDENCE** to: Won-Dong Kim, MD, FCCP, Division of Pulmonary and Critical Care Medicine, Asan Medical Center, University of Ulsan College of Medicine, 388-1 Pungnap-dong, Songpa-gu, Seoul 138-736, Republic of Korea; e-mail: wdkim@amc.seoul.kr

### ABSTRACT

**BACKGROUND:** Airflow limitation in COPD is due to a variable combination of small airway obstruction and centrilobular emphysema (CLE) and/or panlobular emphysema (PLE), but the relationship between these three different phenotypes is poorly understood. This study compares the severity of small airway obstruction in both forms of emphysema and determines its relationship with FEV1.

**METHODS:** We compared the lung histology of nonsmoking control subjects without emphysema (n = 10) to that of patients with CLE (n = 30) and PLE with (n = 8) and without  $\alpha$ 1-antitrypsin (AAT) deficiency (n = 11). The degree of airspace enlargement was measured using the mean interalveolar wall distance (IAWD) [mean linear intercept, Lm], and the evenness of airspace

destruction was assessed by the coefficient of variation (CV) of the IAWD. The severity of small airway obstruction was determined by dividing total wall area by the length of the basement membrane to obtain wall thickness.

**RESULTS:** Lm was greater in all three subgroups of emphysema than in control subjects, and in AAT deficiency than in PLE or CLE. The CV of IAWD was greater in AAT deficiency and CLE than in control subjects and in CLE than in AAT deficiency or PLE. Although small airway wall thickness was greater in CLE and PLE with AAT deficiency than in control subjects, the association between wall thickness and both Lm and FEV1 was observed only in CLE.

**CONCLUSIONS:** Small airway wall thickening occurs in CLE and PLE with AAT deficiency but is more closely associated with degree of emphysema and airflow limitation in CLE.

## Treatment of airway inflammation improves exercise pulmonary gas exchange and performance in asthmatic subjects

Hans C. Haverkamp, PhDab, Jerome A. Dempsey, PhDb, David F. Pegelow, MSb, Jordan D. Miller, PhDbc, Lee M. Romer, PhDbd, Marcus Santana, MDb, Marlowe W. Eldridge, MDbe

Received 18 September 2006; received in revised form 16 February 2007; accepted 8 March 2007 published online 25 April 2007.

Burlington, Vt, Madison, Wis, Iowa City, Iowa, and Middlesex, United Kingdom

**BACKGROUND:** Asthma is an inflammatory disease of the airways that can lead to impaired

arterial blood oxygenation during exercise.

**OBJECTIVE:** We asked whether treatment of airway inflammation in asthmatic subjects would improve arterial blood gases during whole-body exercise.

**METHODS:** By using a double-blind parallel-group design, 19 asthmatic subjects completed

treadmill exercise to exhaustion on 2 occasions: (1) before and (2) after 6 weeks' treatment with an inhaled corticosteroid (ICS; n = 9) or placebo (n = 10).

**RESULTS:** The ICS group had improved resting pulmonary function, decreased exercise-induced bronchospasm, and decreased postexercise sputum histamine during the posttreatment study

compared with that during the pretreatment study. In the ICS group exercise Pao<sub>2</sub> was significantly increased after treatment (84.8 to 93.8 mm Hg). Increased alveolar ventilation (arterial Pco<sub>2</sub> decreased from 36.9 to 34.1 mm Hg) accounted for 37% of the increased Pao<sub>2</sub> and improved gas exchange efficiency (alveolar-to-arterial Po<sub>2</sub> difference decreased from 22.5 to 16.3 mm Hg) accounted for the remaining 63% of the

increased Pao<sub>2</sub> after treatment. In the ICS group exercise time to exhaustion was increased from 9.9 minutes during the pretreatment study to 14.8 minutes during the posttreatment study.

**CONCLUSION:** Treatment of airway inflammation in asthmatic subjects can improve arterial blood oxygenation during exercise by (1) improving airway function, thereby allowing

increased alveolar ventilation during exercise, and (2) improving the efficiency of alveolar-to-arterial blood O<sub>2</sub> exchange.

**CLINICAL IMPLICATIONS:** In asthmatic patients ICSs not only attenuate exercise-induced bronchospasm but also improve arterial blood oxygenation during exercise.

## Filaggrin null mutations are associated with increased asthma severity in children and young adults

Colin N.A. Palmer, PhDa, Tahmina Ismail, MBBS, MSch, Simon P. Lee, MSc, Ana Terron-Kwiatkowski, PhDc, Yiwei Zhao, MDc, Haihui Liao, MDc, Frances J.D. Smith, PhDc, W.H. Irwin McLean, PhD, DSc, FRSEc, Somnath Mukhopadhyay, FRCPCH, PhDd

Received 5 March 2007; received in revised form 26 March 2007; accepted 3 April 2007 published online 26 May 2007.

Dundee, United Kingdom

**BACKGROUND:** Filaggrin is a key protein involved in skin barrier function. Filaggrin (FLG) null mutations are important genetic predisposing factors for atopic disease.

**OBJECTIVE:** To study the role of FLG null alleles in the clinical phenotype in children and young adults with asthma.

**METHODS:** FLG mutations R501X and 2282del4 were assayed in 874 subjects 3 to 22 years old

with asthma from Tayside. Lung function and disease severity were also studied.

**RESULTS:** The filaggrin mutations were significantly associated with greater disease severity for asthma. Independent of eczema, mean FEV1/forced vital capacity of FLG wild-type individuals differed from those carrying either FLG null allele (0.89 vs 0.86; P = .012). Individuals bearing FLG null alleles were more likely to be prescribed increased medication ( $\chi^2 = 10.3$ ; P = .001), with the homozygote null individuals having an odds ratio of 6.68 (95% CI, 1.7-27.0; P = .008) for being prescribed long-acting  $\beta$ -agonists in addition to inhaled steroids. FLG null alleles were also associated with increased rescue medication use (P = .004). Individuals with asthma and with

FLG null alleles were more likely to have eczema, and individuals with eczema tended to have more severe asthma; however, the association of FLG null alleles with all markers of asthma disease severity was similar in children with and without eczema.

**CONCLUSION:** FLG mutations are associated not only with eczema-associated asthma susceptibility but also with asthma severity independent of eczema status.

**CLINICAL IMPLICATIONS:** FLG status influences controller and reliever medication requirements in children and young adults with asthma.



[www.asthma.org.nz](http://www.asthma.org.nz)

## Asthma New Zealand / The Lung Association has been caught in the **WEB!**

The "Breathe Easy" Website was launched on the  
17<sup>th</sup> February 2006.

To access the services of Asthma New Zealand/the Lung  
Association, Asthma Auckland and partner societies go to:

[www.asthma.org.nz](http://www.asthma.org.nz)

This exciting innovation from Asthma New Zealand has been quite some time in the production, but when you view it you will see it has been worthwhile. The web site developers have kept the site colourful, interesting, simple and direct so that up to date information can be accessed by a simple click of the mouse. If you do not have internet access, remember that most libraries have computers with internet access available to the public, so why not have a look and explore our website

The home page displays our "Breathe Easy" logo and has an EMERGENCY Signal so you can quickly access steps on "What to do in an asthma emergency".

There is also an A-Z asthma glossary, providing definitions for the most common words used in association with asthma and Chronic Obstructive Pulmonary Disease (COPD). Some examples of these: spacers, triggers, wheezing etc.

The asthma question section covers frequently asked questions. Many people have similar questions and concerns about their asthma – the answer you want may be here.

The website will promote current news and events. This will be regularly updated to keep you informed. This will include our COPD monthly meeting dates for the year.

From within the website, you will be able to move easily from the Breathe-Easy homepage to the

Asthma New Zealand- the Lung Association or to the Asthma Auckland homepages and back again.

We welcome any feedback you have regarding our website, including anything you think we should add. As you can understand, a website is a living document and requires maintenance to keep the information relevant and up to date. We

will endeavor to achieve this.

Of further interest is the ability to download copies of some of our pamphlets and in time we hope to be able to include a download of our quarterly journal "The NZ Journal of Respiratory Health" O2.

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## Latest data pinpoints complexity & severity of influenza burden, reiterating need for teaching children cold and flu hygiene

Independent virologist and consultant to the World Health Organisation, Dr Lance Jennings, believes teaching children cold and influenza hygiene practice is an important addition to the range of measures the health sector takes to reduce the incidence of influenza-related illness.

"Viruses are continuously evolving, causing outbreaks in some years which are more severe and complex. We need to take care of our families and communities with a range of measures, in addition to vaccination and taking anti-viral medications," he says.

Dr Jennings is supporting the third successive Kleenex SneezSafe health education initiative underway in schools around the country. He says the SneezSafe 'squad' system, which encourages children to 'spread the safe-sneezing message and not the cold and flu virus', will help safeguard the influenza high-risk groups and the wider population over time.

According to the Institute of Environmental Science and Research (ESR) 2006 report recording the incidence of influenza-like illness in New Zealand, the influenza burden for babies and over 65s (the highest-risk group), **reached a 10-year high last winter.**

The report cautioned that the severity of the predominant Influenza A (H3N2) strain in 2006, particularly among high-risk groups, meant that 652 people were hospitalised — **the highest number on record in 16 years.**

On the upside, the data showed that GP visits for influenza-related illness had declined significantly across the lower-risk age groups - 38,239 New Zealanders visited a GP with influenza-like illness in 2006, 19% lower than the 2005 total of 47,108.

The Kleenex SneezSafe teaching programme was first offered to pre-schools in 2005, and in 2006 it was adopted by new entrants' teachers in primary schools. In 2007, junior and middle syndicate leaders of primary schools, head teachers of pre-schools, and public health nurses throughout the country have received free teaching kits.

The makers of Kleenex Anti-Viral tissues have developed and funded the Kleenex SneezSafe initiative, supplying more than 5000 schools and pre-schools with free kits including 30-minute lesson guides, classroom posters, fun science facts about safe-sneezing, SneezSafe SQUAD stickers, and a new on-line VIRTUAL SNEEZE component (allowing children to witness a risky sneeze on-line without catching it) at [www.sneezsafe.co.nz](http://www.sneezsafe.co.nz).

Lesson content for Kleenex SneezSafe has been designed for the 'Body Care & Physical Safety' key learning area of New Zealand primary schools' health curriculum, and the technical content has been verified by the Ministry of Health.



### Most prolific spreader of cold and flu virus particles = the sneeze

Dr Jennings first investigated the spread of cold virus particles in an Antarctic-based study 28 years ago. He says it is scientifically correct to focus a health education programme of this kind on the sneeze. Of the various means of transferring cold and flu virus particles by air, (e.g. sneezing, coughing, nose-blowing, speaking, laughing), the sneeze is believed to be the most prolific vehicle for the spread of live cold virus particles from person to person.

### South Canterbury hardest hit by influenza in 2005 and 2006

According to weekly Influenza Surveillance statistics tracked by ESR, South Canterbury was the only region in the country where GP consultations for patients with 'influenza-like illness' (ILI) exceeded 400 per 100,000 practice patients in the peak of the flu season in both 2005 and 2006. South Canterbury was joined by Eastern Bay of Plenty, Hawkes Bay, Taranaki and Hutt in 2005, when the influenza peak came earlier and was more widely felt than in 2006.

This information is sourced from  
[http://www.surv.esr.cri.nz/virology/influenza\\_](http://www.surv.esr.cri.nz/virology/influenza_annual_report.php)  
annual\_report.php

**The VIRTUAL SNEEZE demonstrates sneeze hygiene ... SAFELY!**

To experience the VIRTUAL SNEEZE teachers and students can visit [www.sneezesafe.co.nz](http://www.sneezesafe.co.nz), where they see a range of animated sneezes in action without exposing themselves to any cold and flu viruses. The safe sneezes include: the 'No. 1 Safe Sneeze', which is trapped in a virucidal tissue and binned; the 'Trap and Wash' sneeze which is trapped with cupped hands and washed down the sink; and the last resort, no-hands 'Coming Ready or Not' sneeze which is trapped in the crook of the elbow with live virus particles isolated on the fabric of the sleeve. The risky 'Spreadable Edible' sneeze isn't trapped at all, and spreads all over people and surfaces within a one-metre radius, illustrating to the children the risks associated with sneezing unsafely.

**Virucidal tissue technology has enhanced cold and flu hygiene**

Dr Jennings says the need for hand-washing after every sneeze is lessened where a virucidal tissue is used to trap a sneeze. When moisture from a runny nose, cough or sneeze comes into contact with the treated tissue's inner virucidal layer, 99% of cold and flu viruses are killed in the tissue before they can spread. Kleenex Anti-Viral tissues are the only virucidal tissues available and have



been tested to kill Influenza A and B (causes of the flu), Rhinoviruses Type 1A and 2 (leading causes of the common cold) and Respiratory Syncytial Virus (RSV – leading cause of lower respiratory infection in children).

**Westport South Primary taught 1670 locals to sneeze safely in 2006**

Fourteen 5-year-olds from the new entrants' class at Westport South Primary School took up the challenge of teaching their community to be SneezeSafe in 2006. The children taught 1670 people how to sneeze safely - an average of 119 people per child – earning the national title 'Top SneezeSafe Squad'. Class teacher Annette Jones said: "We were really involved with the SneezeSafe message, taking children to other schools, pre-schools and aged people's groups. One outlying school was two hours' drive away over a windy track. We've even been to nursing homes and the Fire Brigade. Everywhere we went we asked people to pass the message on."

For interviews with Dr Lance Jennings and further information, please contact Sally Elton Ph. 09 445 4585 / 0274 980 568; Email [sally@elton.co.nz](mailto:sally@elton.co.nz)

Released by Kimberly-Clark New Zealand  
The makers of Kleenex Anti-Viral Tissues



**The Night Katie Couldn't Breathe**

The September of 2006 is one which Rebecca McMillan will not easily forget. As a young mother devoting her time to the care of her 2 children under 5 years, Rebecca's life was very busy.

Last year was difficult as it seemed that someone in the family always had a cold. Frequent visits were made to the local doctor and pharmacy, although Sophie and Katie were normally vibrantly strong healthy girls.

Katie was no stranger to the local emergency services. She had developed a fondness for putting small objects such as peas up her nose and there had already been a few hasty dashes to see the doctor. She loved to put lots of plasters on her legs pretending to be injured and could at times be a little drama queen complaining of a sore ear or sore throat that proved to be mainly in her imagination when examined by the doctor.

Then one day when she had a cold Katie asked to be taken to the doctor. Not yet 3 years old and in view of her history Rebecca reluctantly took her. Upon examination of Katie's chest the doctor diagnosed bronchial asthma and took Katie and Rebecca to a side room to give Katie a nebuliser. The noise of the machine was frightening to Katie and having to put a mask on was not an option at that time. The protest was very loud. She was given Redipred to counteract the inflammation in her lungs and Ventolin to use via a mask and spacer. The doctor advised Rebecca to see how things went and told her

to go to Shore Emergency Care. Once again in her now traumatised state the mask wasn't an option as Katie was very distressed by now. Rebecca finally managed to give her Ventolin via the mask when she had fallen asleep. Still concerned, Rebecca decided to sleep in Katie's room that night. It wasn't a restful night. Katie wheezed noisily into the night and her breathing was very laboured. Rebecca was naturally very concerned by the loud wheezing noise and, as it worsened, decided to visit the emergency doctor at midnight. Katie was treated again with Redipred which she promptly vomited. Some more Ventolin was given when she went to sleep. The next day she was a bit wheezy but following that she was fine.

Rebecca felt most alarmed by the dreadful noise of the wheezing. This certainly is a symptom of asthma.

The airways in a person who has asthma are over-sensitive, and are irritated easily. The irritation causes the inside of the airway to become inflamed and swollen and the muscles surrounding the airway walls tighten. These two processes narrow the airway passage, making breathing very difficult at times. The noise of wheezing normally occurs upon expiration and can be very frightening.

Other signs and symptoms of an asthma attack are cough, complaining of a tight chest, and shortness of breath.

An important feature of asthma is that symptoms vary from person to person and may also vary from day to day. One day symptoms may not be so bad, while another day you may have difficulty performing the easiest of daily activities.

Katie was a little wheezy the next day and has remained asymptomatic for months. It is possible that her asthma may return if she gets another respiratory infection or if other triggers irritate her airways. The diagnosis has been made that she has bronchial asthma.

Asthma is chronic; that means it is present in the airways all the time. It becomes acute, when symptoms get a lot worse this is when it is most distressing.

References: Some answers to Asthma; brochure by Asthma New Zealand Inc.

Heather McMillan



**Yes! I want to support Asthma Auckland**

Name: \_\_\_\_\_  
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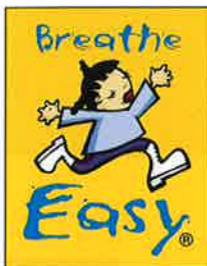
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**Thank you for helping us to fight asthma and make New Zealand breathe easy**

### Asthma New Zealand's partner societies around New Zealand:

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### Questions, Letters, Articles, Advertisements

O2 Journal welcomes dialogue with readers. Whether you are a person with asthma, a company involved in the sector, or a potential advertiser, we welcome your enquiries and communication.

#### Contact:

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References: 1. PHARMAC. Notification of changes to the Pharmaceutical Schedule (Letter), 10 July 2006. 2. IMS Report May 2006.

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