

THE NZ JOURNAL OF RESPIRATORY HEALTH
August 2012



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ASTHMA CONTROL TEST

➔ Answer these simple questions

Q1 In the **past four weeks**, how often did your asthma prevent you from getting as much done at work, school or home? **SCORE**

All of the time 1 Most of the time 2 Some of the time 3 A little of the time 4 Not at all 5

Q2 During the **past four weeks**, how often have you had shortness of breath?

More than once a day 1 Once a day 2 3 to 6 times a week 3 Once or twice a week 4 Not at all 5

Q3 During the **past four weeks**, how often did your asthma symptoms (wheezing, coughing, shortness of breath, chest tightness or pain) wake you up at night or earlier than usual in the morning?

4 or more times a week 1 2 to 3 nights a week 2 1 night a week 3 Less than 1 night a week 4 Not at all 5

Q4 During the **past four weeks**, how often have you used your reliever medication (such as your blue inhaler or rescue inhaler)?

3 or more times a day 1 1 or 2 times a day 2 2 or 3 times a week 3 Once a week or less 4 Not at all 5

Q5 How would you rate your asthma control during the **past four weeks**?

Not controlled 1 Poorly controlled 2 Somewhat controlled 3 Well controlled 4 Completely controlled 5

➔ Add up each score to get your total

TOTAL

➔ Your test result is an assessment of your level of asthma control.^{1,2} It can help you and your health care professional decide if your asthma is controlled or whether there is room for improvement.

SCORE: 20-25

Well done. Your asthma appears to be controlled.² Even so, it can change over time so it's important to retest yourself regularly. Continue to talk to your health care professional about your asthma control.

SCORE: 19 or less

Your asthma may be uncontrolled or only partly controlled.² Talk to your health care professional about how you can improve it.

Even if you are happy with your level of asthma control, it is important that you discuss your Asthma Control Test™ results or any other concerns about your asthma with your health care professional.* asthmacontrol.co.nz

References: 1. Nathan RA et al. *J Allergy Clin Immunol.* 2004;113:59-65. 2. Thomas M et al. *Prim Care Resp J.* 2009;18(1):41-49. *Please note that normal doctor fees will apply.



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Asthma and COPD Nursing Course Information

Applications are now invited from registered nurses wanting to enrol in the Asthma New Zealand/Unitec Asthma Nursing Course for February 2013 & COPD Nursing Course for April 2013. The programmes are offered by distance learning. The primary aim of the Asthma & COPD Nursing Courses are to provide nursing health professionals with a high level of evidence-based asthma & COPD knowledge that promotes best practice and is consistent with national policy.

Since the commencement of the Asthma & COPD Nursing Courses, 931 nurses have enrolled over 38 intakes. Many applicants had not undertaken any additional study since completing their nursing training, which may have been years before. However, most find the courses to be challenging but thoroughly enjoyable learning experience that is within the grasp of any competent nurse practitioner.

Asthma New Zealand in association with Unitec New Zealand offers these courses within the Bachelor of Nursing Programme. Asthma Nursing Course is a level 7 course and attracts 24 credits. COPD Nursing Course is a level 7 course with 12 credits. **A grant towards the cost available for registered nurses.**

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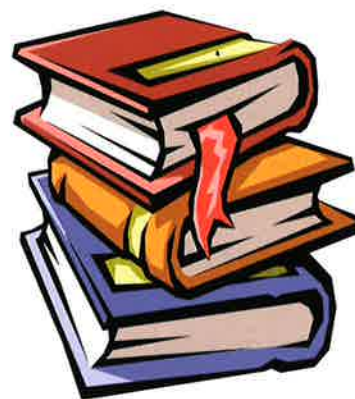
Email annw@asthma-nz.org.nz

swarnah@asthma-nz.org.nz

The closing date for enrolment is

11 February 2013 for Asthma Nursing Course

15 April 2013 for COPD Nursing Course



Upcoming events and courses

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HALF DAY COPD COURSE

17 October 2012



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November 14 2012



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Asthma New Zealand and partner societies reaching all of New Zealand



message to readers

Asthma New Zealand – The Lung Association (Inc) continues to develop its concept of establishing a national asthma body, which is branch based. In general terms, if one looks at many of the national or voluntary agencies one would have to say is that they have increased access to funding from the Ministry etc., instead of small organisations who really have difficulty in attracting national funding and funding from charitable agencies. As indicated earlier, the Asthma South Canterbury Society dis-incorporated and is now a full branch of Asthma New Zealand. The Chief Executive Officer and the PR/Marketing Manager recently spent two days in Timaru in terms of working with staff and the local District Health Board in order to set the standards in terms of achieving for people with asthma and their families throughout the South Canterbury region. It is an exciting development. Asthma New Zealand of course, continues to support Asthma Wellington, who is also succeeding in their role in the Wellington area.

Many of our readers may have taken from recent publicity in the newspapers that there were some issues between Asthma New Zealand – The Lung Association (Inc) and the Wellington based Asthma Foundation. It is unfortunate that the Asthma Foundation

took upon itself to be critical of Asthma New Zealand and its research efforts. One would hope that maturity will prevail and that one need not go to the newspapers to make a point.

Our PR/Marketing Manager, Linda Thompson, has been extremely busy and has been visionary in her approach to developing the Breathe Easy Asthma Management App. The App is now live and free to download from the App Store.

Kindest regards

Gerry A. Hanna
Secretary/Treasurer
Asthma New Zealand – the Lung Association (Inc)



action plans – an integral part of

Compiled by Janet Delooze RN

What are action plans?

Asthma action plans, or asthma management plans, are written guidelines for people with asthma to follow giving clear directions what treatment they have when they are well and have no asthma symptoms, and what treatment and actions they should take when their asthma is worsening or severe. Action plans are usually written by a doctor or a nurse prescriber – there are now several nurse practitioners who prescribe in their area of expertise.

Asthma action plans include the regular maintenance dose of therapy for those on preventer inhalers and the dose of reliever to take when asthma symptoms start or at the first sign of a cold or 'flu. They are usually symptom-based, i.e. when symptoms start, clear guidelines are given on how many puffs of the reliever inhaler to take and how much this can be increased to if asthma becomes more severe.

Some action plans also include peak expiratory flow rates as a guide to the level of asthma control. These should be based on the persons best peak flow reading rather than their expected peak flow reading¹: some people consistently blow higher or lower than their predicted peak flow when well. The action plan should always include clear directions of what action to take when asthma is becoming uncontrolled, for example, if worsening symptoms are not responding to increased doses of reliever medication the person needs to contact their doctor. If there is severe difficulty with breathing, walking or talking or they are exhausted due to the effort of breathing, someone

"Personal written asthma plans help individuals make change to their treatment in response to changes in their level of asthma control, as indicated by symptoms and/or peak expiratory flow, in accordance with written predetermined guidelines."

GINA guidelines, 2011.

must Dial 111 and call for an ambulance. Asthma patients are always advised NOT to go by car to hospital at this point but to continue their reliever inhaler at a rate of 6 puffs (1 puff at a time) every 6 minutes through a spacer until help arrives.

Action plans should be individualised and can range from quite simple to more complicated. The picture below shows the Asthma Management Action Plan for Young People used at Asthma Auckland.

Why do we need action plans?

Many people with asthma are aware of what to take on a daily basis but may not be sure what to do if their asthma control changes. Studies have found that by following an action plan, there was a reduction in the number of exacerbations, GP and hospital visits, and generally improves health outcomes²⁻⁴. Action plans should be developed in partnership with your doctor or health provider to suit individual health goals. Management plans that have been discussed with the patient

Asthma Management Action Plan for Young People

Your peak flow readings



Name: _____ My goal is _____

Date: ____ / ____ / ____

100%

Green Zone-Go! Asthma under control

- Breathing is good
- Reliever used no more than 2 times a week
- Managing to do usual activities
- Free of night-time symptoms



Controlling Asthma

- To be in control of asthma involves taking the following -

- Preventer: _____ puff(s) morning and night even when well
- Reliever: _____ puff(s) when needed and 5-10 minutes before exercise
- Symptom controller _____ puff(s) morning and night always with a preventer
- Other medication _____

85%

Yellow Zone-Caution! Asthma getting worse

- At first sign of a cold or flu
- Increasing breathlessness
- Coughing, wheezing or chest tightness during the day
- Waking up at night because of asthma symptoms



Action Yellow Zone

- Preventer: _____ puff(s) morning and night even when well
- Increase reliever to _____ puffs every 4 hours until symptoms improve
- Continue with symptom controller and any other medication as directed

60%

Orange Zone-Medical Alert! If you experience any of the following, action orange zone

- Very short of breath
- Difficult to breathe
- Needing reliever every 2-3 hours
- Wheezing sound getting louder
- Area between ribs and around neck sucking in



Action Orange Zone

- Give/Take _____ puffs of reliever inhaler (blue) (one puff at a time to 6 breaths) through spacer at 20 minute intervals for one hour.
- Contact GP or Emergency Centre for advice and inform them you/your child is having an asthma attack

40%

Red Zone-Emergency !!!! If you/your child has any of the following

- Severe difficulty with breathing, walking or talking
- Blueness around lips or on fingertips
- Exhausted / distressed
- Wheezing sounds louder or stops
- Area between ribs and around neck sucking in

Dial 111 and ask for ambulance

- State your child/you are having a **SEVERE ASTHMA ATTACK**
- Give/Take 6 puffs of blue reliever inhaler through spacer (1 puff at a time to every 6 breaths) every 6 minutes until help arrives
- If alone contact a support person to stay until help arrives



asthma self-management

are far more likely to be followed as patients feel that they have some ownership of their healthcare'. This is not to suggest that the patients prescribe their own treatment, but rather their health needs and goals are considered in a personalised management plan.

Education for people with asthma and their families is essential for self-management. Action plans will have little meaning without an understanding of asthma and how the treatments work. Also, written guidelines together with a clear rationale for medication may help patients who do not adhere to treatment. Low rates of adherence to preventative treatment are associated with higher rates of hospitalization and death: a non-judgemental approach to patients concerns improves concordance⁵.

If action plans are included in the management guidelines, why aren't they being used more often?

According to some health practitioners, action plans seem to be of little value⁶. Is this because of time constraints or lack of improvement in patients' asthma control? Jenkins and colleagues, however, found that consultations involving patients in their care did not need to take long to improve outcomes⁷. Despite there being good evidence of the effectiveness of action plans, and strong recommendations in guidelines, there is still poor uptake⁸. The asthma nurse educators at Asthma Auckland strive to provide an action plan to all clients but they still need to be completed by a doctor.

Action plans can also be electronic: the new Breathe Easy App by Asthma New Zealand is the latest innovation to assist in the management of asthma. Instead of having a written action plan, the iPhone App is individualised to include your treatment, peak expiratory flow readings and action plan. It also includes the Asthma Control Test, and automatic reminders to take your medication and for your next doctors visit. It is an easy way to keep track of your symptoms and promotes awareness of your asthma control.

Giving people the knowledge and skills to self-manage, under the direction of their health provider, has got to be the way forward. Better self-management will ultimately improve asthma control and relieve the pressure on our already stretched health providers.

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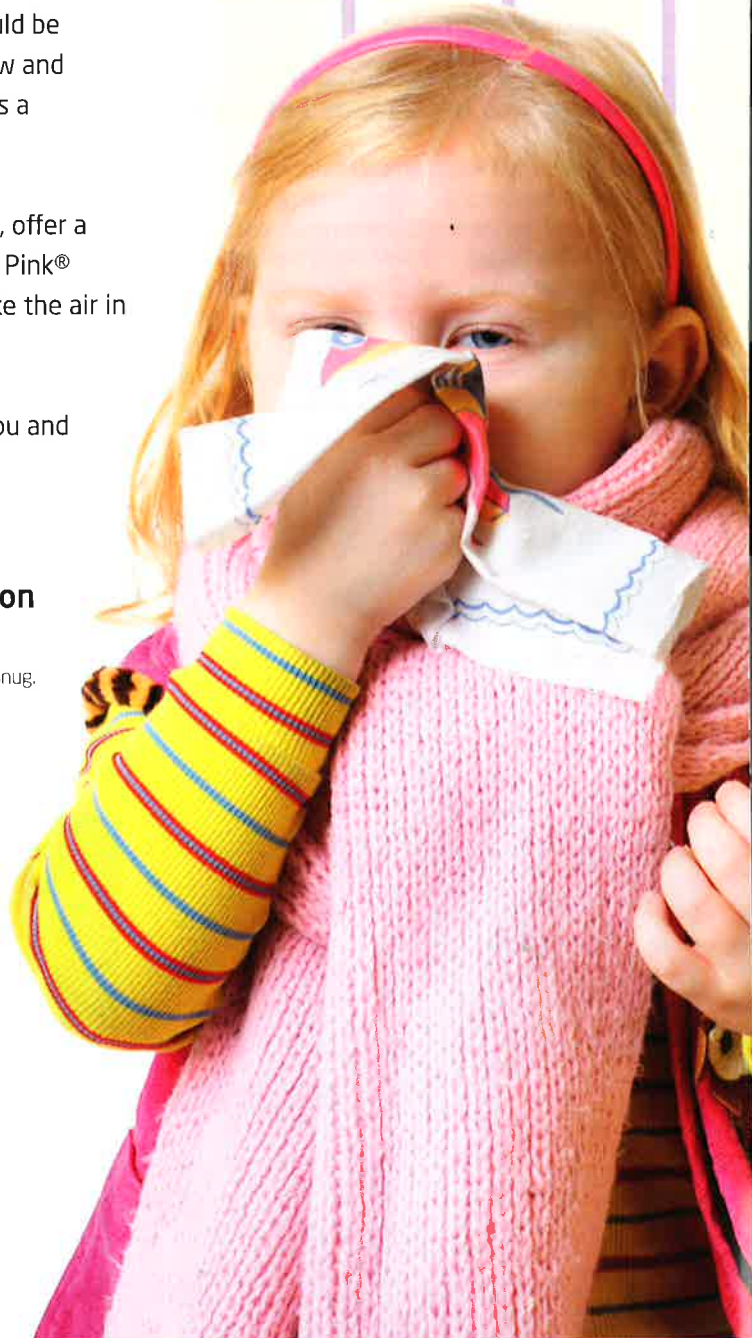
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*Not available in conjunction with other offers
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Healthy Home Group
A division of Fletcher Building



dear nurse

Dear Nurse, ever since I have stopped smoking I am coughing up phlegm. My friend said it was because when you smoke it kills the bugs?

No your friend is not correct. You will cough up more phlegm for a while because the small hairs called cilia are now working better and are wafting the damaged cells and debris caused by your smoking to your throat so you can cough it out. When you smoke these cilia do not work properly in fact they get singed! Well done giving up smoking it is the best thing you could have done to improve your asthma.

Dear Nurse, my doctor said my son could have a free flu vaccination because he is on a preventer. I have been told that often people get sick after having this vaccination?

Many studies have been done to disprove this rumour. Some people can get a slightly sore arm and very occasionally have a slight temperature; the vaccination will not give you the flu. For younger children they may require a divided dose at a one month interval.

Dear nurse, should I stop sending my son to day care. He seems to have one cold after another that then turns into asthma?

First of all is your child on a preventer and is he taking it morning and night even when he is well. Have you discussed the flu vaccination with your Doctor? There are two ways of approaching this common problem. There is one train of thought that children should be exposed to different viruses to develop immunity. However some mothers do decide to keep their child at home. I however can understand your frustration. I advise you to discuss this with your child's day-care centre to ascertain what policies are in place for children attending the centre when unwell.



Dear nurse, I have been advised for my child to have a skin prick test, what do you think?

I think this is a great idea, especially if you are uncertain of your child's triggers for his asthma. A skin prick test will confirm allergens. Remember you cannot live in a bubble but it will enable you to implement measures to reduce exposure to the allergens. And thus improve asthma control. For example some studies have shown that up to 70% of people with asthma show a dust mite allergy.

Dear nurse, my nose is blocked nearly all of the time. My doctor said it is something called allergic rhinitis. What is this, and what can be done about it?

The nose is there to warm and filter the air. We should all be breathing through our nose. If you have asthma it is especially important to do this. There are two types of nose spray that are used to treat this condition. Decongestants reduce swelling of the nasal lining, such as Otrivan and Drixine. These should only be used for short periods. The second type are Glucocorticoids, which are low dose nasal steroids that may be used for up to six months, such as Butacort, Alanase and Flixonase. Your doctor may also prescribe anti-histamine.

**IF YOU HAVE A QUESTION PLEASE EMAIL OR POST TO:
editor@asthma-nz.org.nz or Dear Nurse, Asthma New Zealand,
PO Box 67 066, Mt Eden, Auckland 1349.**

**DON'T LET
THE FLU
GET YOU!**

Parts of New Zealand have been hit in increasing numbers by the A (H3N2) influenza virus and other respiratory viruses in recent weeks.

"Even though we're seeing a rise in influenza like illness around the country, it's not too late to be vaccinated and it's still your best form of protection against influenza," says virus expert and NISG spokesperson, Dr Lance Jennings.

The National Influenza Specialist Group (NISG) says that, so far, close to a million New Zealanders have already had a flu vaccination this year.

Dr Jennings says while this virus can be particularly severe for the elderly and those with an ongoing medical condition, it can also affect others severely too.

The current flu vaccine covers three influenza A and B strains circulating in New Zealand, including the A (H3N2) virus.

The Government-subsidised campaign ended this year on July 31 for those eligible for free flu immunisation. Anyone who wants to be immunised against influenza after July 31 will have to pay a small charge to get it from their doctor or nurse. However, many District

Health Boards have asked the government for an extension to this campaign in view of the increasing numbers of flu cases. Check with your doctor to see if you are able to be immunised.

As well as getting a flu vaccination there are other ways you can protect yourself and your family/whanau from flu including:

- Wash and dry your hands often
- Stay away from people who are sick
- Stay away from work or school if you're unwell
- Cover your coughs and sneezes
- Avoid touching your eyes, nose and mouth
- Don't share drinks

Seek medical advice early if you are concerned, especially if you are pregnant or have an underlying medical condition.

For further information go to www.fightflu.co.nz or www.health.govt.nz or call 0800 IMMUNE 0800

Reference
National Influenza Specialist Group Press Release July 10, 2012

is coffee beneficial for an asthmatic?

Compiled by **Adie Riddell RN**

New Zealanders have become great coffee drinkers. Over the last 50 years the consumption of coffee has grown considerably particularly following the arrival of European refugees and settlers. It may also have been influenced by the stationing of American servicemen in New Zealand in the 1940's. And in the last ten years there has been a further increase with the 'latte' scene.

Caffeine is a drug which is found in coffee, tea, cocoa, and soft drinks that acts in a similar way to the drug Theophylline. Theophylline has been used for many years to treat asthma. Theophylline has a direct relaxant effect on the smooth muscle of bronchial airways and pulmonary blood vessels, serving as a bronchodilator and pulmonary vasodilator (Medline).

Caffeine also acts as a bronchodilator that opens up the airways in the lungs and relaxes the airway muscles and relieves wheezing, and shortness of breath.

There are two major reasons why as health professionals we need to know the effects of caffeine on the bronchial airways. Firstly, caffeine may be useful in relieving the symptoms of asthma. Secondly, consuming caffeine prior to lung function testing may affect the results and/or mask how bad someone's asthma is.

A recent Cochrane review (Welsh, Bara, Barley, and Cates, 2011) carefully assessed seven studies involving a total of 75 people with mild to moderate asthma and looked at the effects of caffeine on lung function and if there was a need to restrict the consumption prior to lung function or exhaled nitric oxide testing.

They concluded that caffeine even at a low dose (less than 5mg/kg body weight) appears to improve lung function for two hours and as long as four hours after consumption.

This information can be particularly useful in an emergency asthma situation as this data suggests caffeine is an effective tool to open up the airways. But inhaled medications are delivered directly to the lungs and provide an immediate reaction. This is a little harder with a cup of coffee and won't provide quick relief. While coffee could never be recommended as the sole treatment for an asthma exacerbation, it may be useful to use in an emergency situation and if inhalers are completely unavailable.

If an asthmatic is to undergo lung function testing then caffeine could cause misinterpretation of the results. The problem that may arise



from this is that the client has a better result than if they had not had any caffeine. This may result in under medication or incorrect medication being prescribed which can lead to problems with asthma management.

It would appear that even small amounts of caffeine can improve lung function for up to four hours. It should not be used as a replacement for medication. Consideration should be given to restricting caffeine for at least four hours prior to any lung function testing being performed.

NOTE:

Caffeine's benefits for asthma are real but minimal and should not be relied on in an emergency.

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spring – what does it mean for people with asthma?

Compiled by Ann Wheat BN

Most of us look forward for spring to arrive as it means the end of the cold wet weather which for many can be a major trigger for asthma. Spring brings images of flowers blooming, baby birds, little lambs playing, warmer temperatures and longer brighter days. It's the time that we tend to throw open doors and windows, spring clean and tidy up the garden to make it look great for summer. This is the time when many people with asthma and allergies have asthma episodes, sneeze a lot and have runny noses. These are caused by not only dust mites, pets, mould and respiratory infections but also by pollens from trees, flowers and grasses¹. Pollens are microscopic grains about 15 to 50 microns in size and carry the male contribution to the new plant generation².



Triggers can be identified by having a skin prick test and it is essential to know exactly what triggers your asthma and hay fever symptoms. Hay fever and asthma can make the other condition worse, so it is necessary to treat both conditions adequately to maintain good health. Use of the preventer medication for asthma twice daily, even when well is necessary and using antihistamines and nasal sprays for hay fever will also help at this difficult time of year.

What are the most troublesome pollens in New Zealand?

It appears that the plants that have been introduced into New Zealand are the ones that are the most troublesome source of allergic pollens³. Plants that are wind pollinated are usually more problematic than plants that are pollinated by insects or birds³. In New Zealand the pollen season can vary between the North and South Islands with the season commencing at the top of the North Island about a month ahead of the bottom of the South Island³. In Auckland, the main pollen season is between October and February but is usually not well defined around the rest of New Zealand. Inland pastoral areas such as Hamilton and Palmerston North can have severe allergy seasons³. By the sea, the pollen counts are usually lower but New Zealand is surrounded by farm land and so we have higher concentrations of grass pollens all over the country³. Asthma and hay fever are usually worse on dry windy days.

The following are some of the worst plants for causing problems in New Zealand:

Pine – widespread from our forestry plantations and the flowering season is July to September. People who react to pine, usually also have a strong grass pollen allergy^{3,4}.

Birch – is a popular tree in gardens and produces large amounts of pollen which is a very potent allergen and is now the most common tree pollen causing allergic symptoms. People with birch allergy can also show a cross reaction to apples, several other fruits and vegetable³.

Plantain is a weed and is very abundant. It can produce small to moderate amounts of pollen which is highly allergic.

Grasses produce large amounts of pollen that can be carried a long way by wind⁴.

Other trees and plants are Olive (more of a problem now that they are being planted more frequently in New Zealand), alder, ash, coprosma, elm, oaks. Flowers that may cause problems are daisies, marigolds and chrysanthemums⁴.

Privet which grown abundantly throughout New Zealand is not particularly allergenic but does have a highly scented flower which

is an irritant to many people³. People who think they have an allergy to privet are more often than not allergic to rye grass.

So what can you do to help with pollen allergy? This information is provided by Asthma Auckland (2012)

1. Close windows in cars and use the car's air-conditioning system or recycle air
2. Close windows on windy days or when humidity is high and at night
3. Arrange outdoor activities for early afternoon when pollen levels are at their lowest. Pollen is usually emitted between 5 a.m. and 10 a.m. Grass pollen is released when the weather is dry and sunny and has usually risen high into the atmosphere by noon, descending again when the air cools, towards the evening.
4. Use wrap-around sunglasses when outdoors.
5. Have a shower after spending time outside as pollen can collect on skin and hair.
6. Avoid hanging sheets and clothes outside to dry as they will collect pollen
7. Choose pretty, brightly coloured flowering plants, as they attract bees and other insects
8. Holidays near the beach at the height of the pollen season may cause less symptoms
9. Avoid freshly mown grass and arrange to have lawns mown often to avoid flowering
10. Pollen calendars are available to help identify the pollen seasons of different trees, weeds and grasses
11. Wear a mask when outside if possible especially if gardening
12. Check the pollen count if this service is available
13. Use your preventer medication as prescribed twice daily even when well.
14. Wash your hands frequently

In conclusion, pollen can be a major trigger for people with asthma and although the worst time of the year is spring, some pollens are around at different times of the year so it is very important to know what you may be allergic to, so have a skin prick test to identify them. Take precautions to minimise the amount of pollen exposure you have and this may help with your asthma control.

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Old-Time Remedies

Compiled by Sharron Daniels RN BN

Note: These are just for fun! While these were actually published in old books, we do not recommend that you try them! They actually could be dangerous!

I smile to think of what they used
To help us kids survive,
But I am "going on" 69
And very much alive.
My sorest throats were eased, and I
Still hold no bit of rancor
To think of sucking sugar lumps
With a drop or two of camphor.

And camphor mixed with goose grease for
A winter chest congestion;
Baking soda cleaned my teeth
And helped my indigestion.
Because of Mother's tender heart

I hereby sing a Glorial
She never gave me castor oil,
Just syrupy Castoria.

Salt for all mosquito bites,
Cobwebs on the scratches,
The sickroom fumigated with
Our sulphur kitchen matches.
Somehow there's quite a bunch of us
That never had a shot,
But here we are still kicking
And enjoying it a lot.

– Author Unknown

Asthma

- If a child has asthma stand him up against a tree and drive a nail in the tree an inch above his head. If the child grows an inch in the next year, the asthma will disappear.

Colds – Curing

- Catching leaves in your hand, which fall from the trees in the fall, will cure a head cold.

Colds – Preventing

- Eat an onion sandwich and wash your hair.

Coughs

- Put some cow dung in water and bring it to a boil. Gargle the water three times a day and your cough will be gone.
- Bake onions and pour all the juice from the baked onions into a glass and drink.

Sore Throat

- Take a black thread, tie nine knots in it, and wear it around your neck for nine days.
- Heat coarse salt in a cast iron frying pan; fill hand knit wool stocking with heated salt. Sew top of stocking together. Hold around the neck with large safety pin.
- Tie a piece of fatback on a string and swallow the fatback, pulling it up again by the string. Repeat several times.
- To prevent catching strep throat, burn orange peels on the damper and inhale while they are burning.
- Mix turpentine from a fir tree with sugar and swallow it.
- Eat molasses candy made with a small amount of kerosene oil. Some people just boiled molasses and kerosene oil (or Minard's Liniment) and took a couple of spoonfuls every few hours.
- Rub kerosene oil and butter on the throat and chest.

Whooping Cough

- Put some hair from the person on a piece of bread outside the kitchen door where the moon can shine on it. If a dog comes along and eats it, the cough will be cured in five days.
- Grab hold of a table leg when coughing.
- Place a pan of fresh chicken droppings under the bed.



Asthma was diagnosed and treated in days of old by what is known today is aromatherapy. Chamomile, which is a natural antihistamine, was used to aid in relieving asthma. Chamomile flowers were made into teas and decoct and drank or inhaled to relieve the symptoms. If asthma were allergy based, honey would be added to teas to build the immunity system. Grated horseradish was used to clear the sinuses and stimulate easier breathing. Bouquets of eucalyptus were inhaled for the menthol scent, which relieved breathing difficulties.

This of course is all well and good, however; aren't we glad that medical technology has made its mark in the empirical world?

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Middlemore Hospital Respiratory Nursing Team

Compiled by Karen Little RN

In the past, I have described the roles of the five asthma nurses who work for Asthma Auckland. I visited Nicola Corna, Respiratory Nurse Specialist, at Middlemore Hospital recently to find out about her and her colleague's role in the hospital and community. Nicola is the current chairperson of the Respiratory Section of the New Zealand Nurses Organisation which at present has a membership of over 200.

Nicola works with a varied team of nurses, physicians, physiotherapists, community workers and health psychologists. The team work with people who have a variety of respiratory diagnoses including airways disease e.g. asthma, chronic obstructive pulmonary disease and bronchiectasis, lung cancer, obstructive sleep apnoea and other less common conditions.

The team includes seven respiratory nurses specialists and Diana Hart, Respiratory Nurse Practitioner. The team all work closely together contributing a multi-disciplinary approach to sleep, oxygen, bi-level ventilation, general respiratory and pulmonary rehab. All the nurses have on-going involvement in research projects according to their different areas of expertise. The respiratory nurse specialists are also involved in teaching as well as their clinical roles.

Diana is the convenor of The Thoracic Society of Australia and New Zealand, nurses special interest group. There are only three respiratory nurse practitioners in New Zealand. Nurse practitioners are expert clinical nurses in their specialist field. They have a masters degree and may also be prescribers. Diana is very clinically focused, spending at least three days a week visiting the patients she case manages in the community. She also facilitates and lectures for the University of Auckland post graduate papers.

Shyama Abraham, Lila Prasad and Nicola are general respiratory nurse specialists. Nazma Khan and Suzette Norris focus on lung cancer patients in the Hospital and community settings.

Charlene Swanevelder is the oxygen nurse specialist. The service meets the needs of both paediatrics and adults, inpatients and outpatients, long term, short term and palliative patients. Oxygen is a prescribed treatment and the international guidelines are adhered to for supply of oxygen. Referrals are accepted from a variety of sources, inpatient, outpatient and other district health boards. Charlene assesses these patients usually in outpatient clinics. Charlene follows up relevant patients in her oxygen clinic. Her nurse specialist colleagues also support her doing oxygen clinics. All equipment is supplied and maintained by Counties Manukau District Health Board (CMDHB).

Christine Little, the sleep nurse specialist is responsible for the nursing care and smooth running of the outpatient obstructive sleep apnoea service at CMDHB. There are currently approximately 2500 patients in this service. She has a team of five community health workers. Sleep clinics run every weekday, at Manukau SuperClinic. The respiratory nurse specialists all do sleep clinics with Christine.

Obstructive Sleep Apnoea (OSA) is diagnosed following a physician appointment and a sleep test. The sleep test may be done in the patient's home or in a sleep laboratory. The patient undergoes an overnight test attached to a machine that can measure a number of parameters including heart rhythm, body position, abdomen and chest movement and O₂ saturation. Once the results have been examined and a diagnosis of OSA confirmed, another test called a Pressure Determination Study may be ordered. This involves another machine that gauges what pressure is needed to keep the airways open preventing oropharyngeal obstruction. Following this, the patient is fitted with a mask and Continuous Positive Airway Pressure (CPAP) machine. The patient should then use this machine and mask every time

that they sleep. These services are again fully funded at CMDHB.

The five community workers speak a variety of languages. This enables them to assist patients from different cultures to use this equipment and help with any problems that may arise.

The bi-level service is run by Diana Hart with Nicola's assistance. At present there are approximately 60 patients in the community under this service. These patients have a number of comorbidities and the bi-level ventilator machine is used to assist with ventilating these complex patients.

The Pulmonary Rehabilitation Programme is a six week course. People are referred onto this course following a multi-disciplinary assessment by nurses, physiotherapists and doctors. A respiratory physiotherapist and Shyama are in attendance during the sessions. Spirometry tests, six minute walk test and health questionnaires are included in the programme assessments.

In 2001, the respiratory team at Middlemore Hospital set up a support group for people who have Chronic Obstructive Pulmonary Disease (COPD) for people who reside in Counties Manukau. The group's name is MAGIC (Manukau Airways Group Inspiring Confidence). The group now runs itself with most people having completed the Middlemore Hospital Pulmonary Rehabilitation Programme. Each month a brief meeting is held followed by gentle exercises and often a guest speaker will attend. If any of our readers in South Auckland would like to attend please contact Janet Gifkins, the president, on 09 2624453.

Health psychologists are available to help people with particular serious health events such as a new diagnosis or a deteriorating diagnosis. These health professionals can help people come to a better understanding of their condition.

There is a team based at Middlemore Hospital known as the Very High Intensity Users (VHIU) team. They work with people who have had over five admissions to hospital in a year. This multidisciplinary team includes nurses, pharmacists, social workers and physicians who visit and monitor people in the community to try to ensure better health outcomes and reduce unnecessary admissions to hospital. Dr Fiona Horwood and Professor Harry Rea are the physicians involved in this project and RN Pam Hill is the co-ordinator. The respiratory nurse specialists work very closely with this team too.

Nicola Corna is also involved in the bronchiectasis youth transition team with Sarah Mooney, senior respiratory physiotherapist. These adolescents have been discharged from Starship Hospital into adult respiratory services at Middlemore Hospital. This cohort now has 37 people and has been running for four years. The team follows these people providing holistic care, referring and working alongside other specialties as necessary.

Nicola stressed to me that all the health practitioners that I have described in the above article work closely and collaboratively as a team to provide the best service for their patients in the hospital, outpatient clinics and community. I would sincerely like to thank Nicola for the time she spent with me explaining the varied roles of the team as well as letting me observe a home visit.

asthma and food allergy

If you have asthma on top of a food allergy, you are at increased risk for severe anaphylaxis. But if you manage both conditions, you reduce your risk. Allergy Today looks at the latest research into food allergy and asthma and offers some practical tips.

The asthma and food allergy link

Researchers have long known that there is a close association between food allergy and asthma, but it is unclear whether these just co-exist or if one causes the other. What is known is that asthma increases the risk for severe anaphylaxis, including fatal anaphylaxis, particularly if asthma is uncontrolled. What this highlights is that both conditions need to be well managed. If this is achieved, then you reduce this risk and will still be able to live a healthy and active life.

Authors Julie Wang and Andrew Liu, from the Mount Sinai School of Medicine, New York, USA and the National Jewish Health and University of Colorado Denver School of Medicine, Denver, Colorado, USA have looked at the research into the food allergy and asthma link. Their findings appear in the publication *Current Opinion in Allergy and Clinical Immunology*.

Management of coexisting asthma and food allergies

“Whether or not food allergies and asthma are simply associated with each other or causally related, patients with both diagnoses are at risk for poor outcomes and should be well managed to prevent potential morbidity and mortality,” Wang and Liu write.

The first step to prevent this is to get an accurate diagnosis of both asthma and food allergies. Asthma symptoms, triggers and response to bronchodilators need to be assessed, as these are essential to establish the diagnosis. For the majority of people with asthma, good control can be maintained by following conventional asthma management. There are international guidelines that can be followed. Because uncontrolled asthma is a risk factor for severe anaphylaxis, optimal management and compliance with controller asthma medication is required. Talk to your health professional about this and find more information at Asthma New Zealand (www.asthma-nz.org.nz) and The Asthma and Respiratory Foundation (www.asthmanz.co.nz). There are asthma societies throughout New Zealand where you will get individualised help and education on managing your asthma.

This also goes for food allergy. Once you have a diagnosis, it is vital you are educated about the importance of food allergy avoidance, how to read food labels as well as how to appropriately treat an allergic reaction in an emergency situation. This is where Allergy New Zealand can help. The organisation has practical tips on the day-to-day management of food allergies at home, day-care, school, the workplace and in social situations.

Wang and Liu note that it can be confusing whether symptoms are due to asthma or food allergy. If you are highly suspicious of food-induced anaphylaxis, do not rely on short-acting bronchodilators, such as Ventolin; in this situation, injectable adrenaline is the treatment of choice.

“Having food allergy and asthma places people at greater risk for morbidity and mortality,” Wang and Liu write. “With heightened awareness of the relationship between these two entities, management of food allergy and asthma and recognition of food-triggered asthma exacerbations may improve treatment and prevent severe reactions.



A multifaceted approach to managing this subset of patients can lead to optimal care.”

How is it linked?

Although there is a close association between food allergy and asthma, do these just coexist in children predisposed to allergic conditions or does one cause the other? This is what Wang and Liu asked, as they searched the recent studies.

These studies have found that being sensitised to egg is a risk factor for developing later asthma; however there was no association between the severity of allergic reaction to foods and risk of developing asthma. Being sensitised to an allergen means that your body has developed antibodies to it — IgE — but it does not mean you are allergic. It is only when these antibodies trigger an allergic reaction that you are deemed to have an allergy.

The association between food allergy and asthma is further supported by epidemiologic studies that show a high rate of food allergies in children with asthma. One study of children with asthma from cities in the United States found that almost half were sensitised to at least one of the most common food allergens: milk, egg, wheat, soy, peanut, or fish. Four percent of the group had high IgE levels that indicated very high likelihood (95 per cent positive predictive value) of a reaction, Wang and Liu observe.

The authors also note that children with asthma and concurrent food allergies tend to have worse health due to asthma (asthma morbidity) than those with asthma alone. In the cohort above, children with sensitisation to foods had increased asthma morbidity, with higher rates of asthma hospitalisation, and higher requirements of steroid medications.

Another finding indicated that children with food allergy presented with asthma at an earlier age than those without a history of food allergy.

“Interestingly, there was no association between asymptomatic food



Key Points

- Asthma and food allergy may often coexist.
- Food allergic individuals with asthma are at higher risk for severe asthma.
- Concurrent asthma places food allergic individuals at higher risk for severe allergic reactions to foods, particularly if the asthma is uncontrolled.
- Food allergy should be considered in children with acute life-threatening asthma exacerbations with no identifiable triggers; and in highly atopic children with severe persistent asthma resistant to medical management.
- In patients with coincident food allergy and asthma, educate about heightened risks and manage both well.

sensitisation and asthma prevalence or severity.”

Long-term food allergy

Wang and Liu also note that while respiratory symptoms may not always accompany food allergic reactions, having asthma as well appears to worsen the general prognosis for food allergy. For example, the presence of asthma is a predictor for persistent cow's milk allergy, and asthma is a risk factor for fatal food anaphylaxis.

“In a recent study of anaphylaxis prevalence in the UK, those with asthma had significantly higher rates of anaphylaxis as compared with those without asthma. Of note, the most common triggers for anaphylaxis in that population were drug and food allergies.”

Management and education

Wang and Liu point out that there may be situations in which food allergy should be suspected in asthmatic patients.

“These may include acute life-threatening asthma with no identifiable triggers or outside the typical season for viral infections, or highly atopic children with severe persistent asthma resistant to medical treatment in whom the history linking food ingestion to asthma may not be reliable due to fragmented care (e.g. children in foster care or children alternately living with divorced parents).”

The bottom line is that suspected food allergy and asthma need to be investigated and properly diagnosed. Once this is done, then a multifaceted approach to managing these conditions can lead to optimal care.

“With heightened awareness of the relationship between these two entities, management of food allergy and asthma and recognition of food-triggered asthma exacerbations may improve treatment and prevent severe reactions,” Wang and Liu conclude.

Source: Julie Wang; Andrew H. Liu, Food Allergies and Asthma, Curr Opin Allergy Clin Immunol. 2011;11(3):249-254.

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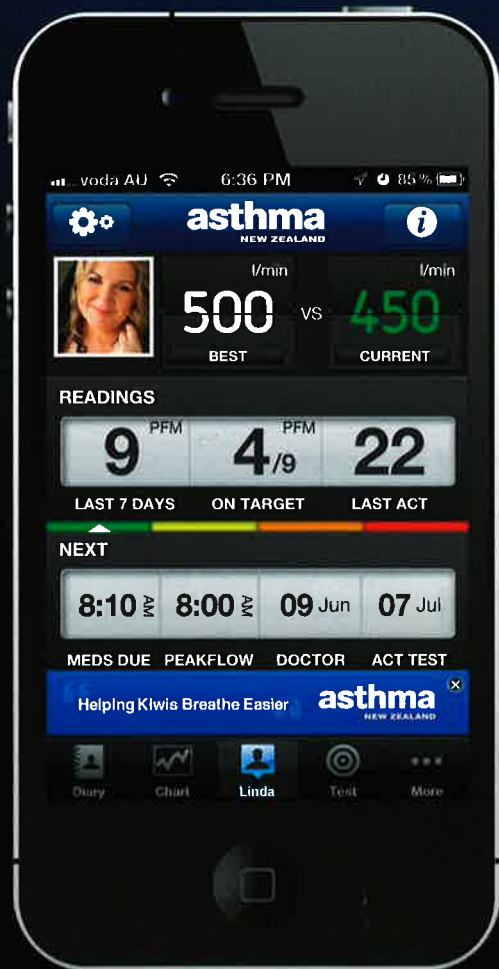
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As a person with Asthma, and a tax payer, I was shocked to first learn the cost of Asthma to the New Zealand economy. The direct cost is estimated to be \$825 million per year, whilst the indirect cost of asthma – including loss of productivity, loss of healthy life; due to disability, and premature death – is approximately \$700 million per year. In short it is costing our economy over \$1.5 billion per annum.

As people with asthma we need to take responsibility for the burden we share. Much of this cost is from poor asthma control. There is currently no cure but very good treatments already exist that can help people to live a better life. I should know, I have had asthma my whole life and it is only recently that I feel I have had an effective tool to assist me in being compliant. I sincerely believe that the last time I completed an action plan was 23 years ago before I left for boarding school. I now have my asthma action plan at hand and I now know how I should properly respond when I develop symptoms. As the developer I am naturally biased but I was also one of the guilty people who knew I should be taking my preventer but didn't. I had developed habitual non-adherence and learnt to live with asthma. My approach has always been to puff on my blue reliever and continued to puff if that didn't work. I would even develop symptoms when I didn't have my reliever at hand – such was my reliance on this solution.

Thanks to Asthma New Zealand, I am now reminded on a daily basis to take my preventer and I now know what my personal best peak flow should be. My asthma is now in control not in control of me.

It seems I am not alone. To date 84% of people who have downloaded the App and taken the Asthma Control Test have poor asthma control. But they have taken the first step in personal responsibility for their healthcare just like I did.

Healthcare is in the middle of a mobile revolution. According to Professor Lionel Tarassenko at Oxford University, "mHealth allows one of the key objectives of 21st century medicine to be met: the delivery of healthcare away from the doctors surgery and closer to the patient's home." It removes the tyranny of distance for doctors wanting to manage and monitor their patients health. It also provides patients the opportunity to self manage their condition. The latest report from PWC found that nearly 60% of consumers using mHealth services say they've already replaced some visits to doctors or nurses due to mobile interventions. mHealth is a disruptive force that has universal appeal for consumers within healthcare, one that put the consumer front and centre.

In the case of Asthma New Zealand's App it has demonstrated wide appeal with a range of ages and ethnic groups including people of Polynesian, Chinese, Indian, Maori and New Zealand European descent registering to use the free tool. It is also removing geographical barriers with users not only subscribing in main urban areas but also from outside areas like Kaitaia, Raglan and Wanaka.

Why? Because mHealth has personalised reach, anytime, anywhere. Currently, 44% of New Zealand household's contain a smartphone and this figure is expected to reach 60% by the end of the year. To put this in perspective SKY TV is only in 48% of New Zealand household's. Whereas SKY TV's penetration has been reasonably static, the growth of smartphones in New Zealand has been exponential. mHealth provides the state and health providers a fantastic opportunity to actively intervene and assist people on a personal basis going forward.

Asthma New Zealand can also continuously improve upon the App based on user feedback and analyzing its use (anonymously) to build a better patient-centric App. Asthma New Zealand is already responding to medical professionals; by building a GP dashboard that allows them to monitor their patients health and directly intervene when their asthma is not in control.

The future looks bright for mHealth. The mobile health technology market (including devices, applications and services) is expected

to exceed US\$8 billion by 2018. That's up from US\$500 million in 2010, a 44% compound annual growth rate. Thanks to the foresight of Asthma New Zealand's leadership team it is front and centre.

John McRae is CEO of VADR. VADR designs, develops and promotes Apps for non-profits, businesses and brands. To find out more visit: www.vadr.it or call us on 09 889 7770.

Recommended Reading:

www.pwc.com/mhealth
<http://mobihealthnews.com/>
<http://www.fiercemobilehealthcare.com/tags/mobile-healthcare>

For more information about the App visit: www.breatheeasy.co.nz

Tips for getting the most out of your App

1. Make sure you have the latest version installed.
2. Activate the BPFM in the settings to find out your best personal peak flow. It's a two week program that prompts you twice a day to take your peak flow then determines your personal best.
3. You can get a free peak flow meter from your doctor.
4. Leave a spare preventer in the bathroom, your office or bag or car so you have one at hand when you receive a reminder.
5. Make sure you enter your support person and doctors contact details in settings so you have them at hand in an emergency.
6. Go through your action plan with your doctor next time you visit them.

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the emergency ride

Compiled by Karen Little
Asthma Nurse Educator

Joe woke up with a cough.

His brother complained that he had been coughing all night, but he did not remember that.

"How can you cough and not wake up?" asked his brother Jack.

"I don't know," grumbled Jack. He felt really tired and did not want to go to school.

"You are going to school today Joe, you have already had four days off school this month with asthma," said his mum, Mary. "Make sure you take your blue puffer to school in case you get wheezy".

Joe was not happy with this; he was sick of feeling tired all the time and did not do well in his maths test last week. His sister, Karen, was also being more annoying than usual so he kicked her shoes under the bed so she could not find them.

School seemed to last forever. Joe had two puffs of his blue puffer every four hours. He remembered his doctor had said it would be a good thing to do if he had a cold. Joe was not sure if he had a cold but he certainly did not feel right. His chest felt tight and when he coughed he could also hear a sound like a whistle.

Mum asked if he had been taking his orange preventer every morning and night.

"I can't remember," said Joe. He felt bad because he had been forgetting it more and more recently as he had been feeling so well.

"I will be really mad if you haven't been," mum said very crossly. "You heard the Doctor say you still needed to take it even when you are well".

Mum made him find his spacer and watched him put one puff into it and take six breaths.

"Baby, Baby, Baby," yelled his horrible sister Karen. "Do you want to use my baby mask?"

Joe was glad to go to bed that night to get some peace and quiet.

Joe was having a horrible dream where he felt he was under the water and could not breathe. He must wake up soon surely. It got worse and worse. Suddenly he felt his brother shaking him awake.

"Joe, Joe," cried his brother Jack, "what's wrong?"

Joe could hardly breathe and started to really get scared.

"Get Mum," he croaked.

Mum came rushing in. She woke up the whole house shouting, "where is that blasted blue puffer?"



Every one ran around in a panic. Joe was now becoming very frightened; he had no idea where he could have left his puffer.

"I'll take him in the car to the hospital," shouted Dad to make himself heard.

"No, no," shouted back Mum, "don't take him out in the cold air, call an ambulance". Mum felt pleased that she had joined St John's Ambulance Society as she now knew she would not need to pay for the ambulance ride.

Dad rushed to the phone and dialled 111. He told them Joe could hardly breathe because of his asthma. He then went outside to turn the light on and to wait for the ambulance in case they could not see the number in the dark.

Finally, his sister Karen woke up as well. "I know where my blue puffer is Mum," she said.

"Quickly, quickly get it," by this time mum was crying loudly.

Mum put one puff into Joe's spacer and he took six breaths. They did this six times. Joe felt a little better but still felt that he was under water and drowning. Mum put one puff in again to six breaths and again repeated it six times. Joe was not getting any better after this so mum kept doing this every six minutes until the ambulance men rushed into the room. They gave Joe some oxygen, put him onto a stretcher and took him quickly outside to the ambulance.

Joe was still very frightened but he felt happy that the ambulance men were here to help.

Off they went with the red light flashing and "WHOOO WHOOO" sound.

At the hospital the nurses and doctors were waiting. They put a tube in his arm to give him medicines through and put a mask on his face so more medicine could be given through a machine called a nebuliser. Mum sat by his bed until he felt better. Joe felt for the first time in ages like he loved his sister so he told mum where her shoes were.

Kid's Page



Draw a line from each picture to the letter with the same beginning sound.



L



S



C

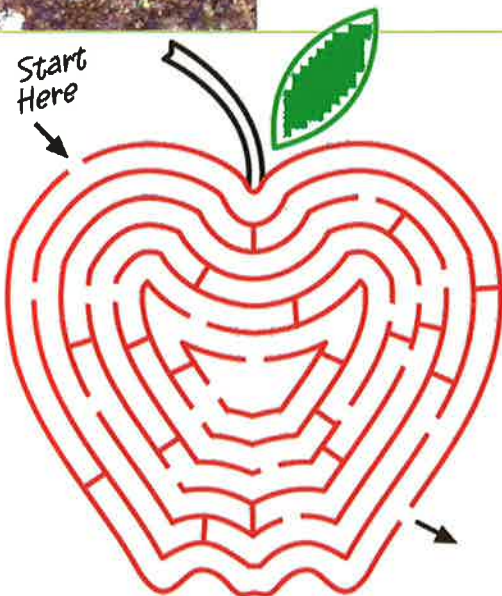


B



W

Start Here



Unscramble the words all about school and write the correct word on the line

cnluh _____	nbkoeoot _____
ubs _____	taehcre _____
loorsacms _____	dfniers _____
lble _____	urlaogpnyd _____
ncepil _____	eskd _____

WORDFIND

N	D	A	N	D	E	R	L	F	U	DUST
T	U	L	E	E	I	D	E	P	O	COLD AIR
I	S	P	S	A	L	P	P	S	C	GRASS
P	T	E	D	O	E	L	R	T	G	DANDER
A	S	L	M	S	U	K	O	E	R	SMOKE
N	O	I	T	U	L	L	O	P	A	POLLUTION
C	T	S	S	S	F	T	A	M	S	PAINT
L	L	P	K	F	L	I	T	O	S	PETS
O	C	U	L	S	N	U	T	S	R	FUMES
E	S	S	E	T	K	S	S	I	P	POLLEN
										FLU
										MOLD
										PESTS
										NUTS

M

B

C

S

L



Answers
Draw a line from each picture to the letter with the same beginning sound.

Unscramble the words and write the correct word on the line

cnluh	lunch	nbkoeoot	notebook
ubs	bus	taehcre	teacher
loorsacm	classroom	dfniers	friends
lble	bell	urlaogpnyd	playground
ncepil	pencil	eskd	desk



gluten free food and allergy show

June 9 & 10 2012



The gluten free food and allergy show is dedicated to bringing ideas and solutions for a wide range of allergy and intolerance issues, along with information on asthma, hay fever and skin conditions such as eczema.

The staff from Asthma Auckland are always pleased to be part of this weekend as it provides us with a wonderful opportunity to provide education and information about asthma management, as we are able to engage with a large number of members of the public.

Janet Delooze and Ann Wheat also spoke about triggers, which

is a big part of asthma management. They both received positive feedback, with some people wanting more information on a one-to-one basis.

We also provided information about house dust mite protection and this year we introduced a new range of barrier bedding covers for mattresses, duvets and pillows.

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world asthma day – 1 may 2012

by Janet Delooze

The nurses at Asthma Auckland were out in force on World Asthma Day this year to promote asthma awareness. It was a fantastic opportunity to provide advice and education to members of the public that we would not have otherwise seen. In order to reach as many people as possible, the nurses spread out into different shopping malls and pharmacies. Ann spent the day at Botany Town Centre, Elaine was at the pharmacy at St Lukes and Janet and Sharron had a table at Takapuna Shopping Mall. Karen visited Glenn Innes pharmacy and Mission Bay pharmacy with the Asthma Bus during that week. Many people stopped to talk about their asthma or wanted general information, and several people were followed up at home for further education.

As a non-profit organisation, we are grateful for the donations made by the general public, and to the Westfield shopping centres at Takapuna and St Lukes for enabling us to have a table to promote our services.



Karen Little with Amcal Pharmacy staff at Mission Bay.



Janet and Sharron at Takapuna

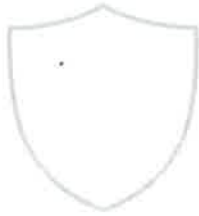


L to R is Hannah Carragher, Dylan Hartnoll, Danielle Clark all of Botany Downs Kindergarten who supplied the photo of the three of them selling windmills for Asthma.



Anne Wheat at Botany Town Centre. Photo – Eastern Courier.

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international nurses day

International Nurses Day is marked on the anniversary of Crimean War Nurse Florence Nightingale's birthday and is a chance for the public to recognise the work that nurses do.

This year on 11th May 2012 the theme was *Closing the Gap: from Evidence to Action*, and acknowledged the role nurses can play in improving the health of all.

Sue Sharpe, New Zealand Nurses organisation (NZNO) regional council chair and Registered Nurse co-ordinated many groups to meet in Auckland's Aotea Square from 9am – 1pm.

Karen Little Asthma Nurse Educator was needed there bright and early at 7am as the Marquee was set up around our travelling Asthma bus. She was soon joined by other nurses checking people's blood pressure, sugar levels, lung ages and giving advice on becoming smoke-free. Breast screening, Pacific Health, Men's Health, Plunket, Practice, student and Accident and Emergency nurses were also present.

The day was enjoyed by all with members of the public having the opportunity to talk to local nurses and to get their health checked at the same time.



big save from big save



One little boy is now sleeping through the night thanks to the generosity of Big Save Furniture in Upper Hutt. Coen Hughes (4) has had frequent visits and stays to emergency departments and hospital due to the asthma he was diagnosed with at age 1 and has regularly woken at night coughing and struggling to breathe.

Our Asthma Nurse Educator, Adie Riddell visited Coen after his family doctor referred him to our service. Along with advising on correct medication technique, Adie spent some time looking for triggers in the home that seemed to set Coen off. Dust mite can be a major trigger for asthmatics and is common in bedding, particularly mattresses and pillows. Cohen happened to be sleeping on a very old mattress and Adie was concerned that that was contributing in a big way to Coens nightly attacks, as Coens asthma was so persistent, even though Amanda had purchased anti-allergen bedding. It was recommended that a new bed would be preferable. Unfortunately such a big item was not within Amanda's current budget.

An approach was made to Big Save for a new bed and although they had been putting all their efforts into supporting Christchurch since the quakes, they came back straight away a resounding yes! With Sealy also coming to the party, they donated a hypo-allergenic bed from their special range to Coen.

In less than a week of sleeping on the bed, Amanda reported

that Coen was no longer waking at night. Understandably, the difference it has made to both Coen and Amanda has been huge and long term will continue to impact greatly on Coens future due to less time off school and other activities. Coen continues to improve and has even been able to reduce some of his medication.



In further supporting the family Asthma NZ also donated an Air Purifier for Cohens bedroom so we are hoping that his winter will be better than last. A huge thank you to Lily, Glenn and Geoff!

We have decided in Wellington it would be nice to have our own local newsletter so we can keep our local members updated with what is happening locally around asthma and Asthma Wellington. This will be by bi-monthly email and in addition to the O2 magazine. If you or anyone you know is interested in receiving this please email Kim at kimj@asthma-nz.org.nz.

Kim Jansen
Administrator/Fundraising Coordinator

nutrition in patients with copd

Compiled by Elaine Murray RN

Asthma Nurse Educator

Nutrition and energy supply are important components of rehabilitation programmes for patients with chronic obstructive pulmonary disease (COPD).

Improvement in functional performance is considered an important management goal in patients with COPD. Pulmonary rehabilitation is now considered as an evidence based intervention to achieve an improvement in functional capacity as well as other management goals such as improved health status and reduction in breathlessness (Wouters, 2003).

The metabolic demand of exercise, reflected in the energy expended on activities, is generally overlooked when patients are stressed to increase their activity level.

Consideration of energy balance in COPD is important because weight loss and, specifically loss in fat mass, is the result of a negative energy balance. One obvious way of improving energy balance is to decrease energy expenditure. However, restricting energy output is not desirable as maintaining an active lifestyle is one of the management objectives in patients with COPD (Wouters, 2003)

Malnutrition in patients with COPD is associated with an impaired pulmonary status, reduced diaphragmatic mass, lower exercise capacity, and higher mortality rate when compared to adequately nourished patients with COPD (Ferreira et al, 2000).

Ferreira et al, (2000) also state that malnutrition is more common among patients with emphysema than among those with chronic bronchitis. It is unclear whether malnutrition is the cause of deterioration in these patients, or whether it simply reflects other processes intrinsic to the disease.

Several studies have shown that patients with low weight have more gas trapping, lower diffusing capacity, and lower exercise capacity than those with similar pulmonary mechanics but with normal weight. In addition, malnourished patients with COPD had a higher mortality rate than those whose nutrition was adequate.

Nutritional depletion in COPD is common and has a negative impact on respiratory as well as skeletal muscle function, contributing to the morbidity and mortality of this condition (Ferreira et al 2001).

In patients with COPD, energy requirements have been reported to be 15%-20% above normal needs due to the increased energy required for breathing. Careful balancing of caloric intake is required (Houghton, 2008).

As the disease progresses and symptoms increase, they start to affect nutritional intake. It is common for patients to report difficulties with eating due to

- Difficulties in shopping and preparing meals
- Decreased appetite
- Increased breathlessness on eating



- Dry mouth-due to side effects of medication
- Fatigue on eating, reluctance to eat due to fear of choking and poor swallow
- Early satiety and feeling bloated
- Fatigue
- Anxiety and depression

Added to this are increased nutritional requirements due to inefficient and overworking of respiratory muscles and cachexia in the later stages of the disease.

The best nutritional advice for you depends on whether you are underweight or over weight.

Tips for healthy eating if you are underweight.

If you are under weight or have problems eating and drinking because of lack of energy, you should try to:

- Eat frequent small meals – aim for six meals/snacks per day.
- Select foods high in protein and fats. High protein foods include meat, fish, chicken, eggs, cheese and milk. High fat foods include fried foods, margarines, butter and oils, cream, peanut butter, sauces and gravy.
- Eat regular snacks and keep snacks available beside your armchair and /or bed. Good snack ideas include milk drinks, yoghurt and milk puddings, sandwiches, cheese, nuts and raisins, muesli bars, cakes, biscuits, scones and pikelets, and don't forget chocolate.
- An adequate intake of fluid and dietary fibre prevents constipation. Remember to eat fruits, vegetables and wholegrain breads and cereals, and to drink 8-10 glasses of fluid every day. You may find it easier to drink small amounts often throughout the day.
- If you get breathless when eating choose soft foods that require less effort to eat. Good choices include porridge, scrambled or poached eggs, custards and milk puddings, mashed vegetables

- and cheese sauce or gravy, stews, casseroles and mince.
- Avoid drinking large amounts with a meal as you will feel full and make it harder to breathe.

Tips for healthy eating if you are overweight

- If you are overweight you should eat less fats and sugars. These include takeaways, fried foods, baked products, fatty meats, most desserts and chocolate. Replace these foods with filling foods such as fruits, vegetables, breads and cereals.

Eating well with COPD

Eating an adequate diet can be difficult due to problems with shopping for food, preparing meals and a general lack of energy.

Some suggestions include:

- Buying and using convenience meals-frozen dinners, frozen vegetables, packet sauces and gravies, pasta and sauces, crumbed fish, salads, and cooked chicken.
- Preparing food ahead on good days and freezing it. Soups, stewed meats, stewed fruits, pies, pastries and even a complete meal freeze well.
- Asking support persons to purchase or prepare food or provide transport to the supermarket, or have your groceries delivered.

How to avoid shortness of breath when eating

- Clear your airway before eating
- Eat and chew your food slowly
- Eat foods that are easy to chew
- Eat smaller, more frequent meals
- Save beverages until after you eat
- Eat while sitting upright
- Used pursed-lip breathing to get your breath back

COPD is a chronic progressive condition. Although nutrition is a significant factor at all stages of the disease, the risk of malnutrition increases as the disease progresses. It is important to identify nutritional issues early by regular screening, allowing prompt and appropriate actions to be taken to improve nutritional status, thus improving quality of life and prognosis for people with COPD, (Evans 2012).

Referral to a dietitian is recommended to establish an appropriate diet for a patient with COPD who is malnourished, (Houghton, 2008).

Evidence supporting the use of nutritional supplementation for patients with COPD is limited, but the UK National Institute and also the American Thoracic Society recommend considering nutritional supplementation for people with a BMI less than 20 kg/m² or for those who have involuntary weight loss of more than 10% in the past 6 months or more than 5% in the past month.

Nutritional management of patients with severe COPD is challenging and interventions should be extended to the early detection and further prevention of weight loss before patients become malnourished.

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Source: J Asthma

Montelukast as an Add-On Therapy to Inhaled Corticosteroids in the Treatment of Severe Asthma in Elderly Patients;

Bozek A, Warkocka-Szolysek B, Filipowska-Gronska A, Jarzab J; Journal of Asthma (May 2012)

BACKGROUND: Severe asthma remains a worldwide medical problem. However, this disease has not been adequately explored in the elderly. This study was performed to determine how the addition of montelukast to antiasthmatic therapy improves the control of severe asthma in elderly patients. **Methods.** Elderly patients (>60 years old) with diagnoses of severe asthma were observed over 24 months of therapy: the first 12 months using inhaled corticosteroids (ICS) and long-acting beta-agonists (LABA) and the second 12 months with oral montelukast added in two-thirds of the patients, with the remaining third representing the control group. The primary efficacy endpoint of the study was the percentage of days without asthma symptoms in the first 12 months of treatment compared with the percentage after adding montelukast therapy. **Results.** A total of 512 elderly, asthmatic patients were included in the study: seventy-one (13.9%) patients had well-controlled asthma, 211 (41.2%) had partly controlled asthma, and 230 (44.9%) had uncontrolled asthma. During the first year of treatment using ICS and LABA, an increase in the median percentage of days without asthma was observed from 50.1% to 62.1%, as well as a decrease in the percentage of days with short beta-receptor agonist use, from 52.2% to 46.8%. These differences were significantly greater after 12 months, when montelukast was added to the therapy (78.4% and 39.5%, respectively). This improvement was not observed in the control group. After 2 years of observation, the median number of asthma exacerbation incidents per patient decreased from 1.6 per year to 1.2 per year when montelukast was added. **Conclusion.** Severe asthma in elderly patients is very poorly treated, with this population exhibiting very low compliance with antiasthmatic therapy. Adding montelukast provides benefits and improved control; however, it does not resolve severe asthma control problems.

the challenge with LTD(4), salbutamol was superior to ipratropium in preventing spirometric and gas exchange abnormalities. This result indicates a broader action of salbutamol on several of the disturbances that contribute to airway obstruction including, for example, exudation of plasma in the airway mucosa. The clinical implication of this new finding is that in this model of acute asthmatic airway obstruction, salbutamol was more effective than ipratropium

Source: Eur J Clin Pharmacol

Salbutamol but not ipratropium abolishes leukotriene D(4)-induced gas exchange abnormalities in asthma;

Dahlén B, Gómez FP, Casas A, Howarth PH, Dahlén SE, Rodriguez-Roisin R; European Journal of Clinical Pharmacology (Mar 2012)

PURPOSE: Leukotriene D(4) (LTD(4)) is a central mediator in asthma inducing bronchoconstriction and profound disturbances in pulmonary gas exchange in asthmatic subjects. The aim of the study was to compare, for the first time, the influence of the bronchodilators salbutamol (400 µg) and ipratropium (80 µg) on lung function changes induced by inhaled LTD(4). **METHODS:** Treatments were evaluated in a randomized, three-period, double-blind, placebo-controlled, cross-over study where spirometric and pulmonary gas exchange indices were followed in 12 subjects with mild asthma before and after LTD(4) challenge. **RESULTS:** Compared with placebo, salbutamol provided significant protection against the fall in FEV(1) (forced expiratory volume in 1 s) after LTD(4) challenge. Salbutamol also abolished the LTD(4)-induced gas exchange disturbances [decreased arterial oxygen tension (PaO(2)) and increased alveolar-arterial oxygen tension difference (AaPO(2))]. Ipratropium provided significant but less marked attenuation of the changes in FEV(1) and arterial oxygenation induced by LTD(4). **CONCLUSION:** Despite the equal bronchodilatory effects of salbutamol and ipratropium before

Source: Ann Allergy Asthma Immunol

Poor asthma control and exposure to traffic pollutants and obesity in older adults;

Epstein TG, Ryan PH, Lemasters GK, Bernstein CK, Levin LS, Bernstein JA, Villareal MS, Bernstein DI; Annals of Allergy, Asthma, & Immunology 108 (6), 423-428.e2 (Jun 2012)

BACKGROUND Environmental and host predictors of asthma control in older asthmatic patients (>65 years old) are poorly understood. **OBJECTIVE** To examine the effects of residential exposure to traffic exhaust and other environmental and host predictors on asthma control in older adults. **METHODS** One hundred four asthmatic patients 65 years of age or older from allergy and pulmonary clinics in greater Cincinnati, Ohio, completed the validated Asthma Control Questionnaire (ACQ), pulmonary function testing, and skin prick testing to 10 common aeroallergens. Patients had a physician's diagnosis of asthma, had significant reversibility in forced expiratory volume in 1 second or a positive methacholine challenge test result, and did not have chronic obstructive pulmonary disease. The mean daily residential exposure to elemental carbon attributable to traffic (ECAT) was estimated using a land-use regression model. Regression models were used to evaluate associations among independent variables, ACQ scores, and the number of asthma exacerbations, defined as acute worsening of asthma symptoms requiring prednisone use, in the past year. **RESULTS** In the adjusted model, mean daily residential exposure to ECAT greater than 0.39 µg/m(3) was significantly associated with poorer asthma control based on ACQ scores (adjusted = 2.85; 95% confidence interval [CI], 0.58-5.12; P = .02). High ECAT levels were also significantly associated with increased risk of asthma exacerbations (adjusted odds ratio, 3.24; 95% CI, 1.01-10.37; P = .05). A significant association was found between higher body mass index and worse ACQ scores (adjusted = 1.15; 95% CI, 0.53-1.76; P < .001). Atopic patients (skin prick test positive) had significantly better ACQ scores than nonatopic patients (adjusted = -0.39; 95% CI, -0.67 to -0.11; P < .01). **CONCLUSION** Higher mean daily residential exposure to traffic exhaust, obesity, and nonatopic status are associated with poorer asthma control among older asthmatic patients.

Source: BMC Pulm Med

25-hydroxyvitamin D deficiency, exacerbation frequency and human rhinovirus exacerbations in chronic obstructive pulmonary disease;

Quint JK, Donaldson GC, Wassef N, Hurst JR, Thomas M, Wedzicha JA; BMC Pulmonary Medicine 12 (1), 28 (Jun 2012)

ABSTRACT: BACKGROUND: 25-hydroxyvitamin D deficiency is associated with COPD and increased susceptibility to infection in the general population. **METHODS:** We investigated whether COPD patients deficient in 25-hydroxyvitamin D were more likely to be

frequent exacerbators, had reduced outdoor activity and were more susceptible to human rhinovirus (HRV) exacerbations than those with insufficient and normal levels. We also investigated whether the frequency of FokI, BsmI and TaqI α 25-hydroxyvitamin D receptor (VDR) polymorphisms differed between frequent and infrequent exacerbators. RESULTS: There was no difference in 25-hydroxyvitamin D levels between frequent and infrequent exacerbators in the summer; medians 44.1nmol/L (29.1 - 68.0) and 39.4nmol/L (22.3 - 59.2) or winter; medians 24.9nmol/L (14.3 - 43.1) and 27.1nmol/L (19.9 - 37.6). Patients who spent less time outdoors in the 14 days prior to sampling had lower 25-hydroxyvitamin D levels ($p = 0.02$). Day length was independently associated with 25-hydroxyvitamin D levels ($p = 0.02$). There was no difference in 25-hydroxyvitamin D levels between baseline and exacerbation; medians 36.2nmol/L (IQR 22.4-59.4) and 33.3nmol/L (23.0-49.7); $p = 0.43$. HRV positive exacerbations were not associated with lower 25-hydroxyvitamin D levels at exacerbation than exacerbations that did not test positive for HRV; medians 30.0nmol/L (20.4 - 57.8) and 30.6nmol/L (19.4 - 48.7). There was no relationship between exacerbation frequency and any VDR polymorphisms (all $p > 0.05$). CONCLUSIONS: Low 25-hydroxyvitamin D levels in COPD are not associated with frequent exacerbations and do not increase susceptibility to HRV exacerbations. Independent of day length, patients who spend less time outdoors have lower 25-hydroxyvitamin D concentration.

Source: Arch Bronconeum
The General Public's Knowledge of Chronic Obstructive Pulmonary Disease and Its Determinants: Current Situation and Recent Changes;

Soriano JB, Calle M, Montemayor T, Alvarez-Sala JL, Ruiz-Manzano J, Miravittles M; Archivos de Bronconeumologia (Jun 2012)

BACKGROUND: The objective of this study was to determine the level of knowledge about chronic obstructive pulmonary disease (COPD) and its determinants in the general population of Spain, and to compare it with a similar survey conducted in 2002. METHODS: We conducted a cross-sectional, observational, epidemiological study in September 2011 by means of a telephone interview with a representative sample of individuals aged 40-80 years living in all 17 regions of Spain. RESULTS: A total of 6,528 responses were obtained (response rate of 13.1%), 53% of respondents were females with a mean age of 59.8 years. Regarding tobacco use, 19.4% were current smokers while 27.9% reported being former smokers. Only 17.0% spontaneously recognized the term «COPD». Valencia was the region with the highest degree of ignorance regarding COPD (91%), while Aragon had the lowest (73.7%). Nevertheless, COPD is considered a severe disease, following angina pectoris in severity. Upon comparing these results with the previous survey from 2002, we observed significant improvements in the knowledge and understanding of COPD (8.6% vs. 17.0%), with a marked variability between the regions ($P < .05$). Currently, only 4.7% of the Spanish population knows that there is a National Strategy for COPD, although 86.0% have a favorable or very favorable opinion about the new Anti-tobacco Law. CONCLUSION: The lack of knowledge about COPD and its determinants in the general population remains high compared to 2002; thus, more and better educational and awareness programs are necessary.

Source: Respir Med

Addition of tiotropium to formoterol improves inspiratory muscle strength after exercise in COPD;

Canto ND, Ribeiro JP, Neder JA, Chiappa GR; Respiratory Medicine (Jun 2012)

BACKGROUND: The addition of tiotropium bromide (TIO) to formoterol fumarate (FOR) improves exercise performance in patients with chronic obstructive pulmonary disease (COPD). In this study, we test the hypothesis that the addition of TIO to FOR may improve respiratory muscle performance and oxygen uptake kinetics after exercise in patients with COPD. METHODS: Thirty eight patients with COPD were randomized to a 2 week treatment with FOR 12 μ g twice a day plus TIO 18 μ g once a day (FOR + TIO) or FOR 12 μ g twice a day plus placebo (FOR + PLA) once a day, using a double-blind crossover design. Inspiratory muscle strength was measured before, immediately after, as well as 2, 5, and 10 min during recovery of exercise. Time to limit of tolerance on a constant work load exercise test and oxygen uptake kinetics during recovery were evaluated before and after intervention. RESULTS: Only FOR + TIO improved resting (63 ± 10 cm to 84 ± 11 cmH₂O) and post-exercise (49 ± 7 cm to 84 ± 11 cmH₂O) maximal inspiratory pressure. Time to limit of tolerance on the constant work load test was increased by FOR + PLA and by FOR + TIO, but the size of the increment was significantly larger with FOR + TIO ($40.7 \pm 7.6\%$ vs. $84.5 \pm 8.2\%$; $p < 0.05$). Only FOR + TIO improved oxygen uptake kinetics during recovery (69 ± 21 to 60 ± 18 s). The improvement in maximal inspiratory pressure (0.78 , $p < 0.001$) and in oxygen uptake kinetics (-0.91 , $p < 0.001$) correlated with the change in time to the limit of tolerance. CONCLUSIONS: The addition of TIO to FOR improves inspiratory muscle strength and oxygen uptake kinetics after exercise in COPD patients.

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