



Is moisture causing  
health problems  
in your home?



Heart of a Healthy Home™

ISSN 1176-7847

This issue is proudly sponsored by:



Boehringer  
Ingelheim



**asthma**  
NEW ZEALAND  
THE LUNG ASSOCIATION

For your  
protection and safety



**This emblem can speak  
for you when you cannot  
speak for yourself**

**Ask your doctor for details  
or call toll-free 0800 840 111**

Email: [medicalert@clear.net.nz](mailto:medicalert@clear.net.nz) or visit our website: [www.medicalert.co.nz](http://www.medicalert.co.nz)

**asthma**

NEW ZEALAND

THE LUNG ASSOCIATION

THE NZ JOURNAL OF RESPIRATORY HEALTH



# contents

- 4 message to reader
- 5 asthma course
- 6 another blue inhaler
- 9 exercise induced asthma
- 11 the hygiene hypothesis and asthma
- 14 the great indoors
- 16 asthma management tips in winter
- 17 mould and your home
- 19 kid's page
- 20 north & south
- 25 what are the signs of an exacerbation of chronic obstructive pulmonary disease
- 26 snippets of information
- 28 newstream



11



14



19



20



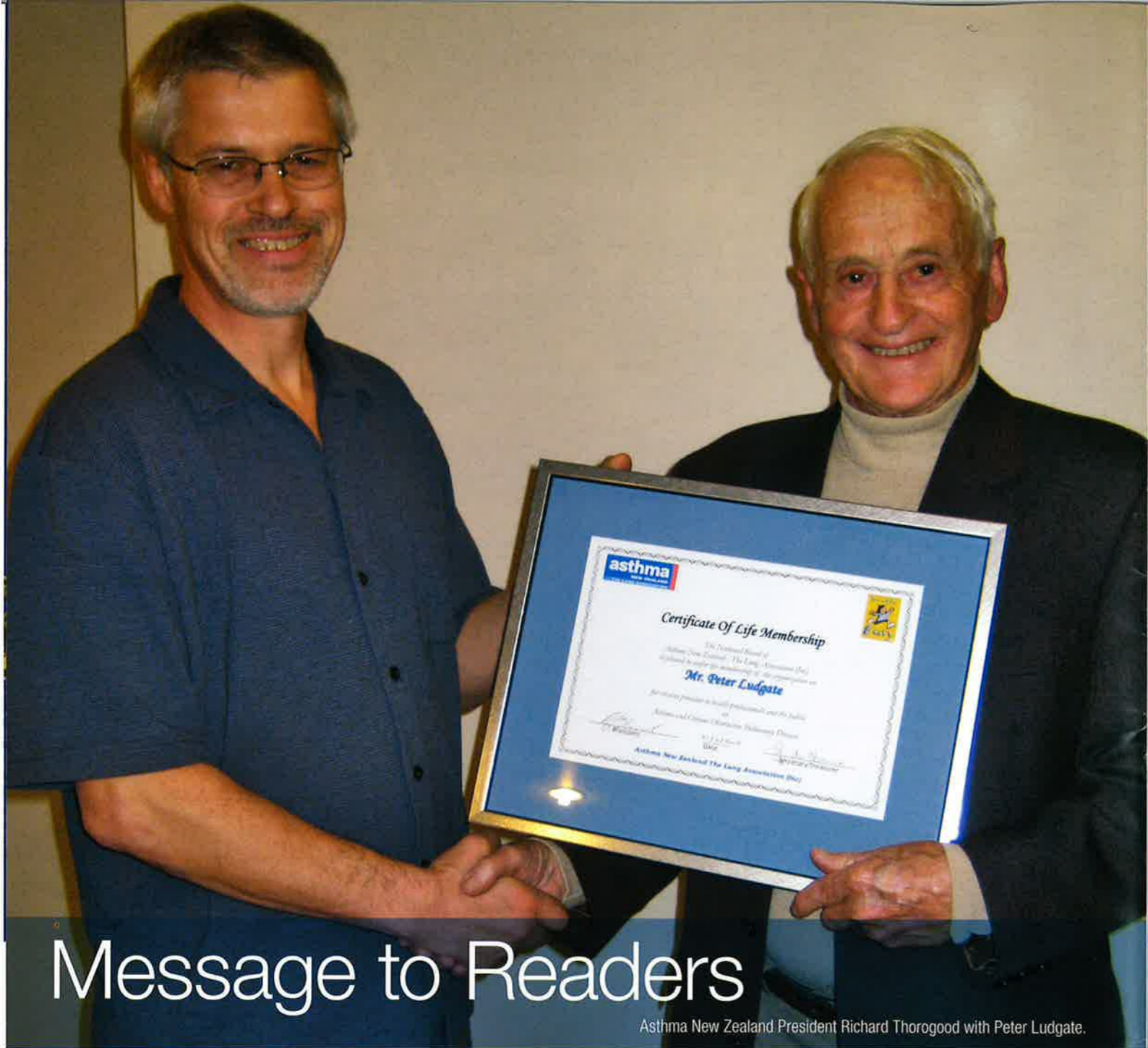
25

**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**  
Asthma New Zealand

**DISCLAIMER:** Views expressed in articles and advertisements do not necessarily represent the views of Asthma New Zealand - The Lung Association. Whilst all reasonable efforts have been made to ensure the accuracy of information, the authors, publisher and editorial committee shall not be responsible or in any way liable for errors, omissions or inaccuracies in the publication and any consequences arising therefrom. The inclusion or exclusion of any product does not mean that Asthma New Zealand - The Lung Association advocates or rejects its use. No material from the publication may be reproduced without prior permission from the editor.



## Message to Readers

Asthma New Zealand President Richard Thorogood with Peter Ludgate.

### Dear Readers

Asthma New Zealand – the Lung Association (Inc) recently held its 2007/2008 Annual General Meeting in Rotorua on the 21/22 June 2008 weekend. A main focus of the Meeting was to award Life Membership to Mr Peter Ludgate (Rotorua Asthma Society), a former member of the Asthma New Zealand Board. Peter, a well known chemist/business man brought considerable skills to the Board and his wise counsel was appreciated. Asthma New Zealand wishes Peter, Elaine and family every best wish for the future and he continues to be an active member of the Rotorua Asthma Society.

Asthma New Zealand continues to provide education courses in Asthma and COPD through the Unitec Institute of Technology. Over 700 nurses across New Zealand have successfully completed these courses which mean there is a wealth of experience and knowledge across the country. The ultimate goal is the establishment of nurse-led asthma clinics across New Zealand. Nurse-led asthma clinics provide the expertise, the time and the personal service to up skill people with asthma, and their families, so that they can lead a full life unaffected by their asthma. "Control your asthma; don't let your asthma control you" is the philosophy underpinning the new approach. The courses continue to be over-subscribed, so the future is bright!

In New Zealand, Pharmac continues to follow a philosophy of the "cheapest" price for pharmaceuticals, rather than what works more effectively for the patient. We now have three "relievers" in New Zealand, Ventolin, Respigen and Salamol (the Asthma Foundation, Wellington, product). The NZ Paediatric Society has made the statement "that children should not be unnecessarily exposed to alcohol". Enough said! It is hoped that the new National Government will rejig Pharmac's philosophy and mode of action. Price should not be the sole arbiter for the patient's needs.

Asthma New Zealand – the Lung Association (Inc) is keen to have feed-back on its O2 magazine and suggestions on how we can do better. Let's hear from you, our readers!

Sincerely

**G.A. Hanna**  
Executive Director



## Asthma & COPD Nursing Course Information

Applications are now invited from registered nurses wanting to enrol in the Asthma New Zealand/Unitec, Asthma and COPD Nursing courses in February and March 2009. The programmes are offered by distance learning. The primary aim of the Asthma and COPD Nursing Courses are to provide nursing health professionals with a high level of evidence based asthma and COPD knowledge that promotes best practice, and is consistent with national policy.

In the 8 years since commencement of the Asthma Nursing Course and 6 years since commencement of the COPD Nursing Course, 749 nurses have enrolled over 24 intakes. Many applicants have not undertaken any additional study since completing their initial nursing education, and for some this has 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 these Asthma and COPD Nursing courses within Unitec Bachelor of Nursing Programme. Asthma Nursing Course is a level 7, 24 credit course and COPD Nursing Course is a level 7, 12 credit course. A grant towards the cost may be available for students.

For an enrolment form for the first Semester 2009 Asthma and COPD Nursing Courses please contact:

Ann or Swarna

**Asthma New Zealand/The Lung Association**

P O Box 67-066, Mt Eden, Auckland

Phone 09 623 0236- Ex 804 Fax 09 623 0774

Email: [annw@asthma-nz.org.nz](mailto:annw@asthma-nz.org.nz) or [swarnah@asthma-nz.org.nz](mailto:swarnah@asthma-nz.org.nz)



# Another blue inhaler??

As of the 1st of June 2008 PHARMAC (who is the government body who decides which drugs are funded in New Zealand), have introduced another fully funded Salbutamol inhaler called Respigen in addition to the already fully funded Salamol and partly funded Ventolin inhalers. All three inhalers contain Salbutamol 100mcg per dose. The reason Pharmac have introduced Respigen is because it was slightly cheaper than Salamol. Salamol suppliers have also dropped their price to match Respigen and therefore the decision to fully fund both Respigen and Salamol has been made by PHARMAC. You will still be required to pay a part charge for Ventolin.



## What is the difference between them?

All of the three inhalers contain Salbutamol, which belongs to a group of medicines called short-acting B2 agonists, bronchodilators or are otherwise known as relievers. Salbutamol works directly on the muscles of the airways in the lungs and helps the muscles to relax. This opens up the airways in your lungs within 5 minutes of taking it and helps to relieve the symptoms of asthma such as chest tightness, wheezing, shortness of breath and coughing<sup>1</sup>. Salamol and Respigen have a different lubricant (a product which helps the medication and the propellant in the inhaler to eject) to Ventolin. Both the Salamol and Respigen lubricant contains ethanol (alcohol) in small quantities which means that Salamol and Respigen inhalers taste different and some children do not like the taste of the alcohol. Ventolin does not contain any alcohol. Inhalers containing alcohol have been known to block more easily. Therefore to try and prevent this from happening it is essential to wash the inhaler once a week. To clean it remove the metal canister from the plastic case and remove the dust cap from

the case, wash the case and dust cap in warm water, dry the case and the dust cap before replacing the metal canister in the case.

Asthma Auckland advocates the use of Ventolin as the first choice for people with asthma as it does not contain alcohol and we believe that children should not be unnecessarily exposed to alcohol, this is supported by paediatricians<sup>2</sup>. However if you are not able to pay the part charge for Ventolin the Salamol and Respigen inhalers do contain Salbutamol which is the same active ingredient in Ventolin which relieves asthma symptoms. The Bricanyl Turbuhaler is still fully funded and provides a dry powder reliever inhaler alternative to Salbutamol.

Victoria Hollier

<sup>1</sup> MEDSAFE. (2007) Consumer Medicine Information: Respigen found on [www.medsafe.govt.nz/consumers/CMI/r/respigen.htm](http://www.medsafe.govt.nz/consumers/CMI/r/respigen.htm)  
<sup>2</sup> Gillies, J., Brown, J., Byrnes, C., Farrell, A., Graham, D. (2005) Pharmac and Ventolin in New Zealand. *The New Zealand Medical Journal*, 118 (1220).

©Primary Care Respiratory Journal (2008); 17(2): 111-113

## Alcohol-based pressurised metered-dose inhalers for use in asthma: a descriptive study

Maryam Alrasbia, \*Aziz Sheikh

<sup>a</sup> Hon. Clinical Research Assistant, Allergy & Respiratory Research Group, Division of Community Health Sciences: GP Section, University of Edinburgh, Scotland, UK

<sup>b</sup> Professor of Primary Care Research & Development, Allergy & Respiratory Research Group, Division of Community Health Sciences: GP Section, University of Edinburgh

Received 18th November 2007; revised version received 4th February 2008; accepted 9th February 2008

Primary Care  
RESPIRATORY JOURNAL  
[www.thepcrj.org](http://www.thepcrj.org)

### Abstract

**Background:** Chlorofluorocarbons (CFCs) have historically served as the propellants of choice in pressurised metered-dose asthma inhalers, but concern has been raised in recent decades regarding their damaging effect on the ozone layer. Among the alternative propellants being considered is alcohol, which can be used as a co-solvent in asthma inhalers. Healthcare professionals need to be aware of alcohol-containing inhalers, since certain populations may have religious and/or cultural concerns regarding the use of such preparations.

**Objectives:** To identify pressurised metered-dose asthma inhalers which contain alcohol-based propellants.

**Methods:** We searched the British National Formulary to identify companies that manufacture asthma treatments and wrote to them to enquire about which of their products contained alcohol and if so in what percentage. These direct contacts were supplemented by searching medical databases and the Internet for additional information.

**Results:** We identified 11 manufacturers of asthma inhalers, seven of which produced pressurised metered-dose inhalers; of these, six were willing to disclose the requested information, and information on the seventh product was obtained from an alternative valid source of information. Most CFC preparations contain alcohol, but CFC- and alcohol-free preparations do exist.

**Conclusions:** Clinicians need to be aware that the majority of CFC-free inhalers contain alcohol. Alcohol-free, and CFC- and alcohol-free, preparations are available for the delivery of both rescue and preventative treatment and these should be considered for use in those patients who may have concern about alcohol-based treatments.

© 2008 General Practice Airways Group. All rights reserved. M Alrasbia and A Sheikh. *Prim Care Resp J* 2008; 17(2): 111-113. doi:10.3132/pcrj.2008.00020

**Keywords** inhalers, alcohol, metered-dose inhaler, CFC, concordance

### Introduction

Asthma is a serious global health problem that affects people of all ages throughout the world. Poorly controlled asthma can place severe limits on daily life, can result in considerable morbidity, and may in some cases prove fatal. Added to this personal burden, asthma also poses a significant cost to the economy through absence from school or work, lost productivity and treatment costs. Fortunately, however, asthma is a manageable condition for the vast majority of sufferers, given the increasing array of effective treatments that are now available.<sup>1</sup>

Drugs for asthma can be administered orally, parenterally, or by inhalation, with inhaled preparations being the mainstay of treatment. With inhaled preparations, the drug is delivered directly to the bronchial tract. Pressurised metered-dose inhalers are an effective, convenient and very widely used means of delivering these inhaled treatments.<sup>2</sup>

Chlorofluorocarbons (CFCs) have historically served as the propellant of choice for use in asthma inhalers.<sup>3</sup> However, as noted by the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer, such propellants pose a considerable threat to the earth's ozone layer, contributing to the phenomenon of global warming.<sup>4</sup> The search has since been underway for alternative propellants which have comparable personal safety and delivery profiles to replace CFCs.

We conducted this study to determine the extent to which alcohol-based propellants are being used in asthma inhalers and also to identify which products contain alcohol. This information is important clinically, since, for religious and/or cultural reasons, some people may object to using alcohol-containing treatments and may prefer to use non-alcohol containing products if suitable alternatives exist.<sup>5</sup> This concern may apply to medication taken orally, and also to treatments taken through other routes such as by inhalation or through the skin.<sup>6</sup>

### Methods

We searched the British National Formulary (BNF) to identify inhaled treatments for use in asthma, and then identified the manufacturers of these products.<sup>7</sup> The BNF was scrutinised for details about which inhalers contained CFCs and which were CFC-free. Manufacturers of all relevant companies were contacted by email or post; we asked whether or not they produced pressurised metered-dose inhalers, and if so, which Alcohol-based pressurised metered-dose inhalers for use in asthma: a descriptive study ones used alcohol-based propellants and in what concentration. Non-responders were followed-up with a reminder email. In the case of those companies unwilling to provide the requested information, we searched the electronic Medicines Compendium to obtain data on excipients.<sup>8</sup> All searches were conducted in the period June 2007 – January 2008.

Table 1. CFC and alcohol use in asthma inhalers

Company	Products	CFC- containing (yes/no)	Response from company regarding alcohol (ethanol) content/electronic Medicines Compendium
Altana- a Nycomed Company	Alvesco aerosol inhaler	No	Company declined to provide any information; electronic Medicines Consortium describes this as containing ethanol
AstraZeneca	Pulmicort aerosol inhalers	Yes	Does not contain ethanol
Boehringer-Ingelheim	Atrovent aerosol inhaler	No	Contains 8.4mg 100% ethanol per puff (50ul of the product)
	Combivent aerosol inhaler	Yes	Does not contain ethanol
GlaxoSmithKline(GSK) Allen and Hanburys Ltd	Ventolin Evohaler Serevent Evohaler Flixotide Evohaler Sereotide Evohalers	No	None of these products contain ethanol
	Becotide Aerosol Beclforte Aerosol	Yes	
Teva UK Limited (IVAX)	Airomir Autohaler 100mcg Airomir MDI 100mcg	No	Contains 166.49mg/ml ethanol
	Beclazone Easi-Breathe Beclazone MDI Aerobec autohalers	Yes	None of these products contain ethanol
	Qvar Autohaler 50mcg Qvar Autohaler 100mcg Qvar Easi-Breathe 50mcg Qvar Easi-Breathe 100mcg Qvar MDI 50mcg Qvar MDI 100mcg	No	Contains 1.67g ethanol per 200 dose canister
	Salamol Easi-Breathe 100mcg	No	Contains 0.971g ethanol per 200 dose canister
	Salamol CFC Free 100mcg		
Sanofi-Aventis	Intal aerosol inhaler	Yes	Do not contain ethanol as an excipient
	Tilade CFC-free inhaler	No	
Trinity Chiesi	Atimos modulite aerosol inhaler	No details in BNF	Contains 9mg of ethanol per actuation, equivalent to an actual volume of ethanol of 0.011 ml
	Clenil modulite aerosol inhaler	No	

# Exercise induced Asthma

## Results

Through searching the BNF, we identified 11 companies manufacturing asthma inhalers. All 11 companies responded to our request for information, three indicating that they did not produce pressurised metered-dose inhalers. Of the eight relevant companies, one no longer marketed pressurised metered-dose inhalers, leaving seven eligible companies. Six of these seven companies were willing to provide the requested information; additional information on the excipients for the inhaler made by the seventh company was available from the electronic Medicines Compendium. Table 1 details the inhaler products that are available in the UK, together with information on whether or not they contain CFCs, and companies' responses regarding alcohol use in their preparations.

## Discussion

We have identified a number of pressurised metered-dose inhaled reliever and prophylaxis preparations for use in asthma that are either CFC- or alcohol-free. There is, in addition, a limited choice of preparations that are both CFC- and alcohol-free. Faced with patients who may have concerns about possible alcohol-based preparations, clinicians and patients therefore have options available to them that they may hitherto have been unaware of.

The main limitations of this work are that one of the seven relevant companies declined to provide the requested information – albeit that we were able to obtain relevant data on this company's product through another valid route – and that we focused on preparations available in the UK. Not all of these preparations may be available in other parts of the world and there may in addition be other preparations available outside of the UK which we have failed to consider.

However, this is, as far as we are aware, the first such study of its kind and we hope that its findings will help clinicians and patients to choose preparations in a way that will facilitate mutual trust and concordance. This is particularly relevant considering the fact that the Muslim community – for whom this information is most likely to be of greatest relevance – has the poorest overall health outcomes in the UK and is one of the groups of people who are at particularly high risk of experiencing poor outcomes from asthma – facts which, to an extent, reflect the lack of confidence in the treatments that they are issued.<sup>9,10</sup> What is particularly important to note in this respect is that many of those who have such concerns about alcohol-containing products will subscribe to the rule of Islamic law which dictates that 'whatever is prohibited in large amounts is also prohibited in small amounts'.<sup>11</sup>

The BNF should consider making information of this

kind available to clinicians in order to facilitate informed choice in important clinical decision-making.

## Acknowledgements

We are grateful to the companies for sharing this information with us.

## Funding

None.

## Contributorship

MR undertook data collection and led the writing of the paper. AS conceived this study, oversaw data collection and commented on several drafts of the paper.

## Conflict of interest declaration

AS chairs the National Clinical Assessment Service's Equality and Diversity Group and is a former chair of the Research and Documentation Committee of the Muslim Council of Britain. AS is an Assistant Editor of the PCRJ, but was not involved in the editorial review of, nor the decision to publish, this article.

## References

1. Global Initiative for Asthma (GINA). Global strategy for asthma management and prevention, 2006. Available from: <http://www.ginasthma.org/> (last accessed 18 October 2007)
2. BTS/SIGN. British guideline on the management of asthma, 2007 update. Available from: <http://www.sign.ac.uk/guidelines/fulltext/63/index.html> (last accessed 18 October 2007)
3. Sciarra JJ. The next generation of metered dose inhalers. Available from: [http://www.uspharmacist.com/oldformat.asp?url=newlook/files/Feat/ACF2F19\\_cfm&pub\\_id=8&article\\_id=50](http://www.uspharmacist.com/oldformat.asp?url=newlook/files/Feat/ACF2F19_cfm&pub_id=8&article_id=50) (last accessed 18 October 2007)
4. United Nations Environment Programme. Montreal protocol on substances that deplete the ozone layer. Available from: <http://ozone.unep.org/pdfs/MontrealProtocol2000.pdf> (last accessed 18 October 2007)
5. Gafrad AR, Mynors G, Hunt P, Sheikh A. Patient choice in medicine taking: religious sensitivities must be respected. Arch Dis Child 2005;90:983-4.
6. Ahmed QA, Memish ZA, Allegranzi B, Pittet D. WHO Global Patient Safety Challenge. Muslim health-care workers and alcohol-based handrubs. Lancet 2006;367:1025-7.
7. British Medical Association and Royal Pharmaceutical Society of Great Britain. British National Formulary, 2007.
8. electronic Medicines Compendium. Available from: <http://emc.medicines.org.uk/> (last accessed 27 January 2008).
9. Sheikh A. Should Muslims have faith based health services? BMJ 2007;334:74.
10. Netuveli G, Hurwitz B, Levy M, Fletcher M, Barnes G, Durham SR, Sheikh A. Ethnic variations in UK asthma frequency, morbidity, and health-service use: a systematic review and meta-analysis. Lancet 2005;365:312-17.
11. Gafrad AR, Sheikh A. Medical ethics and Islam: principles and practice. Arch Dis Child 2001;84:72-5.

## What is Exercise Induced Asthma?

Asthma can be triggered by many things such as allergies and colds or flu but did you know that some people's asthma can be triggered by exercise? Exercise Induced Asthma (known as EIA for short) can be one of several triggers for a person with asthma; however, for some people EIA is their only asthma trigger. We normally breathe in air through our nose, the nose helps to warm, moisten and filter the air before it reaches our lungs however when we exercise we start to breathe deeper and faster and we draw in air through our mouths instead of our nose, this causes the air to be unfiltered, cold and dry which triggers asthma. The airways constrict and the lining in the airway becomes inflamed and mucus forms, this causes the symptoms of asthma such as a wheeze, cough, tight chest and shortness of breath. People with EIA generally develop symptoms of asthma within 5-10 minutes of starting exercise and usually peaks 5-10 minutes after finishing exercise.



## What are the symptoms of Exercise Induced Asthma?

Shortness of breath (feeling puffed) after a few minutes of starting exercise

- A tight feeling or a sore feeling in your chest when you are exercising
- Wheezing and/or coughing
- Stopping exercise because you feel unwell
- Extreme fatigue

Symptoms in children may be more subtle:

- Children can complain of not being able to keep up with friends in games and sports
- Children may also say they don't like games or avoid participating

If you think that you have any symptoms of EIA and have not been diagnosed with asthma, please contact your local doctor.

## What do I do if I get these symptoms while I am exercising?

- STOP and take some slow deep breaths
- Take your blue reliever inhaler
- When your symptoms improve you will be able to carry on

## What can I do to help manage my Exercise Induced Asthma?

- Exercise is very important for people with asthma, it helps to strengthen the muscles used for breathing and over time may even help to improve your EIA symptoms. If you have asthma it is important that you participate in sports/exercise to help manage your asthma.
- You can help prevent the symptoms of EIA by taking 2 puffs of your blue reliever inhaler 10-15 minutes before you start your exercise.
- Make sure you do some warm up activity 10-15 minutes before

your exercise, this will help to slowly increase your heart and breathing rates gradually.

- Also it is important to do some cool down exercises to get your heart and breathing rates back to normal slowly.
- Avoid exercise when you have a cold or respiratory tract infection.
- Try and avoid exercising in extremely cold weather
- If you smoke, quit smoking
- EIA can be managed and should not stop you from participating in exercise. Make sure you let your PE teacher or sports coach know that you have EIA. Ensure that they know what to do in an emergency and make sure you take your blue reliever inhaler with you when you are exercising or playing sports.

Victoria Hollier

**References:**  
eMedicine Health (2007) Exercise Induced Asthma found on [http://www.emedicinehealth.com/exercise-induced\\_asthma/article\\_em.htm](http://www.emedicinehealth.com/exercise-induced_asthma/article_em.htm)  
Global Initiative For Asthma (2006) Global Strategy For Asthma Management And Prevention GINA

### ALLERGEN BARRIER BEDDING COVERS

PROVEN EFFECTIVE PROTECTION FROM DUST MITE ALLERGEN



## MiteGuard<sup>2</sup>

RECOMMENDED FOR MITE-ALLERGIC SUFFERERS OF ASTHMA, ECZEMA AND CHRONIC RHINITIS

- PROVEN EFFECTIVE - Independently tested by Allergy Specialists
- COMFORTABLE - Precision microweave polyester-cotton fabric
- QUALITY - Made in NZ, 5 year manufacturer's warranty

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

Available from Asthma Societies  
phone: (09) 817 4669 for information, e-mail : [info@allergencontrol.co.nz](mailto:info@allergencontrol.co.nz)



## Paint without the headache

Don't put up with nasty odours and high VOC paints next time you redecorate. Make a healthy choice and choose from a full range of Environmental Choice approved paints from your local Resene ColorShop.

Call 0800 RESENE or visit [www.resene.co.nz](http://www.resene.co.nz) for your nearest ColorShop.

# Resene

the paint the professionals use

# BLOWS YOUR OLD PUFFER AWAY



Get the confidence to be active with asthma using the new Sports-haler.

- Retractable twist action mouthpiece
- Medication and mouthpiece protected when device closed
- Reusable/refillable
- Compact slim design
- Fashionable/functional

Use only as directed and consult your pharmacist to confirm the reusable Sports-haler suits your asthma medication. For more information go to

[www.sports-haler.com](http://www.sports-haler.com)

Always read the instructions and use strictly as directed. Not suitable for all asthma relievers. Ask your pharmacist if reusable Sports-haler is suitable for your asthma medication.  
USL Medical Consumer Products AK NZ Phone NZ 0800 658 814

**sports-haler™**  
ASTHMA RELIEF WITHIN REACH



Available at pharmacies nationwide and from Asthma NZ  
Asthma NZ 581 Mt Eden Road Auckland



## The hygiene hypothesis and Asthma



Not as simple as eating dirt!

**Richard Thorogood**

We're too hygienic for our own good – that is the basis of the *Hygiene Hypothesis* – the currently accepted theory of why allergic diseases including asthma are continuing to increase at an alarming rate.

Asthma prevalence has doubled every ten years for the last 2 to 3 decades. But this trend has only been seen in westernised countries and not in poorer "third world" countries, so there appears to be a connection between the prevalence of allergic disease and our higher standard of living. Genetic differences cannot explain the speed with which these changes are occurring, so lifestyle changes during this period are the most likely culprit. What has changed over the last 20 to 30 years? We can certainly keep ourselves and our homes more "germ-free" with all the antiseptic sprays, wipes and soaps that are now available and children seem to live a more protected lifestyle, with far more time spent in front of the television or computer compared

to the "rough and tumble" outdoor games of older generations. This reduced exposure to infection is an attractive theory for the increase in allergic diseases but in common with most fields of research, as more is found out, more questions arise. This is certainly true of the *Hygiene Hypothesis* which, as the title states is "not as simple as eating dirt".

### Origins of the Hygiene Hypothesis

A medical researcher in 1989 discovered that children from large families are less likely to suffer from allergic diseases, compared to children with fewer brothers or sisters. He suggested that children

who caught frequent infections from their siblings could be protected in some way from developing allergies. The *Hygiene Hypothesis* that evolved from this observation predicts that exposure to microbes during a critical early period of life is essential for the immune system to develop "normally". Children whose immune systems do not receive this stimulus are more likely to develop allergies.

Subsequent research by immunologists and epidemiologists largely supports the hypothesis, including a recent study suggesting the critical period for exposure to microbes could begin at the time of birth. It was found that babies delivered by Caesarean section had a 20% greater risk of developing asthma compared to children delivered vaginally.

The use of antibiotics in infancy could also be depriving our children of essential "normal" stimuli to the immune system. A recent analysis of research conducted over the last forty years found a small but significant increase in the risk of developing asthma for children who had received at least one course of antibiotics in their first year of life.

Another supporting piece of evidence comes from a study comparing allergy rates in neighbouring countries Finland and Russia. It found that drinking water with high or intermediate bacterial counts decreased the risk of allergy to about one third compared to drinking clean water and this was independent from other possible causative factors.

But the increase in asthma prevalence is not just about a lack of childhood infections.

Even exposure to non-infectious bacterial fragments could play an important role. Children growing up on farms, particularly dairy farms have a significantly lower rate of allergy compared to those growing up in urban environments and a link has been made to the high concentrations of the bacterial cell wall component called endotoxin or lipopolysaccharide typically found in the farm environment. This provides more evidence that an imbalance in the immune system is behind the rise in asthma and allergies. Microbial fragments are primarily recognised by the innate side of our immune system, which responds rapidly to foreign substances as opposed to the adaptive side of our immune system that responds more slowly but more specifically and which develops our long term immunity. It is suggested that frequent stimulation of our innate immune system at critical early stages of life could favour the development of tolerance to potential allergens rather than the development of an allergic type response.

The pathway through which this occurs is likely to be at the cellular level, involving regulation of the Th1 / Th2 lymphocyte components of adaptive immunity. An immune response driven by the Th1 cell type is typical of most bacterial and viral infections, whereas the Th2 cell type is predominant in allergic conditions.

The water has been a little muddied when considering asthma apart from other allergic conditions in that the development of asthma symptoms seem to involve both Th1 and Th2 pathways.

Studies of endotoxin exposure and asthma have also led to an apparent paradox since farm workers who have grown up on farms are less likely to have hay fever symptoms but more likely to have asthma than those who have not grown up on farms. Similarly, children exposed to higher levels of endotoxin in house dust are found to have a reduced risk of developing allergies but an increased risk of asthma. At least part of the explanation for this comes from the fact that endotoxin can directly cause inflammation of the airways and is a



known occupational hazard for workers in some industries. Endotoxin can also act as an adjuvant, worsening symptoms in existing allergic asthma.

So where does this leave the opening statement "We're too hygienic for our own good"? It all seems to be about timing. Our current understanding of the *Hygiene Hypothesis* suggests that exposure to microbial diseases or endotoxin in early infancy could have a protective effect against the development of asthma and could provide an explanation for the dramatic rise in allergic diseases in developed countries.

However, for the parent of a child with asthma, this doesn't mean that you can stop cleaning the house. Endotoxin can aggravate existing asthma and bearing in mind that it is derived from bacterial cell walls, perhaps you should continue using those antibacterial sprays and wipes!

#### References

- Strachan DP. Hay fever, hygiene and household size. *BMJ* 1989;299:1259-1260
- Thavagnanam S., Fleming J., Bromley A., Shields M.D., Cardwell C.R. A meta-analysis of the association between Caesarean section and childhood asthma. *Clin Exp Allergy* 2008;38(4):629-633
- Marra F., Lynd L., Coombes M., Richardson K., Legal M., Fitzgerald J.M., Marra C.A. Does antibiotic exposure during infancy lead to development of asthma?: a systematic review and metaanalysis. *Chest*. 2006;130(5):1624
- Seiskari T., Kondrashova A., Viskari H., Kaila M., Haapala A.M., Aittoniemi J. et al. Allergic sensitisation and microbial load - a comparison between Finland and Russian Karelia. *Clin Exp Immunol* 2007;148:47-52
- Ponsonby A.L., Kemp A. Investigation of the hygiene hypothesis: current issues and future directions (Editorial) *Allergy* 2008;63:506-508
- Beisswenger C., Bals R. Interaction of allergic airway inflammation and innate immunity: hygiene and beyond (Review) *J Occupational Med Toxicol* 2008;3(suppl 1):S3
- Celedon J.C., Milton D.K., Ramsey C.D., Litonjua A.A., Ryan L., Platts-Mills T.A., Gold D.R. Exposure to dust mite allergen and endotoxin in early life and asthma and atopy in childhood. *J Allergy Clin Immunol* 2007;120:144-149

## 60 Lanyards FREE first in first served with any sportshaler purchase



Stock available from  
Asthma New Zealand  
**09 630 2293**

**asthma**  
NEW ZEALAND  
THE LUNG ASSOCIATION

**What if your child falls, bumps his head or injures his knee?**

**Your child is very upset, what do you do next?**

**Do you have the right medical supplies and information for their injuries?**

**All Better Now™** are premium First Aid Kits designed and assembled in NZ for use with infants and children up to 12 years of age, yet most of the contents can be used by the whole family.

These comprehensive, compact and portable kits were designed by a Registered Nurse and mother, in conjunction with a leading paediatric specialist.

The carefully selected contents equip parents and caregivers for a wide range of common infant and childhood situations so they can be confident they are prepared, even for emergencies.



**win** one of each size

**asthma**  
NEW ZEALAND  
THE LUNG ASSOCIATION

Send name and contact details on the back on an envelope to  
Asthma Auckland, PO Box 67 066, Auckland 1024.



# The great indoors

## Improving indoor air quality for people with asthma

One of the 'damp' New Zealanders from the new DVS® TV commercials.

It's probably fair to say that most people would consider indoor air pollution a relatively minor problem compared to outdoor pollution. But when you consider that we spend about 90% of our time inside – surrounded by contaminants such as dampness, bacteria, viruses, gases and chemicals to name only a few – indoor air pollution can actually be a bigger health risk than outdoor pollution.

Ventilation of the home with fresh, filtered air is important for the health of any family. However, for people with asthma (who are allergic to the microscopic particles found in the air that we breathe) the benefits are even more important. A DVS® home ventilation system will push out the stale, moisture-laden air in the home and replace it gently and naturally with fresh, filtered air from outside. In doing so, it can actually improve the health of people who suffer asthma and other respiratory illnesses by significantly improving indoor air quality and reducing exposure to inhaled triggers and irritants. This is achieved in three ways, by:

- controlling excess moisture and condensation;
- filtering the air that comes into the home from outside (via the roof space);
- pushing out the airborne pollutants and irritants that originate inside the home.

### Controlling excess moisture and condensation.

In an independent field study carried out by a team from Massey University, moisture was identified as a significant problem in

New Zealand housing, with excessive condensation, mildew and dampness affecting 45% of New Zealand homes.

The study, which was carried out by Massey over two winters, looked at the problems of excess moisture in New Zealand homes and the effectiveness of the DVS® system in dealing with them. It identified sources of moisture such as dampness rising from the ground, humid outdoor air, building materials, occupants and their activities such as showering and cooking, with up to 70 litres of moisture a day typically entering a house.

The study states that dampness in houses is a serious health concern as:

*"... moisture can provide a ripe environment for fungi and dust mites to propagate ... allergens produced by fungi and dust mites have been highlighted as leading causes of asthma and triggers for asthma attacks. New Zealand has the second highest rate of asthma in the world."*

Breathe easy with Asthma NZ & DVS®

DVS® is proud to be an official Asthma NZ partner, with Asthma NZ recognising that the installation of a DVS® home ventilation system may assist those with asthma-related illnesses and other respiratory conditions. The partnership is an obvious fit for DVS® as the DVS® ventilation system has been proven by Massey University to reduce the mould and fungal spores that can be triggers for people with asthma. In addition, DVS® air filters can virtually eliminate the pollens and other airborne particles and irritants that can be so devastating for people who suffer from respiratory illnesses.



Dampness can also cause bacteria, leading to respiratory illness, according to evidence from a scientific survey conducted in 2007 by the Ontario Lung Association. Their findings suggest an association between bacteria in housing and increased incidence of upper respiratory infections.

With a DVS® ventilation system at work controlling condensation and excess moisture in the home, the growth of mould, mildew and bacteria can be halted, and the number of dust mites significantly reduced, if not eliminated.

### Filtering the air that comes into the home from outside

DVS® ventilation systems use high quality, internationally-rated filters to filter out dust, pollen, plant spores and other inhaled triggers from the air before they come into the home (via the roof space).

While such allergens will always be present in fresh, outside air, people who are allergic to such triggers can choose to stay inside their DVS®-ventilated homes (with windows and external doors closed) breathing filtered air to significantly reduce their exposure to these irritants and, therefore, their symptoms.

### Pushing out airborne irritants that originate inside the home

Good ventilation in the home can easily and effectively reduce a number of harmful indoor air pollutants that can trigger asthma and allergies, such as:

#### Emissions

Gases (e.g. volatile organic compounds, including formaldehyde) and particles emitted from building materials, furnishings, appliances, clothing and products used in cleaning and personal hygiene (e.g. perfume, deodorants). The Canadian survey found that the respiratory effects caused by such products included wheezing, coughing, decreased lung function, exacerbation of asthma and increased risk of pneumonia in children.

#### Combustion by-products

The Canadian study also found that emissions from burning wood, gas, oil, kerosene, propane and candles can result in elevated concentrations of potent contaminants including aldehydes, polycyclic aromatic hydrocarbons and carbon monoxide.

#### Viruses

Airborne viruses can be transmitted from person to person indoors, particularly where fresh air ventilation is inadequate. Sufficient ventilation, on the other hand, can dilute airborne viruses in the presence of infected individuals.

#### Animal dander and cockroach antigen

Ventilating the home with a DVS® system ensures that any contaminated air inside the home is continually pushed out, and replaced by drier, fresher, filtered air instead – the health benefits of which have been proven by the Massey University study:

*"... the results appear to show that installation of the DVS® improved the health of the occupants. Overall, the incidence of symptoms experienced by participants decreased by more than 50% after the installation of the DVS®, suggesting that the level of pollutants present in the indoor air were reduced."*

And finally:

*"Without exception, all participants felt that condensation within their houses was either significantly reduced or had disappeared entirely."*

#### References:

Massey University Study (2002) on the Effectiveness of DVS®  
2007 Ontario Lung Association – Scientific Review  
Breathe easy with Asthma NZ & DVS®

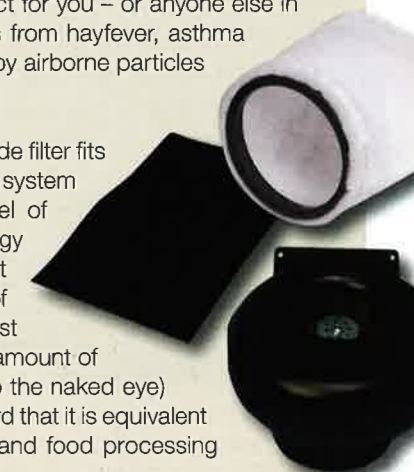
# Good news for allergy sufferers, just in time for Spring!

If you're no stranger to sneezing or wheezing, then there's a DVS® air filter that's perfect for you – or anyone else in your household that suffers from hayfever, asthma and other allergies caused by airborne particles and irritants.

Called the 'F6', this high-grade filter fits onto the DVS® ventilation system to provide a very high level of filtration that's perfect for allergy sufferers. It will eliminate at least 99% (and up to 100%) of visible airborne pollen and dust particles (plus a significant amount of particles that are invisible to the naked eye) and is of such a high standard that it is equivalent to those used in hospitals and food processing factories.

Other filter options include our standard G4 Filter (which will eliminate at least 80% and up to 95% of visible airborne pollen and dust particles) and our Activated Carbon Filter that greatly reduces smoke smells from wood or open fires in winter.

DVS® is also the only ventilation company to offer BioShield Healthy Infusion treatment of its filters to inhibit the growth of moulds, mildew and odour-causing bacteria. To find out more about our filters, please call DVS® on 0800 387 387.



## Interest-free offer for O<sub>2</sub> readers

**Install a DVS® before 31st December 2008, and we'll give you nine months to pay – interest-free and no fees, just the true cost spread over nine months\*.**

So why wait any longer to improve your family's health? It's just too important. Contact us today to arrange your free, no-obligation quote (please mention you saw this ad in the O<sub>2</sub> magazine so we can ensure you receive the nine month interest-free deal):

**0800 387 387**

\*Subject to normal lending criteria. Some conditions apply.

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



Heart of a Healthy Home™



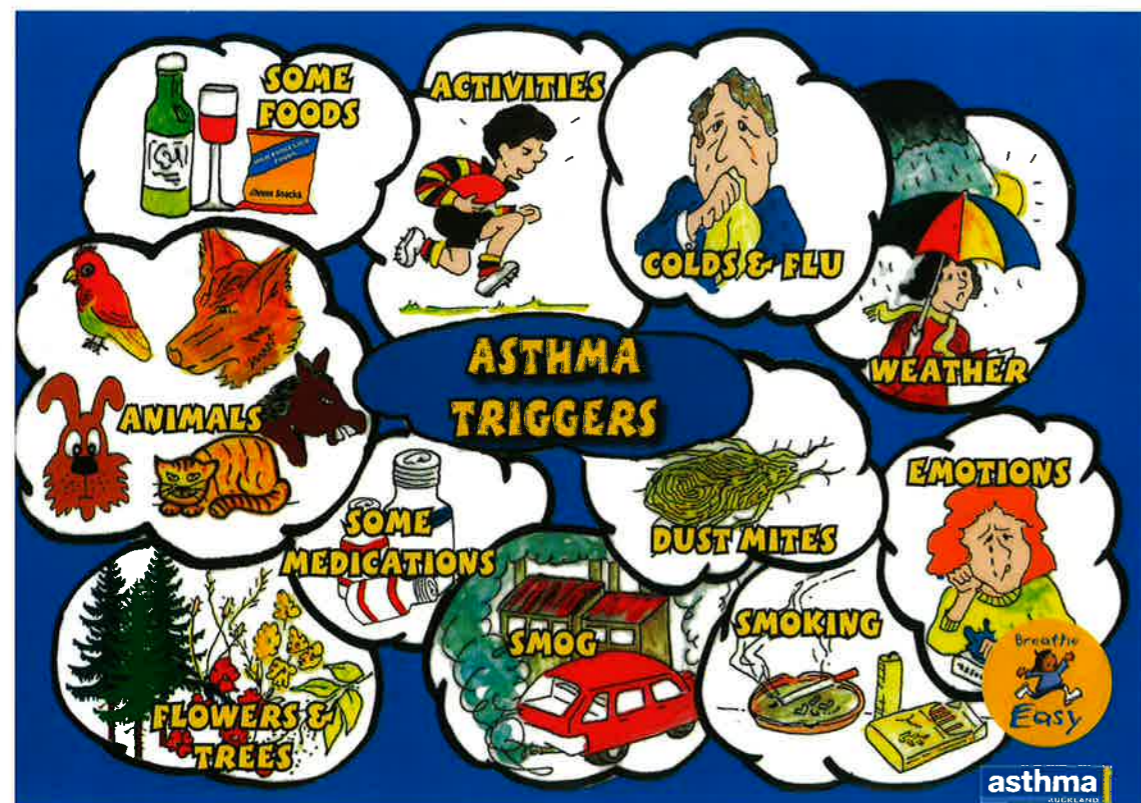
# Asthma management tips in winter

Colds, viruses and exercise are common triggers for asthma. They are also prevalent in winter. Neither colds nor exercise can necessarily be avoided. The aim for someone with asthma is to control their asthma so that they can cope with whatever triggers may come along. So try this checklist for managing your asthma in winter.

- ✓ Get your doctor to review your asthma regularly especially before winter.
- ✓ Talk to your doctor about the influenza vaccine.
- ✓ Some tips to help reduce the spread of viruses and aid in recovery:
  - Keep your hands away from your eyes, nose, and mouth.
  - Use tissues to wipe your nose, and then discard them.
  - Wash your hands after blowing your nose or covering your mouth for a cough or sneeze, and before preparing or eating food.
  - Do not share cups or cutlery with other people.
  - Take good care of yourself. Rest. Drink plenty of fluids. With your doctor's OK, use over-the-counter cold or flu remedies to relieve your symptoms. The medication won't help you get over the cold or flu faster, but it can help you feel better in the meantime.
- ✓ Stock up on the asthma medications you may need for asthma in winter and at the first sign of a cold/virus follow your Asthma Action Plan given to you by your doctor. If you do not have a written Asthma Action Plan please discuss this with your doctor next time you visit.
- ✓ Pay close attention to your asthma symptoms. If you notice warning signs of an asthma attack — such as coughing, wheezing, chest tightness or shortness of breath — adjust your medication as directed by your doctor e.g. the use of your blue reliever medication - 2puffs four times a day at first sign of a cold and throughout its duration. Quick action can help prevent a severe attack.
- ✓ Use a peak flow meter to monitor how well your lungs are working from day to day. Take your readings at the same time every day. If you notice a drop in your peak flow rate, adjust your medication as directed by your doctor.
- ✓ Take your preventer medication regularly i.e. everyday.
- ✓ Avoid smoke from tobacco, fireplaces and wood stoves as this can trigger asthma symptoms.
- ✓ Protect yourself from the cold by dressing up warm and wearing a scarf around your mouth, and try to breathe through your nose, this warms and humidifies the air.
- ✓ If you have central heating, clean the ducts before you turn on the heater for winter.
- ✓ Try and keep the inside and outside temperature as uniform as possible in the home, since sharp drops in temperature can trigger asthma. The same principle applies to the heater in a car.
- ✓ Try and exercise in the warmer part of a winter's day.
- ✓ If you are exercising you can avoid Exercise Induced Asthma (EIA) by preparing before exercise or activity: Refer to EIA article on page.... for management of EIA.
  - Always carry your blue reliever medication. One convenient way to carry your medication during exercise or sporting activities is by using the Sports-haler™. It is a secure portable device allowing people with asthma to participate in their sport or activity with confidence, knowing their medication is protected and easily accessible. For more details or to purchase a Sports-haler™ (\$25.00) contact Asthma Auckland on 09 6302293.

Mona Ogle

**References**  
[www.asthmawa.org.au](http://www.asthmawa.org.au)  
 © 1998-2006 Mayo Foundation for Medical Education and Research (MFMER)



# Mould and Your Home

Mould is a known trigger for some people with asthma. Mould is often found in our homes such as in the bathroom, kitchen and around windows.

Moulds are microscopic fungi that reproduce rapidly and produce fungal spores and mycelia in the process (Health Canada, 2008). The spores of the fungi float in the air both indoors and outdoors and are inhaled triggering an allergic reaction in the airways for those who are susceptible causing asthma episodes and hay fever.

Some moulds can be useful such as penicillin and some foods and beverages are made by the actions of mould which are manufactured in controlled conditions. Mushrooms and yeast are types of mould (Health Canada, 2008)

Indoors, when mould spores land on damp or wet surfaces, they will start to grow and digest what they are growing on to survive (Environmental Protection Agency, n.d.). This can eventually cause damage and destruction of the surfaces that the mould is growing on. Damp and wet surfaces can be caused from several sources such as leaky roofs, moisture coming up from under floors and through walls. Other causes include plumbing leaks, moisture created by people and pets living in the home, bathing, washing clothes, cooking and indoor plants. The amount of moisture in a home is often dependent on the amount of ventilation that a house receives (Christchurch City Council, n.d., Health Canada, 2008).

## Preventing Mould

Mould and dampness can be prevented in the following ways as per Christchurch City Council (n.d.):

- In the bathroom always keep a window open or use an extractor fan when having a shower or bath as there is approximately 2 litres of condensation produced every time someone has a bath or shower.
- Fix any plumbing leaks.
- When using a clothes dryer it should be vented outside to prevent up to 3 litres of moisture per load being put into the atmosphere.
- Clothes should be dried on an outside line whenever possible.
- Washing machines produce on average 0.5 litres of moisture per load if a hot wash is used. This can be reduced by keeping a window open or installing an extractor fan.
- The kitchen can produce up to 3 litres of water a day from cooking, using dishwashers, washing dishes. It is important to use an extractor fan, range hood or keep windows open when cooking, cover pots when cooking and again fix any leaks as they occur.
- Free standing gas heaters are another source of moisture. An un-flued gas heater can produce up to 1 litre per hour of condensation on its highest setting. This can be assisted by using a flued gas heater or some other form of heating such as electric heaters, heat pumps or pellet fires.
- Areas of restricted ventilation such as in cupboards, wardrobes and remote corners are susceptible to mould formation. Keeping doors slightly ajar can help reduce this.
- Open curtains early in the morning and close them as the sun goes down.
- Wipe condensation off windows and doors as soon as possible.
- Clean out old food stored in the fridge.

Some activities cannot avoid the formation of moisture that can cause condensation. When we breathe, we produce on average 1 litre a day per person. Many of us also have indoor plants. Water is

needed to keep these alive, and so moisture is again allowed into the atmosphere therefore keep indoor plants to a minimum. The use of dehumidifiers and home ventilation systems can assist in helping to keep the house free of condensation as they reduce the relative humidity found indoors. It is important to keep the house well ventilated by opening windows when possible. It is also important to be aware of places where mould can be hidden such as around pipes, showers etc. Extra care needs to be taken when investigating these areas.



Outdoors it is important to ensure that the roof and guttering are cleaned and regularly repaired. Leaves should be raked up and not allowed to rot. Outdoor taps and drains should be repaired as soon as any leak is discovered.

## Treating Mould

Mould should be treated and removed as soon as it forms as it is harder to remove when it has been present for some while (Housing New Zealand Corporation, (HNZ), n.d.). When removing mould it is important to protect yourself by wearing rubber gloves, masks and if possible goggles. Do not allow splashes of liquid onto your clothes or in eyes when cleaning and open windows to improve airflow (HNZ, n.d.) Mould can be cleaned with either household detergent or weak household bleach (one part bleach to three parts water mixed together). It is important to use a clean sponge or cloth and rinse it frequently during the mould removal. Dry the surface well once completed. Some surfaces such as carpet may have to be removed and replaced if mouldy.

## Conclusion

Moulds can be used to treat people and in the manufacture of foods. But for some people mould can be a major health issue causing frequent episodes of asthma and hay fever. Learning how to protect your home from mould is very important to ensure good health and once present the correct way of removing is also important. Remember, a drier well-aired home is easier to warm and is much healthier for all those who live in it.

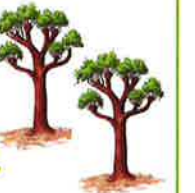
Ann Wheat

## References

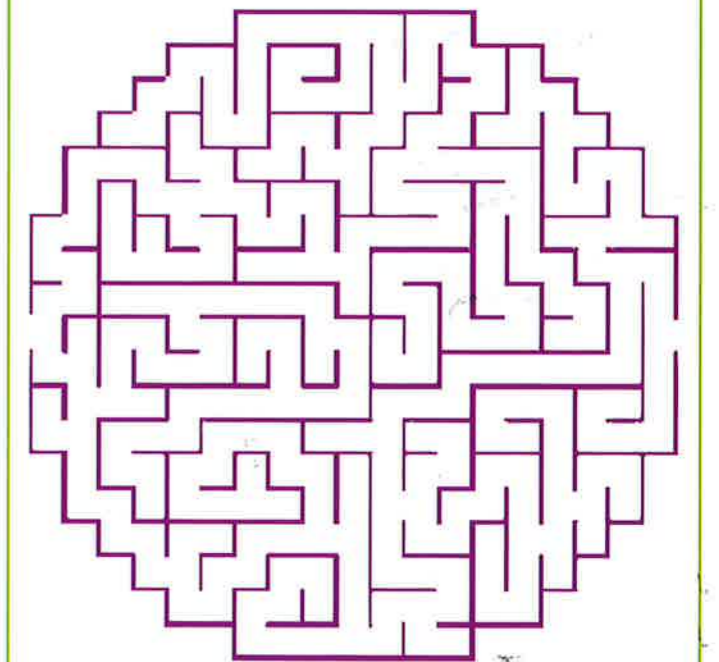
Christchurch City Council, (n.d.). Preventing Mould and Mildew. Retrieved from the World Wide Web June 30, 2007  
<http://www.ccc.govt.nz/environment.asp>  
 Health Canada, (2008). Fighting Mold - The Homeowners' Guide. Retrieved from the World Wide Web July 2, 2008  
[http://www.hc-sc.gc.ca/index\\_e.html](http://www.hc-sc.gc.ca/index_e.html)  
 Housing New Zealand Corporation, (n.d.). Looking after your home. Retrieved from the World Wide Web July 2, 2008  
<http://www.hnzc.govt.nz/hnzc/web/rent-buy-or-own/living-in-a-housing-new-zealand>  
 U.S. Environmental Protection Agency, (n.d.). A Brief guide to Mold, Moisture and Your Home. Retrieved from the World Wide Web July 2, 2008  
<http://www.epa.gov/asthma/molds.html>



## Earth Day Recycling Maze



Find the path from the recyclables to the recycling centre.  
The earth thanks you ♥

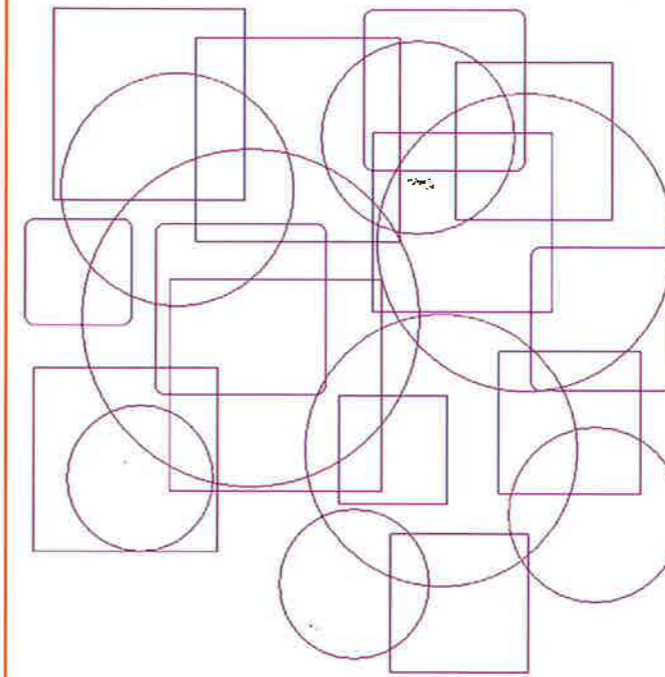


Recycling Center

Winner of BBQ raffle –  
Sharon Mitchell (Blue Hearts) 70E



How many circles, rectangles and rounded rectangles are in this muddle?



Answer:  
8 circles  
9 rectangles  
4 rounded rectangles

Find the words:

Allergist  
Allergy  
Asthma  
Dander

Inhalers  
Medications  
Mold  
Pollens

Sneeze  
Wheeze

T	I	G	E	B	S	F	P	S	N	V	T	J	P	D	Q
T	V	S	H	T	W	N	R	O	M	Q	E	D	R	I	M
S	X	E	P	N	J	E	O	H	L	V	H	L	A	T	P
A	Y	C	Q	W	L	Q	O	I	X	L	I	O	R	A	F
T	Q	O	M	A	K	I	T	R	T	Y	E	M	U	S	E
S	J	E	H	I	G	V	S	E	U	A	U	N	N	T	M
W	W	N	N	A	R	F	I	J	Z	A	C	H	S	H	X
W	I	X	V	Y	G	R	G	X	Q	E	K	I	D	M	P
K	V	C	A	L	L	E	R	G	Y	D	E	A	D	A	I
E	Z	E	E	N	S	T	E	O	J	B	N	H	O	E	J
K	U	Z	L	F	G	D	L	N	O	D	R	T	W	O	M
J	X	K	Q	C	Z	K	L	B	E	S	T	N	R	M	X
B	K	J	B	L	E	O	A	R	G	S	W	D	T	N	X
F	Y	C	X	B	K	W	I	T	O	X	U	W	H	Z	D
L	W	N	A	K	E	E	R	Z	E	H	Y	K	Q	A	Q
A	A	G	B	P	T	B	B	S	O	K	T	O	J	A	D

## 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 from taking a natural product, made from a marine substance.

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 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.**

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 Mona  
or email [debral@asthma-nz.org.nz](mailto:debral@asthma-nz.org.nz)



### A gift that keeps on giving!

**A "random act of kindness" or is corporate society finding a balance between a profitable turnover and "social responsibility"?**

At a time when the economy is erring on the side of caution and the quest to procure funds to secure our ongoing sustainability becoming increasingly more difficult, it is refreshing to note that some corporate companies are not just sitting back enjoying the fruits of their labour. Instead they have found their conscience and are giving a generous share back to charitable organisations.

Building a marketing alliance between for-profit and non-profit organisations can develop into long-term income earnings, enabling non-profit organisations to become less reliant on short term donations.

It's not all one-sided however and it goes without saying that these relationships also benefit the businesses involved, as they align themselves with causes both they and their customers believe in. This social responsibility can become a significant factor in a company's bottom line by enhancing its corporate or brand image.

**Bunnings Ltd** is one such company and **Asthma Auckland** is only one of many non profit organisations, to benefit from their generosity. Not only did Bunnings donate a BBQ, with all the bells and whistles, as a prize at our recent event to celebrate World Asthma Day, they also provided us another BBQ to use on the day and sent a team of three workers to man it; providing us with a steady stream of sausages – the team never stopped smiling throughout the event, all three are a credit to **Bunnings Warehouse Mt Roskill!**

The giving didn't stop there; Sharon Mitchell the winner of our raffle decided she didn't need the newly acquired BBQ and gifted it to her local primary school; Westmere Primary. The school Principal, Carolyn Merino, was over the moon and couldn't believe her luck as the schools only BBQ was on its last legs!

I was invited to the BBQ's inception as Westmere Primary celebrated Matariki through a fundraising disco where I was wined and dined and treated to a wonderful waiata performance by some of the school's bi cultural class.

The school's windfall is the result of a gift that will keep on giving, hopefully, for many years to come. Congratulations Westmere Primary, I'm sure Carolyn joins me in thanking the "Bunnings Team" and Sharon Mitchell for a job well done! Certainly makes my work as a fundraiser much easier and more enjoyable too!

**Linda Thompson**



Carolyn Merino and Sharon Mitchell with the BBQ at Westmere Primary celebrating Matariki



Iaikimi Atu, Timo Malcolm, Anita Devi from Bunnings Warehouse Mt Roskill



Asthma Auckland would like to thank photographer Steven Neville for his time and ongoing support.  
www.aucklandsportsphotograph.com



### Patients, Families, Governments Striving for Asthma Control! World Asthma Day brings awareness-raising, education activities around common lung disease!



WORLD ASTHMA DAY 2008®

Tuesday 6 May, 2008 marked World Asthma Day and the common positive theme for this year is "YOU CAN CONTROL YOUR ASTHMA".

Asthma is one of the most common chronic diseases in the world, affecting more than 300 million people worldwide. 1 in 4 children and 1 in 6 adults in New Zealand have asthma.

However, with proper treatment most asthma patients can achieve good control of their disease. Asthma does not have to limit your daily life!

Asthma control means no, or very minimal, symptoms, and very infrequent asthma episodes. A person whose asthma is under control can go to work or school, exercise, and participate fully in life.

Asthma Auckland hosted an event to celebrate and help raise

awareness for asthma, we offered free on site education, face painting, bouncy castles, sausage sizzle and plenty of give-away prizes!

All in all it was a great day and everyone involved put in a great effort, we had a lovely day of sunshine; despite the sceptics doing their best to attempt to cause me concern but I was always confident we would have good weather and we did. We had over a hundred people visit and it was smiling faces all round. I would like to thank our team and in particular our two volunteers; Claire Brokken and Derrick Depledge and also the team from Bunnings Warehouse Mt Roskill for their efforts on the day. We also need to acknowledge our sponsors for the great array of prizes we had to offer and our t-shirts as we really couldn't have done it without you all so thanks. It really was a team effort and next year will be even bigger!

**Linda Thompson**



### Jack Duley is off to Disneyland

**By Scott Morgan (Central Leader)**

Jack Duley is off on the trip of a lifetime.

The nine-year-old was shocked to discover last month he has been selected by Asthma New Zealand to go on an all-expenses-paid trip to Disneyland.

"I'm very excited and amazed," he says.

The trip, which is being organised by Koru Care, will see asthma sufferer Jack visit the theme park and other attractions around California for about 10 days in October.

But the Mt Albert resident knows exactly what his first stop will be when he arrives.

"Im going on the roller-coaster," he says.

Jack got involved with Asthma New Zealand after he took part in a trial to see whether the new drug lipranol is effective in treating asthma.

Asthma New Zealand fundraising manager Linda Thompson says Jack was selected to go on the trip because he "put a great deal of effort into the research programme".

While the asthma has improved markedly since being on the trial, Jack's mum Lorna says they aren't sure whether it improved because of the marine substance, because he might have been part of a group taking a placebo.

As for his trip to the United States, Lorna is a little nervous about letting Jack go on holiday by himself, but is confident he will have a great time.

"After 25 years of doing it, I'm sure he will be well looked after."  
(photo: Jason Oxenham Central Leader)





Eve (age 2)



WORLD ASTHMA DAY 2008®

### Colouring Competition Winners

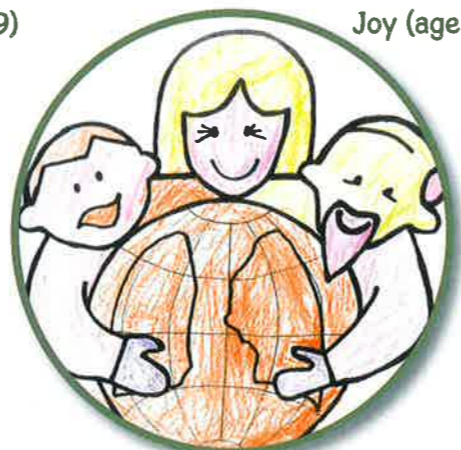
- |        |                            |
|--------|----------------------------|
| Sara   | 1st Girls Over 10          |
| Alex   | 1st Girls 8-10             |
| Liam   | 1st Boys 8-10              |
| Isla   | 1st Girls 5-7              |
| Alyssa | 1st Girls 3-4              |
| Eve    | 1st Girls under 3          |
| Brenna | Highly Commended Girls 3-4 |
| Chelsa | Highly Commended Girls 3-4 |
| Grace  | Highly Commended Girls 3-4 |
| Joy    | Highly Commended Girls 3-4 |



Alyssa (age 4<sup>3/4</sup>)



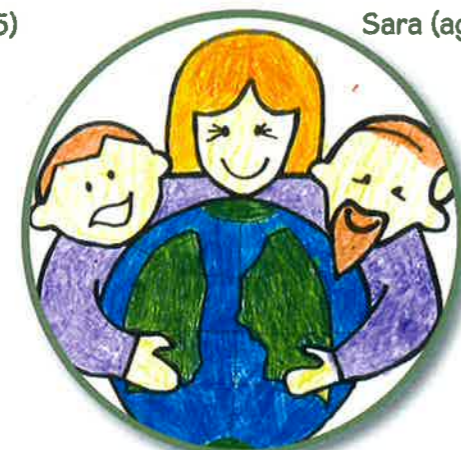
Alex (age 9)



Joy (age 4)



Isla (age 5)



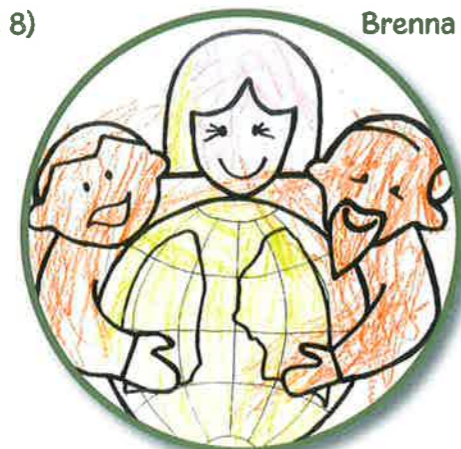
Sara (age 11)



Grace (age 3)



Liam (age 8)



Brenna (age 3)



Chelsa (age 4)

## NEWS FROM AROUND THE REGIONS ...

### Jack Welsh – Recipient of Volunteer Recognition Award 2008



#### Profile

Hello My name is Sandra Coulter, I am a qualified R.N. and am currently sitting my Asthma Nurse Course at Unitec. I have recently been appointed as the Nurse Educator for Asthma South Canterbury.

My Nursing experience includes extensive practice in community settings as a Practice Nurse, Plunket Nurse and a Remote Area Nurse in Central Australia.

Over the past 10 years I have worked as a Paediatric Nurse in Christchurch where I was involved in Asthma Education in the acute setting. Recently I moved to Timaru and I look forward to my new role as an educator assisting people to achieve a better understand and control of their respiratory conditions.



Jack Welsh has been a volunteer for Asthma Canterbury for 14 years. His dedication in coming in every week is much appreciated and even more so recently, with the ill health and hospitalisation of his wife.

Being a very small team, Jack's contribution is valued and appreciated by all the staff at Asthma Canterbury. He does important jobs like the banking, maintaining our membership database, filing, receipting, handyman jobs and of course spreading his good cheer. He is one of the team.

Not only does he volunteer for this organisation but also gives his time to Forest and Bird, and the Museum.

Thanks to Jack, and all the other volunteers who are so generous with their time.

### Rotary Timaru Auction

Rosalene Davidson of Asthma South Canterbury with Chris Thomas of Rotary Club Timaru handing over a nice cheque for \$8000.00 raised from the Timaru Charity Auction we are grateful for the monies raised as it facilitated manning of the Auckland Asthma Bus while it was here in South Canterbury.



# North & South

NEWS FROM AROUND THE REGIONS ...



Volunteer Derrick Depledge with granddaughter Eve



DVS Ltd General Manager, Bob Batenburg (Left) was on hand to present Asthma NZ President, Richard Thorogood (Centre) and Linda Thompson with the first quarterly sponsorship cheque which will go towards funding asthma education and research in the Auckland area.



WORLD ASTHMA DAY 2008®



Sandi Kerr -- Massaging a grateful client



Tracey Curran (Left) from Koru Care with Lorraine and Sara Dobbin (Right), Sara is off to Disneyland with Jack Duley and Malia Telefoni at the end of October to celebrate Koru Care 25 year anniversary!



Eve Thompson waiting her turn on the bouncy castle



Volunteer Claire Brokken with visitor Jill Thompson



Mt Gook school children having a tour of the Asthma Bus. The views at the school were fantastic.



Asthma South Canterbury's President and her husband at the Rotary Charity Auction Gaynor & Stev Kelly



A visitor to the bus while parked at Pak N Save Awahina Akurang



Asthma Auckland wishes to thank Elizabeth Arden for their continuing support and sponsorship.



For all your Beauty needs.  
Phone Albany (09) 414 3865 or St Lukes (09) 846 1029

## What are the Signs of an Exacerbation of Chronic Obstructive Pulmonary Disease (COPD)

The Global Initiative for Chronic Obstructive Lung Disease (GOLD 2006) states that "an exacerbation of COPD is defined as an event in the natural course of the disease characterised by a change in the patient's baseline dyspnea (shortness of breath) cough, and/or sputum that is beyond normal day-to-day variations, is acute in onset, and may warrant a change in regular medication in a patient with underlying COPD.

The most common causes of exacerbations of COPD are:

- Infection such as **bronchitis** (in the airways of the lungs)
- **Pneumonia** (in the lungs)  
Infections are usually caused by a virus, however can also be caused by bacteria.
- **Air pollution**
- **Unidentified** cause – the cause of one-third of severe exacerbations cannot be identified. As a result of an exacerbation there is an increase in mucus production in the lungs and narrowing of the airways in the lungs. This reduces airflow in the lung and results in increasing shortness of breath and cough.

### Symptoms

- Increasing shortness of breath and wheezing
- Increase in mucus production
- Cough
- Change in colour of mucus from clear to yellow/green
- Fever, fatigue, confusion and depression may also be present

### Ignoring early symptoms?

While it is understandable that human nature has us saying that "I'm ok, I don't need to go to the doctor yet!" but in reality early treatment of an exacerbation is of utmost importance in the management of COPD. All too frequently we wait to see what happens, with the answer being that a hospital admission may be imminent.

Recognising the early changes in your current symptoms is of vital importance and that you have a COPD management plan outlining what treatment has been suggested by your General Practitioner or Respiratory Specialist.

### Interventions/Treatments may include:

- Oral corticosteroids such as Prednisone
- Antibiotics
- Increase in bronchodilator therapy
- Nebulising
- Oxygen
- Intravenous fluids

According to GOLD (2006) 10% to 30% of patients with apparent exacerbations of COPD who do not respond to treatment should be re-evaluated for other medical conditions that can aggravate symptoms or mimic COPD exacerbations. These conditions may include pneumonia, congestive heart failure, pneumothorax, pleural effusion, pulmonary embolism and cardiac arrhythmia.

### Factors that assist in reducing risk factors for exacerbations of COPD

- Cessation of smoking
- Education about COPD – early recognition and treatment of exacerbations
- Improve patient adherence to medication and management regimes (action plan)
- Maintaining a regular exercise programme
- Correct use of inhalers, spacers, and nebulisers
- Influenza vaccine annually and Pneumovax 5 yearly



- Maintaining healthy weight – small frequent meals for patients who become breathless while eating
- Ensure careful and regular cleaning of inhalers, spacers and nebulisers
- Replace nebuliser (bowl, tubing, mouthpiece and/or mask) every six to twelve months

Debra Leutenegger

### References

Global Initiative for Chronic Obstructive Lung Disease (GOLD) (2006) | Global strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease.  
Peter J Barnes: Managing Chronic Obstructive Pulmonary Disease – 2nd edition

## SALTER AIRE Plus® Compressor/Nebuliser 8352



- Suitable for COPD and asthmatic patients
- Cost Effective
- Simple to use
- Portable, compact and portable



For enquiries, please phone Sinead Byrne, Product Manager  
Customer Services Freephone 0508 654 258

# Snippets of information



## COPD

### • What does COPD stand for?

Chronic Obstructive pulmonary Disease, it is a general term for a range of breathing problems which include Chronic Bronchitis and Emphysema.

### • Who gets COPD?

Anyone can develop COPD, symptoms generally start to occur at around 40-50 years of age. The most common cause is cigarette smoking or exposure to tobacco smoke. Some occupations such as industrial work where there is exposure to airborne irritants can cause lung damage which results in COPD. Alpha 1 Antitrypsin deficiency, which is an inherited problem accounts for 1-2% of people with COPD, as it causes the lungs to be more susceptible to damage.

### • What are the symptoms of COPD?

Shortness of breath  
Difficulty breathing, especially with exercise  
Cough  
Phlegm  
Winter Bronchitis  
Wheeze

### • Can I exercise if I have COPD?

Yes, regular exercise minimises symptoms of fatigue and breathlessness. It is recommended that people with COPD do mild to moderate exercise.

### • Do I need a special diet if I have COPD?

People with COPD should maintain their bodyweight within the healthy range to ensure optimal health. During an infection you should avoid dietary restrictions as your body has an increased need for nutrients.

- If you are underweight eat small frequent meals, aim for six meals per day, select foods that are high in protein such as meat, fish, eggs and foods that are high in fat such as fried foods, oils, cream, peanut butter. If you are unable to eat large amounts, supplement drinks are available.  
- If you are overweight you should eat less high fat and high sugared foods such as takeaways, fried foods, most desserts and chocolate, replace these foods with fruits, vegetables, breads and cereals.

### • What is an action plan?

Everyone with COPD should have an action plan, it will give you guidelines and instructions on what to do when you are well and what to do if your symptoms get worse. Ask your doctor for an Action Plan.

### • Will quitting smoking improve my COPD?

Yes, stopping smoking is the best thing you can do, it can stop further lung damage and improve oxygen levels in your blood.

**To Quit – talk to your healthcare professional or call Quitline on 0800 778 778 or visit the website – [www.quit.org.nz](http://www.quit.org.nz)**

### • How often should I wash my nebuliser?

You should wash the nebuliser bowl and mouthpiece after each use in warm soapy water, make sure it is dry before you use it again. Give it a thorough wash once a week in a vinegar solution of one part white vinegar and 3 parts water.

### • Does my nebuliser need servicing?

Yes, your nebuliser should be serviced yearly, contact your local Asthma Society for your nearest service provider.

### • I have COPD, are there any support groups available?

Asthma Auckland runs three COPD support groups in the Auckland area, on the North Shore in Central Auckland and in West Auckland, they meet once a month and provide support, information and advice for people with COPD. If you would like more information or to join one of these groups please contact Asthma Auckland.

**If you would like more information on COPD please contact your local Asthma Society.**

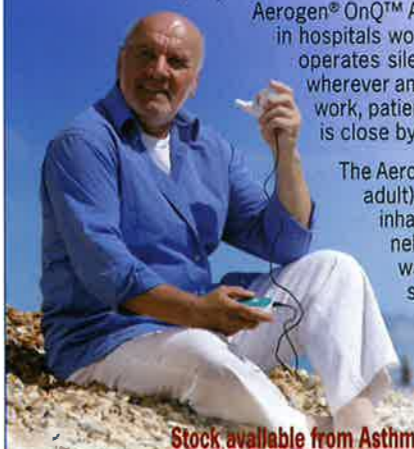
#### LIFESTYLE NEBULISER

- Fast
- Simple
- Lightweight
- Efficient



Introducing Aeroneb® Go—a micropump nebulizer providing efficient therapy for everyday use, anywhere. Aeroneb Go sets a new standard for home nebulizer therapy using Aerogen® OnQ™ Aerosol Generator, the same trusted technology used in hospitals worldwide. Unlike conventional nebulizers, Aeroneb Go operates silently and delivers rapid, efficient aerosol treatments wherever and whenever needed. Whether at home, at school or at work, patients feel secure knowing that their micropump nebulizer is close by when they need it most.

The Aeroneb Go, for use with patients of all ages (infant through adult), aerosolizes physician-prescribed solutions for inhalation that are approved for use with a general-purpose nebulizer. It is simple to operate, works with either an AC wall controller or a battery pack, can be cleaned with soap and water, and disinfected (if desired).



Stock available from Asthma Auckland, 581 Mt Eden Road. Call us (09) 630 2293



WORLD ASTHMA DAY 2008

Asthma Auckland wishes to thank the generous support of the following business – please support them too.



# Yes!

I want to support  
Asthma Auckland



Mr/Mrs/Miss/Ms \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Date Of Birth: (optional) / /

#### Benefits

- Magazine subscription (The NZ Journal Of Respiratory Health)
- Advice and support from Asthma educators
- Networking opportunities/support groups
- Access to information and medical research
- Your donation will also help provide education and support for other people with asthma and their families

Annual Membership \$25

Donation (tax deductible)

Cheque enclosed \$ \_\_\_\_\_

Please debit my credit card \$ \_\_\_\_\_

Visa  MasterCard  Amex

\_\_\_\_\_

Cardholder's Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Expiry date / /

I would like information about making a bequest.

#### Asthma info line:

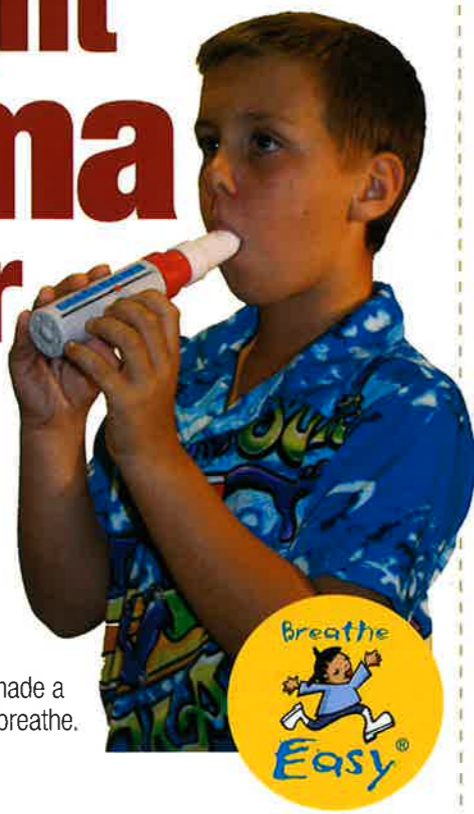
Phone: 09 630 2293  
Fax: 09 623 0774  
Email: [aas@asthma-nz.org.nz](mailto:aas@asthma-nz.org.nz)  
Web: [www.asthma-nz.org.nz](http://www.asthma-nz.org.nz)  
Information collected for Asthma Auckland use only. Under the Privacy Act members have the right to access and correct any information by contacting Asthma Auckland



Return this form to:  
Asthma Auckland, PO Box 67 066  
Mt Eden 1349, Auckland  
New Zealand Regional Office:  
581 Mt Eden Rd, Mt Eden,  
Auckland 1024 NZ

# Let's fight Asthma together

## "We need your help"



Our family and friends may have asthma, but let's not let asthma have them. Your support to help our community breathe easy has always made a difference in thousands of people who fight to breathe.

### Please support generously

Yes, I would like to help New Zealanders breathe easy! Here's my gift to support your work

\$25     \$50     \$100     Other:

My gift marked above is to be charged to my credit card

Visa     American Express     MasterCard

Card Number

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Name of Card Holder: \_\_\_\_\_

Signature: \_\_\_\_\_ Expiry Date: \_\_\_\_\_

Cheque for the above value is enclosed  
Your gifts can attract a tax rebate. We will send you a receipt shortly for your donation.

Mr/Mrs/Miss/Ms \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

- Please send me information on how I can help Asthma New Zealand through my will
- I have already left a bequest for the Asthma Society through my will
- I would love to do some voluntary work to fight asthma

### Asthma New Zealand-the Lung Association

581 Mt Eden Rd, PO Box 67-066  
Mt Eden, Auckland 1024, NZ.  
Phone 09 623 0236, Fax 09 623 0774  
Email anz@asthma-nz.org.nz



*Thank you for helping us to fight asthma and make New Zealand breathe easy*



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

### AUCKLAND ASTHMA SOCIETY (INC.)

P O Box 67 066  
581 Mt Eden Rd,  
Auckland 1024  
Ph (09) 630 2293

### CANTERBURY ASTHMA SOCIETY (INC)

275 Cashel Street,  
P O Box 13 091  
Christchurch 8013  
Ph (03) 366 5235

### ROTORUA ASTHMA SOCIETY

2/285 Vaughan Road  
P O Box 472  
Rotorua 3010  
Ph (07) 347 1012

### SOUTH CANTERBURY ASTHMA SOCIETY

23 Aviemore Street  
P O Box 267  
Timaru 7910  
Ph (03) 688 5571

### SOUTHLAND ASTHMA SOCIETY

70 Forth Street  
P O Box 1793,  
Invercargill 9810  
Ph (03) 214 2356

### WHAKATANE ASTHMA AND COPD GROUP

P O Box 528  
141 - 143 King St  
Whakatane 3120  
Ph (07) 307 1447

### WELLINGTON REGIONAL ASTHMA SOCIETY

Level 4 Pember House  
No 16 Hagley St,  
Porirua  
Wellington 5022  
Ph 04 237 4520

## Questions, Letters, Articles, Advertisements

O<sub>2</sub> 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:

Asthma New Zealand  
581 Mt Eden Road, Auckland  
PO Box 67-066, Mt Eden  
Phone (09) 623 0236  
Email anz@asthma-nz.org.nz

## newstream

### Impact of gastro-oesophageal reflux disease symptoms on chronic obstructive pulmonary disease exacerbation.

Terada K, Muro S, Sato S, Ohara T, Haruna A, Marumo S, Kinose D, Ogawa E, Hoshino Y, Niimi A, Terada T, Mishima M.  
Department of Respiratory Medicine, Kyoto University, Japan

**BACKGROUND:** The association between gastro-oesophageal reflux disease (GORD) and chronic obstructive pulmonary disease (COPD) exacerbation has so far remained unclear. **OBJECTIVE:** To prospectively establish the clinical significance of GORD symptoms on exacerbation. **METHODS:** In total, 82 COPD patients and 40 age-matched controls were enrolled in this study. Symptoms were evaluated by a questionnaire using the Frequency Scale for the Symptoms of GORD (FSSG). COPD patients were prospectively surveyed for 6 months, and episodes of exacerbation were identified using a diary based on modified Anthonisen's criteria. Exhaled breath condensate (EBC) pH was measured in both groups, and induced sputum was evaluated in COPD patients. **RESULTS:** Positive GORD symptoms were reported in 22 (26.8%) COPD patients and five (12.5%) controls ( $p = 0.10$ ). The frequency of exacerbations was significantly associated with the FSSG score ( $p = 0.03$ ,  $r = 0.24$ , 95% confidence interval (CI) = 0.02-0.43). Multiple regression analysis revealed that GORD symptoms were significantly associated with the occurrence of exacerbations ( $p < 0.01$ ; relative risk (RR) = 6.55, 95% CI = 1.86- 23.11). EBC pH was inversely correlated with FSSG score in both groups ( $p = 0.01$ ,  $r = -0.37$ , 95% CI = -0.55 to -0.14 in COPD patients, and  $p < 0.01$ ,  $r = -0.45$ , 95% CI = -0.67 to -0.16 in control subjects). **CONCLUSIONS:** GORD symptoms were identified as an important factor associated with COPD exacerbation.

### Parental Smoking and Passive Smoke Exposure in Childhood Promotes the COPD Exacerbation Rate.

Beyer D, Mitfessel H, Gillissen A.

Medizinische Klinik, Krankenhaus Döbeln.

**INTRODUCTION:** Smoking parents are the main source of passive smoke exposure in childhood. Only few studies have assessed the effect of maternal or paternal cigarette smoke exposure in childhood on the development and severity of COPD. **PATIENTS AND METHODS:** We recruited  $n = 251$  COPD-patients,  $n = 113$  were clinically stable (no exacerbations for up to 24 years backdated from the day of interview), and - according to their history -  $n = 138$  had more than one exacerbation during this time period. All COPD-patients were interviewed by a physician using a structured questionnaire on main health outcomes, social status, smoking history of their parents and themselves. Furthermore, pulmonary function was measured, and concomitant lung diseases were excluded. **RESULTS:** Both COPD groups were comparable in age, gender, smoking history at the beginning of the disease, and cigarette pack-years smoked. Patients whose mothers smoked during childhood had poorer lung function values: FEV<sub>1</sub> 45.2 % vs. 54 % ( $p = 0.037$ ). Non-smoking patients with a history of maternal smoking had a 7-times higher exacerbation rate compared to patients without passive smoke exposure ( $p = 0.073$ ). Paternal cigarette smoke exposure had no effect. **CONCLUSION:** Maternal cigarette smoke exposure in childhood aggravates the COPD disease and predisposes the patient for a higher disease severity.

### Comparison of a combination of tiotropium and formoterol to salmeterol and fluticasone in moderate COPD.

Rabe KF, Timmer W, Sagkriotis A, Viel K.

Department of Pulmonology C3-P, Leiden University Medical Center, Albinusdreef 2 Postbus, NL-2300 Leiden.

**BACKGROUND:** A six-week, multicentre, randomized, double-blind, parallel group study was conducted in patients with chronic obstructive lung disease (COPD) to compare lung function improvements of tiotropium (Spiriva((R))) 18 mug once daily plus formoterol 12 mug b.i.d. to salmeterol 50 mug b.i.d. plus fluticasone 500 mug b.i.d. **Methods** Following a screening visit, subjects entered a run-in period in which they received regular ipratropium (Atrovent((â))). At randomisation, patients were assigned to either tiotropium plus formoterol or salmeterol plus fluticasone. After six weeks of treatment, a 12-hour lung function profile was obtained. The co-primary endpoints were FEV<sub>1</sub> area under the curve for the time period 0 to 12 hours (FEV<sub>1</sub> AUC(0-12)) and peak FEV<sub>1</sub>. **Results** 729 patients were screened, 605 were randomised and treated. 592 patients (baseline FEV<sub>1</sub> (+/-SD): 1.32 L (+/-0.43 L)) were included in the analysis. After six weeks the 12-hour lung function profiles in the group receiving tiotropium plus formoterol were superior to the salmeterol plus fluticasone group (mean difference in FEV<sub>1</sub> AUC(0-12h) 78 mL,  $p = 0.0006$ ; difference in FVC AUC(0-12h) 173 mL,  $p < 0.0001$ ). Also, peak responses were in favour of tiotropium plus formoterol (difference in peak FEV<sub>1</sub> 103 mL,  $p < 0.0001$ ; difference in peak FVC 214 mL,  $p < 0.0001$ ), as were FEV<sub>1</sub> and FVC at each individual time-point post-dose ( $p < 0.05$ ). Pre-dose FVC was significantly higher with the bronchodilator combination, while pre-dose FEV<sub>1</sub> and rescue medication use did not differ significantly between groups. Both treatments were well tolerated. **Conclusions** Tiotropium plus formoterol were superior in lung function over the day compared to salmeterol plus fluticasone in patients with moderate COPD. Long-term studies in severe COPD are warranted to assess the relative efficacy of different treatment combinations. (NCT00239421)

### Cesarean section and risk of severe childhood asthma: a population-based cohort study.

Toll nes MC, Moster D, Daltveit AK, Irgens LM.

Section for Epidemiology and Medical Statistics, Department of Public Health and Primary Health Care, University of Bergen, Bergen, Norway. mette.tollanes@isf.uib.no

**OBJECTIVE:** To explore the possible association between delivery by cesarean section (CS) and later development of asthma. **STUDY DESIGN:** A population-based cohort study of 1,756,700 singletons reported to the Medical Birth Registry of Norway between 1967 and 1998, followed up to age 18 years or the year 2002. Exposure was the mode of delivery (spontaneous vaginal, instrumental vaginal, or CS, with planned and emergency CS separately from 1988 onward). Outcome was asthma registered in the National Insurance Scheme, which provides cash benefits to families of children with severe chronic illnesses. We used multivariate Cox proportional hazard models to examine associations between exposure and outcome. **RESULTS:** The cumulative incidence of asthma was 4.0/1000. Children delivered by CS had a 52% increased risk of asthma compared with spontaneously vaginally delivered children (adjusted hazard ratio [HR] = 1.52; 95% confidence interval [CI] = 1.42 to 1.62). Between 1988 and 1998, planned and emergency CS was associated with a 42% (HR = 1.42; 95% CI = 1.25 to 1.61) and 59% (HR = 1.59; 95% CI = 1.44 to 1.75) increased risk of asthma, respectively. **CONCLUSION:** We found a moderately increased risk of asthma in the children delivered by CS. The possibly stronger association with emergency CS compared with planned CS could be worth pursuing to investigate possible causal mechanisms.

### Blood and sputum eosinophil levels in asthma and their relationship to sinus computed tomographic findings.

Mehta V, Campeau NG, Kita H, Hagan JB.

Center for Allergy, Asthma and Immunology, Creighton University, Omaha, NE, USA.

**OBJECTIVE:** To investigate the relationship among blood and sputum eosinophil levels, sinus mucosal thickening, and osteitis in patients with asthma. **PATIENTS AND METHODS:** We conducted an observational study of 201 patients with asthma who underwent sinus computed tomographic (CT) imaging and induced sputum analysis at Mayo Clinic's site in Rochester, MN, from November 1, 2000, through December 31, 2005. Sinus CT scans were reviewed by an investigator blinded to patients' identity and chart information (J.B.H.) to assess for mucosal thickening. Each scan was assigned a CT score based on the Lund-Mackay staging scale. Approximately 20% of the scans were reviewed at random by a radiologist (N.G.C.) to ensure quality control. Bone changes consistent with osteitis were ascertained from radiology reports. Lung function was measured, and sputum was analyzed by conventional methods. **RESULTS:** Sinus CT scans revealed abnormalities in 136 (68%) of the 201 study patients. Severe mucosal thickening (CT score,  $\geq 12$ ) was found in 60 patients (30%) and osteitis in 18 patients (9%). There was a positive correlation between CT scores and eosinophil levels in both peripheral blood ( $\rho=0.45$ ; 95% confidence interval, 0.33-0.56;  $P<.001$ ) and induced sputum ( $\rho=0.46$ ; 95% confidence interval, 0.34-0.57;  $P<.001$ ). Further, elevated blood and sputum eosinophil levels were associated with the presence of osteitis on CT scan and previous sinus surgery. **CONCLUSION:** Blood and sputum eosinophil levels in patients with asthma are directly correlated with sinus mucosal

thickening and are associated with osteitis, lending further support to the hypothesis that asthma and chronic rhinosinusitis are mediated by similar inflammatory processes.

**Fluticasone in the therapy of asthmatic children: short-term effects on growth**

**Bozzola E, Meazza C, Prodam F, Bona G, Bozzola M.**  
Dipartimento di Scienze Pediatriche, Fondazione IRCCS San Matteo, Pavia, Italia. mauro.bozzola@unipv.it

**AIM:** Inhaled corticosteroids (ICS), for years used in the therapy of low-moderate bronchial asthma, reduce the rate of asthmatic attack with improved pulmonary functioning and quality of life. Clinical trials have been addressed mainly to study the efficacy rather than the safety of drugs, so that the side effects of these drugs have not yet been accurately defined. Clinical experience shows that growth delay appears in the first months of therapy with ICS. The aim of the study was to evaluate the influence of the therapy with spacer-administered inhaled corticosteroid on short-term auxological development in prepubertal children. **METHODS:** In a group of children with low asthma, height and weight have been evaluated before and after six months of inhaled therapy with dipropionate fluticasone at a dose of 100 microg per day. **RESULTS:** Twenty-five patients (19 males and 6 females; age 5.5+/-1.6 years; range: 2.6-7.8 years) showed a regular growth during the six months of therapy (mean height 0.8 standard deviation score [SDS] before therapy and 0.8 SDS after therapy), while 21 (17 males and 4 females; age 10.0+/-1.5 years; range 8.0-12.7 years) showed an increment of growth rate (mean height from 0.5 SDS to 0.7 SDS, respectively). **CONCLUSION:** Spacer-administered low dose fluticasone does not negatively influence short-term growth rate, regardless of the age of the patients.

**What is the therapeutic response to corticosteroid in smokers with asthma?**

**Girodet PO.**  
CHU de Bordeaux, Hôpital du Haut-Lévêque, Service des Maladies Respiratoires, France. pierre-olivier.girodet@chu-bordeaux.fr

Inhaled corticosteroid is the first choice antiinflammatory therapy for chronic asthma. International guidelines are based upon data obtained in the non-smokers with asthma. The objective of this review is to highlight the interaction between cigarette smoking and metabolism of steroids and to consider the consequences of such an interaction on clinical and respiratory function. The mechanisms of corticosteroid resistance induced by cigarette smoking results of overexpression of glucocorticoid receptor beta, increased activation of pro-inflammatory transcription factors (nuclear factor-kappaB) and cytokines (IL-4, IL-8, TNF-alpha) or reduced histone deacetylase activity. Compared with non smokers with asthma, inhaled corticosteroids in smokers with asthma does not improve asthma control, lung function and bronchial obstruction. Active smoking impairs the efficacy of short-term oral corticosteroid treatment. Smoking cessation is the highest priority in smokers with asthma.

# Seretide. Your Asthma Guardian.

Seretide is a two-in-one puffer that can offer you long lasting control of asthma symptoms day and night.<sup>1,2,3</sup>

**SPECIAL OFFER** Find out if you qualify.  
[www.seretide.co.nz](http://www.seretide.co.nz)  
**0800 ASTHMA**




**References:** 1. Seretide® Data Sheet, GSK New Zealand. 2. Bateman ED et al. Am J Respir Crit Care Med. 2004;170:836-844. 3. GINA Report, Global Strategy for Asthma Management and Prevention. 2006. Available at <http://www.ginasthma.com>. Accessed on 3 May 2007.

**Seretide®** (fluticasone propionate/salmeterol xinafoate; available as a 50/25 or 125/25 micrograms per actuation inhaler, or as a 100/50 or 250/50 micrograms per actuation Accuhaler) is a Prescription Medicine for the treatment of reversible obstructive airway disease (ROAD) including asthma, and for the treatment of chronic obstructive pulmonary disease (COPD). Seretide is a fully funded medicine; Special Authority criteria apply. Seretide 250/25 microgram inhaler is a private purchase medicine that you will need to pay for. Use strictly as directed. Seretide is not for relief of acute symptoms. Always carry your reliever inhaler. Do not discontinue Seretide abruptly. Tell your doctor if: you are taking any other medicines or herbal remedies; you have pulmonary tuberculosis (TB), a thyroid problem or a heart problem; or you are having treatment for high blood pressure; Side effects may include: 'shaky' feeling; headache; fast heart rate; irritation in the nose and throat. If symptoms continue or you have side effects, see your doctor, pharmacist or health professional. For more information, see Seretide Consumer Medicine Information at [www.medsafe.govt.nz](http://www.medsafe.govt.nz). Normal doctor's office visit fees apply. Ask your doctor if Seretide is right for you. Seretide and Accuhaler are trademarks of the GlaxoSmithKline group of companies. Marketed by GlaxoSmithKline NZ Limited, Auckland. TAPS NA2135-07MY. GSK0248.




**Seretide®**  
Fluticasone propionate/Salmeterol xinafoate



  
**GUTHRIES**  
JEWELLERS SINCE 1967

"Make your Dream a Reality"



Diamond & Precious Gem Importers Custom Made Jewellery  
Guthries Jewellers Ltd 3rd Floor Dingwall Building 87 Queen Street Auckland ph 09-309 8491 fax 09-309 6049  
Mezzanine Floor 8 Sunset Terrace Botany Town Centre Auckland ph 09-274 5559 fax 09-274 5553  
info@guthries.co.nz www.guthries.co.nz



# Live Life...

# not a COPD Life



Is SPIRIVA<sup>®</sup> right for you?... Ask your doctor\*!

Now Fully Funded for **more** NZ COPD patients<sup>‡</sup>  
Special Authority Criteria Apply.

<sup>‡</sup> FEV<sub>1</sub> < 60% Predicted

\*normal Doctor's fees and pharmacy charges apply

**SPIRIVA<sup>®</sup> (tiotropium 18mcg) is a PRESCRIPTION MEDICINE.** It is used for making breathing easier in chronic obstructive pulmonary disease (COPD) including chronic bronchitis and emphysema. **SPIRIVA<sup>®</sup> should not be used** for acute episodes or rescue treatment of bronchospasm. **Cautions are** high pressure in the eye (glaucoma), kidney problems, problems with your prostate gland or passing urine. **Do not allow** the powder into your eyes. **SPIRIVA<sup>®</sup> like all medicines can cause unwanted side effects in some people.** These may include dry mouth, dry throat, cough, fast heart beat, blurred vision and high pressure in the eye (glaucoma). **If symptoms persist or you have side effects talk to your doctor. Always read the label and use strictly as directed. DO NOT SWALLOW THE CAPSULES** but administer with the HandiHaler<sup>®</sup> device. Boehringer Ingelheim PO Box 76 216 Manukau City, freephone 0800 802 461, Pfizer PO Box 3998 Auckland, freephone 0800 736 363 EP/07/23. TAPS PP4415



**SPIRIVA<sup>®</sup>**  
(tiotropium 18 mcg)