THE NZ JOURNAL OF RESPIRATORY HEALTH

December 2010

Stepping out for Asthma, Stepping up for Logan!

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asthma NEW ZEALAND THE LUNG ASSOCIATION

THE NZ JOURNAL OF RESPIRATORY HEALTH O_2

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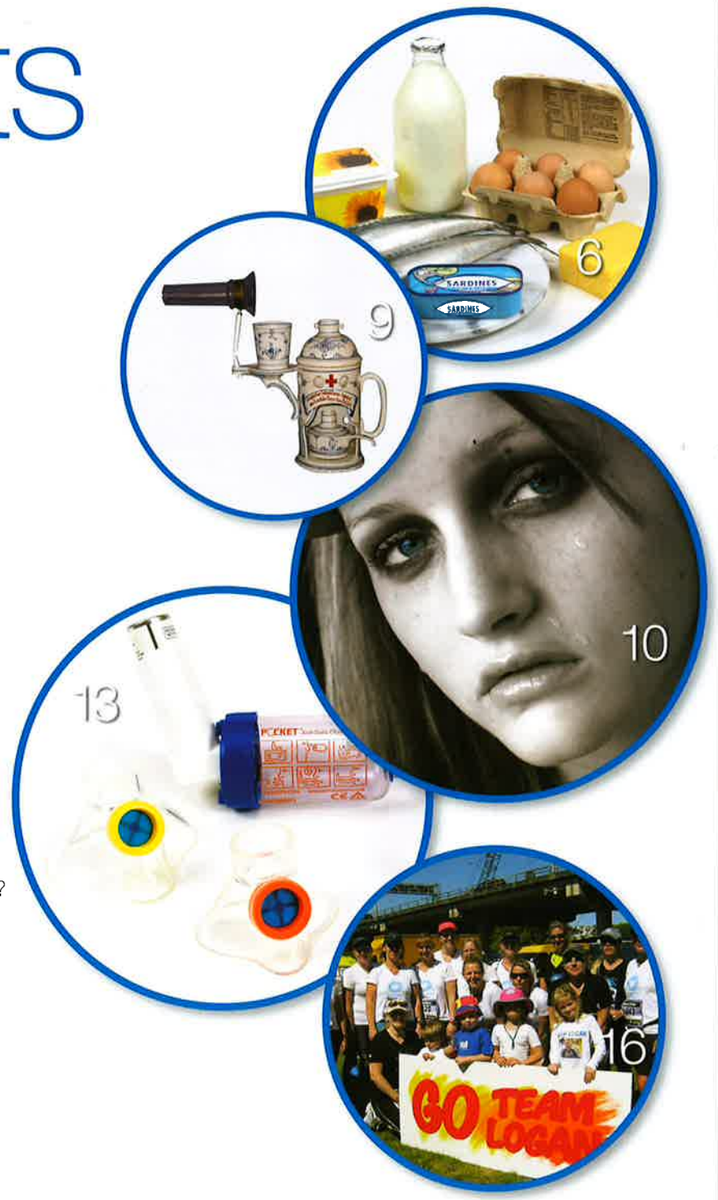

on the cover:
Team Logan's Wendy Willetts, Kirsten Hartnoll, Sally Sumner and Alison Borland
Photo courtesy of ©Marathon-Photos.com

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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 2011 & COPD Nursing Course for April 2011. 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, 843 nurses have enrolled over 32 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 is available for registered nurses.

For an enrolment form for the first Semester please contact:
Ann or Swarna
Asthma New Zealand/The Lung Association
P O Box 67-066, Mt Eden, Auckland
Phone 09 623 4777 Ann or 09 623 4771 Swarna
Fax 09 623 0774
Email annw@asthma-nz.org.nz or swarnah@asthma-nz.org.nz
The closing date for 1st Semester enrolment is 10 February 2011 for Asthma 10 April 2011 for COPD

Upcoming events and courses

ASTHMA NEAT COURSE
16 March 2011
15 June 2011
21 September 2011

HALF DAY COPD COURSE
20 April 2011
20 July 2011
19 October 2011

Further enquiries for any of these events phone
09 630 2293
or
www.asthma.org.nz

GALA DINNER IN AID OF ASTHMA NEW ZEALAND

An evening with **America's Cup Yachting Legends** –
Friday 17 December 2010
The Langham
Auckland

message to readers

Dear Readers

Asthma New Zealand – the Lung Association (Inc) continues to be the lead professional education organisation in New Zealand. The organisation runs courses through the Unitec Institute of Technology in Auckland in Asthma and COPD. The rationale for the courses is that no one should be providing Asthma/COPD education unless they are professionally qualified to do so. It is of concern that there are many people who call themselves "Asthma Educators", yet have no professional basis for saying so. It is interesting that even the "in house" courses that are being run by Asthma New Zealand are heavily attended and often act as an incentive for people to take the Unitec courses as well. Nurses in general terms are non-threatening in the educational situation and education can be a medium to long term process in terms of changing behaviour. The courses continue to be over-subscribed and it certainly shows the interest of nursing personnel in providing educational services to families with asthma.

Asthma New Zealand continues to run the Wellington Asthma Society and it is going from strength to strength. Staffing is in place to deliver both educational and fundraising services. These staff are supported by the Auckland staff on a regular basis.

There are a number of other Societies who have requested that Asthma New Zealand talk to them about the development of a branch-based system. This will take place in due course but it must be done in a very carefully planned way in order to guarantee success. It would be much easier to get funding directly from the Ministry if an approach could be made to them regarding a national branch-based organisation. The advantage of a national organisation is that there would be national standards and national outputs.

I would like to take this opportunity to thank all those people who have supported Asthma New Zealand – the Lung Association (Inc) throughout the past year. The year has been somewhat difficult in that demands constantly outrun the resources available. I wish all readers a pleasant holiday throughout the Christmas/New Year period and trust that it will be a time of rest and recreation to meet the challenges of 2011.

Best wishes.

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

lack of vitamin D may aggravate asthma

Karen Little RN
– Asthma Nurse Educator

Most vitamin D comes from the action of the sun on our skin
However, excess sun exposure and sunburn can also cause skin cancer. This means we need to balance the risk of skin cancer against getting enough safe skin exposure for adequate vitamin D levels. Safe sun exposure will depend on the individual.

Certain foods contain small amounts of vitamin D

Small quantities occur naturally in oily fish (such as salmon, tuna, sardines, eel and warehou), milk and milk products, eggs and liver. We can also get vitamin D from fortified foods. In New Zealand, vitamin D may be added on a voluntary basis by food manufacturers to: margarine and fat spreads; some reduced fat dairy products such as milk, dried milk, yogurt, plant based dairy products (e.g., soy drinks); and liquid meal replacements. You can check the ingredient list on the food labels to see if extra vitamin D has been added.

According to the Ministry of Health

Around 3% of adults and 4% of children in New Zealand have vitamin D deficiency, meaning that the level of vitamin D in their blood is very low (less than 17.5 nmol/L).

It is recommended that New Zealanders from birth up to 50 years of age consume 5 micrograms of vitamin D per day. Recommendations for vitamin D increase with age. The recommended intake for adults aged between 51 and 70 years is 10mcg of vitamin D per day, and those aged over 70 years is 15mcg per day. These recommended intakes assume little or no exposure to sunlight. (Ministry of Health)

It is often hard to obtain this amount from food alone. Fatty fish contain fairly high amounts of Vitamin D. Most of the rest of dietary vitamin D comes from fortified milk. Humans obtain approximately 90% of their vitamin D through sunlight, with the remainder coming from diet. However with the increasing use of high factor sunscreens and staying out of the sun or covering up means that less is produced.

Lung development begins in utero

This also continues through the first few years of life. Vitamin D has also been shown to play a role in the developing lung as early as 14 weeks (Brun, Dupret, Perret, 1987).

It is possible that an adequate vitamin D status in pregnant mothers might prevent the development of asthma in children. Two studies by Camargo, Rifas-Shiman, Litonjui et al (2007) and Devereux, Litonjua, Turner et al (2007) showed 62% and 67% reductions respectively, in the risk of recurrent wheeze in young children born to mothers with the highest intakes of vitamin D compared with those born to mothers with the lowest intakes.

However the question of whether adequate vitamin D status can prevent asthma remains controversial.

A study of over one thousand children

This study took place over four years with children with mild to moderate asthma. Children with relatively low blood levels of vitamin D were more likely to experience severe episodes of asthma. Children with vitamin D levels of 30mg/ml or lower were considered to be insufficient in the vitamin. Vitamin D insufficiency made a child 50% more likely to experience an asthma attack severe enough to require a trip to the hospital, Litonjua (2010).

Overall, the researchers found no evidence that sufficient vitamin D levels protected children from moderate asthma symptoms; in fact, children with low levels of the vitamin tended to report fewer moderate symptoms.

However, these children were at greater risk of severe asthma episodes.

While the findings point to an association between vitamin D status and asthma exacerbations, they do not prove that vitamin D is responsible- or by extension, that taking the vitamin will prevent asthma attacks.

Vitamin D may be best known for its role in healthy bone development and maintenance

It is also needed for normal nerve, muscle and immune system function. Some studies have linked low vitamin D levels to a higher risk of type 1 or "insulin-dependent" diabetes in children and, in adults, heart disease and certain cancers.

The effects of Vitamin D on the immune system, which include the inflammatory response to infections, might help explain why higher levels of the vitamin were linked to a lower risk of severe asthma exacerbations, according to Litongua's team.

They also say it's possible that vitamin D enhances the effects of anti-inflammatory steroid hormones – both the body's natural supply and the synthetic corticosteroids used to treat asthma.

Overweight children and adults also appear to be an elevated risk of deficiency because vitamin D is stored in body fat. The more vitamin that gets sequestered into fat tissue, the less active vitamin there is in the blood.

Based on the effects of vitamin D on the developing immune system and the lung, it is possible that an adequate vitamin D status in pregnant mothers might prevent the development of asthma in children (Camargo, Rifas-Shiman, Liionjua, 2007).

How do I know if I am Vitamin D deficient?

The best way to confirm your vitamin D status is to discuss this with your General Practitioner (GP). He or she will ask you about your sun exposure habits and may refer you to a dietician to assess your diet. Following this it may be recommended that you have a blood sample checked.

Cholecalciferol, calcitriol and alfacalcidol are currently subsidised by PHARMAC.

The Ministry of Health does not currently recommend fish oil supplements, due to concerns about excessive vitamin A intake and contamination with toxins such as mercury. It is preferable to obtain vitamin D from food, safe sun exposure, or when necessary vitamin D tablets.

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inhaled therapies of bygone times

Janet Delooze RN
– Asthma Nurse Educator

The first Metered Dose Inhalers (MDIs) were marketed in 1956 by Riker Laboratories for the inhalation of epinephrine and isoproterenol[1]. Since then, various inhaler devices have come (and gone!) onto the market and currently, some of the most commonly used devices include the MDI, the turbuhaler and the accuhaler.

According to some sources, inhaled therapies date back to ancient times, possibly as far back as 2,000 B.C.[1] Up until the 20th Century, the only way of inhaling medication was by smoking cigarettes or pipes which contained substances such as nitrate powders, tobacco, cubeb and plant-derived stramonium. A far cry from today's anti-smoking message!

Ceramic inhalers, like the Meritor inhaler, provided simple steam inhalations to soothe sore throats and irritated airways. As a student nurse in the late 1970's, I remember preparing steam inhalations with tincture of benzoin in a similar ceramic vessel for the relief of upper airway congestion and bronchitis. The bronchial kettle was used to humidify bedrooms for the relief of croup and similar conditions.

Physicians and pharmaceutical companies in the 19th Century supplied individualised medications by mail order according to the symptoms and medical details on their submission forms.

Combustible powders were another method of administering medication to the airways. The powder was ignited on a plate and the fumes would be inhaled through a funnel. The Kelloggs Asthma relief was used in the late 19th and early 20th century and contained lobelia and stramonium.

Steam-powered inhalers from the late 1800's contained a spirit burner which boiled water in a reservoir. The medication contained in the other chamber gets drawn into the vapour which is then inhaled via a glass mouthpiece.

One of the earliest nebulisers (circa 1930) was the Pneumostat, a complicated looking device that was used to deliver papaverin and eumydrine for the relief of asthma and bronchitis.

It certainly makes you appreciate contemporary asthma treatments!

References
[1]Anderson, P.J. (2005) History of aerosol therapy: liquid nebulization to MDIs to DPIs. Respir Care. 2005 Sept ;50:1139-50
All other information and images courtesy of Mark Sanders www.inhalatorium.com

allergic rhinitis (hay fever)

Elaine Murray RN
– Asthma Nurse Educator

Hay fever is the common name for allergic rhinitis (from "rhino" meaning of the nose and "itis" meaning inflammatory), so it is defined as inflammation of the nose caused by an allergy. However, your nose is not the only organ which may be affected by allergic rhinitis. You may also have problems with your eyes, sinuses, throat and ears.

How does your nose work?

Since allergic rhinitis mainly affects the nose, it is important to understand how the nose works and what it does. Your nose is one of the unsung heroes of your body. In addition to providing your sense of smell, vital to your enjoyment of food and drink, your nose performs many other important functions;

- It acts as a dust mask and first line of defence against infection, protecting the delicate structure of your airways and lungs by filtering out inhaled particles (such as dust, bacteria and pollen) which may be harmful if breathed in
- The hairs in the lining of the nose act as a trap for the larger particles which we breathe in
- Trapped particles are then expelled through sneezing or they stick to the layer of the mucous, which covers the lining of the nose

The mucous which is secreted from special glands in the lining of the nose, is moved steadily backwards towards your throat by the millions of tiny hairs. Once it reaches the back of the throat the mucous is swallowed. In hay fever sufferers the production of mucous is dramatically increased.

- The nose acts as an air conditioner, warming and humidifying the air before it reaches the sensitive lining of your lungs
- It provides a drainage outlet for fluids from your sinuses and ears. Your sinuses are four pairs of air-filled cavities in the bones of the face, behind your nose, cheeks and forehead. The sinuses have the same lining as the nose, with hairs that keep them clean by moving the mucous up and out and into the nose.

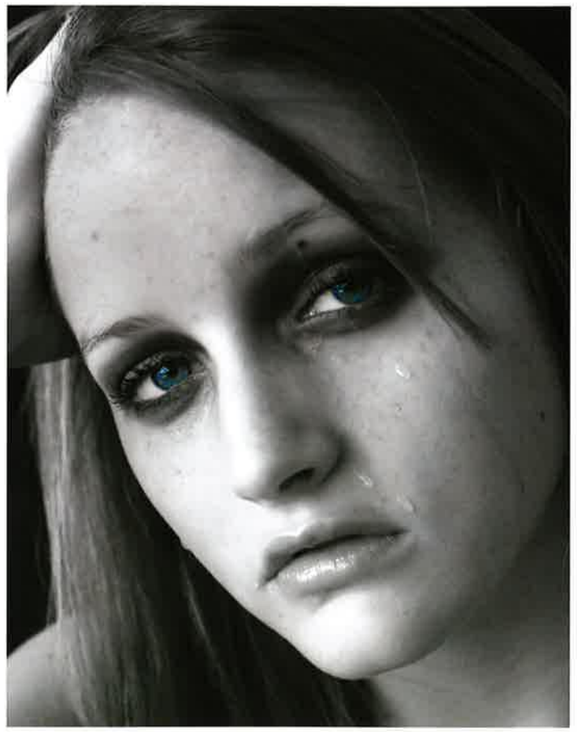
The design of the nose is so good that if you breathe through it alone, and not through your mouth, very few particles will get past its defences.

Allergic rhinitis is a major chronic respiratory disease due to its;

- Prevalence
- Impact on quality of life
- Impact on work/school performance and productivity
- Economic burden
- Links with asthma

What is allergic rhinitis?

- It is inflammation (redness, swelling) of the nose and/or eyes, triggered by an allergen such as pollen, house dust mites or animal dander (the proteins in skin-flakes, urine, faeces, saliva and hair).
- It affects around 1 in 4 people in Australia and New Zealand.
- It occurs all year round (perennial) or only at certain times of the year (seasonal), depending on which allergen or allergens cause the symptoms.
- It can impact on the quality of life (including fatigue, learning, or work performances) and other medical conditions, such as asthma and sinusitis particularly in the pollen season.
- It can be effectively treated, however no cures are currently available



The symptoms of allergic rhinitis include;

- Runny nose and watery eyes
- Itching in the nose, throat or eyes
- Frequently blocked nose
- Sneezing
- Bad breath, mouth, snoring
- Husky voice, sore throat, throat clearing cough
- Loss of sense of smell
- Feeling of pressure over the sinuses and recurrent sinusitis
- Unexplained headaches
- Frequent middle ear infections
- Disturbed sleep, daytime tiredness and poor concentration.

Symptoms can be intermittent (< 4 days per week or <4 weeks at a time) or persistent (> 4 days per week or >4 weeks at a time).

The symptoms can be mild, moderate or severe.

Not everyone will experience the symptoms, but many people with allergic rhinitis will suffer from them at one time or another.

Symptoms of allergic rhinitis often first appear in childhood and adolescence. Many children suffer from allergic rhinitis which is often not recognised by parents or teachers.

Is your child constantly sniffling, twitching and rubbing the nose, often in an upwards direction (sometimes called the allergic salute), has dark circles under the eyes, and breathing through the mouth (often leading to a sore throat, snoring, disturbed sleep and fatigue)? You may need to consider the possibility of allergic rhinitis.

Diagnosis of allergic rhinitis requires;

- Detailed and accurate history (family and personal history of allergic conditions, environment, occupation)
- Physical examination (focus on the nose, throat, eyes and ears, spirometry if indicated)
- Allergy investigation. This can be a skin prick test or a blood test, called a RAST test.
- Patients with persistent allergic rhinitis should be evaluated for asthma by means of a medical history, chest examination, and, if possible and when necessary, the assessment of airflow obstruction before and after bronchodilator.

Management of allergic rhinitis

Patients should not smoke and also avoid environmental tobacco smoke. Smoking may worsen both asthma and rhinitis, and impair the effectiveness of treatment.

If allergen is confirmed, avoid or minimise exposure.

Consider nasal irrigation.

If continuous treatment is required, Intranasal corticosteroids (nasal spray) is the first choice and most effective. Intranasal corticosteroids reduce nasal inflammation and hyperreactivity. They are more effective than antihistamines in controlling symptoms of allergic rhinitis as well as non-specific allergic rhinitis, are effective in managing ocular symptoms, and may contribute to asthma control in patients with asthma and allergic rhinitis. They are most effective when taken continuously, and must be taken for up to 2 weeks before maximal efficacy is achieved. The correct use of the Intranasal inhaler is important for optimal effect just as with asthma inhalers.

Itching and sneezing respond well to an antihistamine (less sedating antihistamines where possible).

Intranasal decongestants have a limited role, and should only be used for a short course. Repeated or long term use can cause side effects.

Referral to an allergy specialist and or an ENT specialist may be necessary.

Immunotherapy (desensitisation) should be considered for patients with moderate to severe allergic rhinitis who have not responded to optimal medical therapy and allergen avoidance.

Both rhinitis and asthma can be triggered by the same factors, whether allergic (e.g. house dust mites, pet allergens, pollen, cockroach) or non-specific (e.g. cold air, strong odours, environmental tobacco smoke).

Allergic Rhinitis and the patient with Asthma.

Rhinitis occurs in an estimated 75-80% of patients with asthma, with high rates reported in both atopic and non-atopic asthma. Conversely, 20-30% of patients with known allergic rhinitis also have asthma (National Asthma Council Australia) 2006.

Effective asthma management involves accurate recognition and appropriate treatment of allergic rhinitis. Alone, allergic rhinitis can significantly affect individual's daily activities and impair quality of life; when it occurs in a patient with asthma, it contributes to airway symptoms and must be considered in the management plan. Allergic rhinitis and asthma frequently co-exist and allergic rhinitis is a recognised risk factor for developing asthma. Effective treatment of allergic rhinitis can reduce the chance of severe asthma attacks.

In patients with asthma already taking inhaled corticosteroids, the intranasal corticosteroid dose should be taken into account when determining the total daily corticosteroid dose. Patients who have both asthma and allergic rhinitis should use both a preventer nasal spray and a preventer asthma inhaler regularly. Patients with asthma should be appropriately evaluated (history and physical examination) for rhinitis.

Ideally, a combined strategy should be used to treat the upper and lower airway diseases to optimise efficacy and safety.

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"Management of Allergic Rhinitis and its Impact on Asthma" Pocket guide, 2007
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What is Hay fever (Allergic Rhinitis)? ASCIA (Australasian Society of Clinical Immunology and Allergy Inc. January 2010. Downloaded from www.allergy.org.au

metered dose inhalers

Murray Webb
Asthma & Respiratory Devices NZ

Over 12 years ago, Professor Innes Asher – now Head of Paediatrics at Aucklandís School of Medicine – found that hospital admission rates for children with asthma can almost be halved by using spacer devices with inhalers, rather than nebulisers. Furthermore, 86% of children and 85% of parents indicated that they preferred using spacers over nebulisers, which has implications for compliance and therefore symptom control.

Spacers are entirely appropriate for use by adult patients with asthma as well – a study of 746 patients found that only 9 % exhibited correct use of an inhaler by itself. Somewhat disturbingly, only 28% of 428 physicians tested could demonstrate proper inhaler use as well! Using a spacer with a metered-dose inhaler has been shown to mitigate poor inhalation technique, ensuring proper deposition of medication deep into the lungs. A lesser-known benefit is that the use of spacers greatly reduces the risk of oral candidiasis – also known as thrush – with inhaled steroids.

Spacers typically come in three sizes:

- Small (e.g., the 110 ml nSpire Anti-Static Pocket Chamber®)
- Medium (e.g., the 230 ml Space Chamber®)
- Large (e.g., the 800 ml Volumatic®).

Each variation has its benefits; note that the Paediatric Society of New Zealand recommends the use of metered-dose inhalers with small-volume spacers and silicone masks for children under the age of four.

One of the key factors that can reduce spacer performance is electrostatic charge, something inherent in most plastic devices. This charge can cause absorption of medicated aerosol particles onto the interior surface of the spacer, thereby reducing the dose available for inhalation. The charge can be removed by washing with detergent (e.g., Sunlight), not rinsing and leave to airdry, but unfortunately rapidly re-accumulates and washing should be done weekly.

The latest solution is spacers made from sophisticated anti-static plastics, which can deliver up to double the inhaled medication possible via less advanced, more static-affected devices. This improvement in drug delivery can mean more predictable control of asthma symptoms. The only anti-static spacer widely available in

6 FREE TO GIVE AWAY

To enter send your name and address on the back of an envelope to Asthma NZ/Anti-Static Pocket Chamber® Competition, PO Box 67066, Mt Eden, Auckland before 28 February 2011

New Zealand is the nSpire Anti-Static Pocket Chamber®. It has the added convenience of being smaller than other spacers, fitting easily into a pocket or purse. It can be purchased through most pharmacies or via Asthma New Zealand.

Selected references:

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Heartiest Congratulations on successfully completing Asthma Nursing Course 2010 – 1st semester

Anne Juchnowicz	Waikanae
Lorraine Inglis	Tauranga
Jacqui Louise Evans-McLeod	Hamilton
Marion Beverley Thompson	Waikaia
Diane Joy Baldwin	Dunedin
Rebecca Malin	Waikato
Elaine Selby	Urenui
Karen Little	Auckland
Elaine Murray	Auckland
Elizabeth Anne Macdonald	Wellington
Julie Margot Smithers	Feilding
Julie Gardner	New Plymouth

Heartiest Congratulations on successfully completing COPD Nursing Course 2010

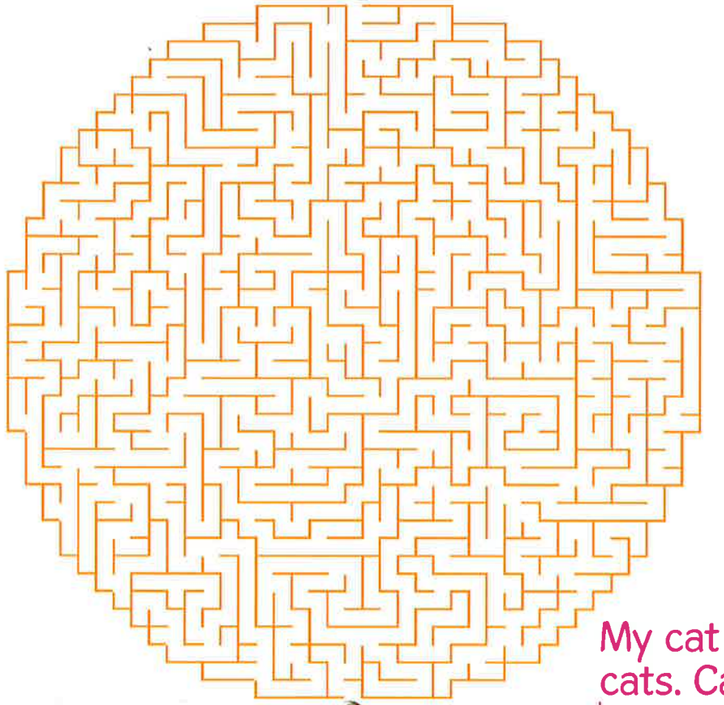
Heather Thompson	Invercargill
Sheryn McClatchy	Nelson
Lynnette Downie	Murupara
Sarah Tweedale	Dunedin
Shona McDonald	South Otago
Ashveen Chand	Waitakere
Alana Henderson	Dunedin
Mele Simanu	Auckland
Ulufafo Samau-Tauai	Auckland

Winner of the E-cloth prize pack
S. Challis, Auckland

E-cloth®

Kid's Page

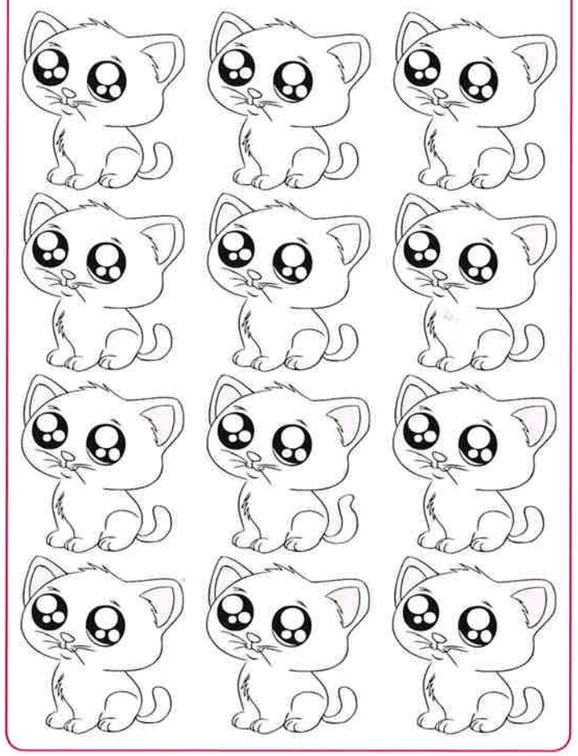
Find the inhaler



All about asthma except one?

Answer: Fish

My cat is different to the other cats. Can you find my cat?



north & south

team logan – in memory of Logan Hartnoll

10 April 2005 – 20 February 2010

Logan Hartnoll died of an exacerbation of asthma in February 2010, aged 4. In memory of Logan many friends and family of Dean and Kirsten Hartnoll (Logan's mum and Dad) supported them by taking part in this years' Adidas Half Marathon which was held at Auckland on 31 October 2010 to raise money for asthma and awareness of poor asthma control in New Zealand; to date they have raised over $16,500.

They raised a fundraising page on www.fundraiseonline.co.nz/teamlogan and held mini fundraisers, Sausage Sizzles, Cake Stalls, and Coffee Stalls all on weekends in their own time.

When I was contacted by Alison Borland earlier this year I didn't realise what an impact she and her amazing group of volunteers would have on me, they have tirelessly worked week after week in preparation for the half marathon, organising mini fundraisers; baking, sizzling sausages, pounding the pavement and all to raise funds and awareness of asthma in New Zealand. It has been a privilege to be a part of this amazing community and instead of writing their story I asked them for a few words on their experience over the past 6 months and they really summed it up – thank you Alison and all of Team Logan!

They hope to raise enough money to assist us with the purchase of a desktop NIOX (Nitric Oxide) machine at a cost of $32,600 and we are right behind them and special thanks to the following for their generous support of Team Logan and Asthma New Zealand.

- Vitality Sales – Tupperware

$32,600

- Lions Club of Howick
- Howick RSA
- Plunket Society Howick
- All Saints Church Howick
- Kim Hoeft Dance Studios
- Sara Lee New Zealand Ltd
- Botany Downs Kindergarten
- Texas Peak (NZ) Ltd – Brooks Running Shoes

Nitric Oxide testing when used in conjunction with education, spirometry testing and peak flow recording assists in improving asthma management by recording changes in airway inflammation in order to assess the response to treatment. The results are provided to the patient's GP who in turn can alter (either increasing or decreasing) asthma medications to gain and maintain better control.

$16,500

One beautiful little boy may have lost his life to asthma but his death has brought a community together – stepping out for asthma, stepping up for Logan!

If you are able to help them reach their goal please donate to their fundraising page or call me at Asthma New Zealand 09 623 0236 for more information.

Linda Thompson
PR / Marketing Manager
Asthma New Zealand

When Kirsten said she would join me and do the half marathon with me, I had no idea what the next 6 months would bring. I have never been so honoured and proud. Wearing our T-shirts, people waving and beeping horns – how proud were we! 3 to 4 times a week we would meet for our wogs (and chats!) and when we eventually got to the bridge on the Big Day, the smiles and tears, aches and pains were so worth it. Logan you are such a wonderful boy, you have changed my life and the lives of so many people already and I know you will keep doing so and to your mummy, Kirsten you are truly amazing. Xx

Alison Borland

When I was initially asked if I wanted to do the half marathon with Team Logan I thought there is NO WAY I could do 21kms. I'm certainly no runner and my fitness was pretty terrible. But, I decided to give it a go to remember such a gorgeous boy, support his family and raise awareness of asthma in NZ. On the day I was very nervous but knew that I should be able to make it to the bridge before the close off time and the rest would be a matter of just getting to the finish line. Well I completely exceeded my expectations, ran most of the way (albeit very slowly), loved being on top of the bridge and finished in a very respectable 2hrs 26mins. This was an amazing thing to do to remember Logan, and certainly up there with my greatest achievements.

Kirsten Low

When your child is first given an inhaler there are several things that go through your mind, "Will he cope?" "Is it forever?" "How will this change our lives?" Seldom do you think "Will this end his life?"
This question is now in the minds of all the parents of this community with children affected by asthma. The question on how will we cope with the loss of Logan is still ongoing. We feel for the family everyday when we look at our own children. By taking part and completing this event our community has shown that we have strength in numbers, we can't help what has already happened but we can help other families from following a similar path. I am so proud to be a part of something this strong.

Stepping Up
Set your pace
Tie up your laces
Get the girls together
Let the wind redden your faces
Why are we rallied?
Because something is wrong
A life has been taken
A beautiful soul has gone
This thing that has happened
Has us all seeing red
Now we're doing our bit
For Asthma NZ
To help keep us moving
Let this be our slogan
"We're stepping out for asthma
And stepping up for Logan"

Nerissa Hardcastle

I couldn't say no to Kirsten when she asked me to do the Marathon, I was there to support any way I could.
Kirsten and Dean needed a focus and I think this was it. The day was fabulous, the adrenaline was pumping, the girls and guy were set, at the starting line, with smiles all round. We were off...and we did it all for you Kirsten, Dean, Sophie and Dylan. A special little boy was cheering his mummy all the way ... I'm so proud of you Kirsten! It's a day I will remember. xx

Sarah Macmillan

we walked
we talked
for a moment in time
we have been in each other's lives and it has left a mark
I want to say thank you for the impression you made
that will stay with us until the end of time
I enjoyed the walk
I enjoyed the talk
we will never forget this moment in time.
In memory of Logan Hartnoll

Jacqui Andrews

There is only one way to sum up Team Logan and the Auckland 1/2 Marathon – inspiring! What an effort and feeling of team membership and exhilaration – out of such tragedy came an inspiring event that has now touched so many lives and spread the word that Asthma must be taken seriously. Logan will shine on and be remembered and never forgotten.

Megan Twentyman

Being a part of Team Logan helped me through the most difficult time of my life. Getting out and pounding the pavement for training gave me a purpose when my life really seemed to have none. Getting to the bridge on time and crossing that finish line with my beautiful boy on my back was very emotional, but I couldn't have done it without Ali and the girls, what an amazing, inspiring bunch of women! Thank you Team Logan.

Kirsten Hartnoll

It has been an honour for me to have been part of Team Logan, participating with AMAZING women, supporting an AMAZING family and most importantly remembering an AMAZING little boy, LOGAN ... "Gone from our sight, but never our memories. Gone from our touch, but never our hearts."
Thanks Linda

Laura Carragher

Team Logan at Botany Town Centre, Camilla

Amanda Harris, Kirsten Hartnoll, Linda Thompson, Nicola Argent and Alison Borland

Team Logan at Plunket Fayre Howick a rare rear view

Team Logan on sausage sizzle at Botany Town Centre

Sophie Hartnoll and friends stepping up for little brother Logan

The BIG DAY, oh so early...

Alison Borland on the bridge

Kirsten Hartnoll and Amanda Harris

Nearly finished

After the half marathon and still smiling

On the bridge

That's the spirit ladies

ASTHMA CAN KILL
- 1 in 4 children in New Zealand have asthma
- 1 in 7 adults in New Zealand have asthma

KNOW THE FACTS!

I am extremely proud to be a member of Team Logan. My hope for us as a team was to show our love and support to the Hartnoll family, to raise funds for the NIOX machine, but a big thing for me was to tell people to stop taking asthma for granted. As it's so common everyone in NZ knows someone with asthma but what many don't know is asthma kills, and we found that out the hard way with Logan's passing in February. The walking has stopped but the talking hasn't, let's get that awareness out there!

Cara Stewart

Being a part of Team Logan made me aware of what a fantastic community we live in and how much the people in our community care about each other which in this day and age is seldom found. The courage shown by the Hartnoll's has encouraged the commitment of the members of Team Logan to raise awareness and money for Asthma NZ. We hope our small gesture can make a big difference.

Rhona Hoffman

There is no I in Team
It is true that you won't find an I in team
Nor in the work it took to complete a dream
A dream of walking from the North Shore to Town
Over the harbour, uphill and down
I have found it hiding in other words though
And here I shall tell you what it is that I know.
It's definitely in friends, girls and sisters
Also in thighs, hips and blisters
It's niggling in shins and in sprain
Tired and inspired, pain and strain
There's distance and splits, bridge and time
This brings me near to the end of my rhyme
Without the I's though the job could not be done
We all came together to stand behind one
We each have a memory for us that lingers
Ali's wog emails or Heather's fingers?
The good I's are found in finished and rejoiced

Nerissa Hardcastle

Being part of Team Logan has been a fantastic experience, I have been both proud and humbled by the journey to get there and the experience of what race day meant to so many different people.
For me to be able to do something positive after such a horrid tragedy has been an important part of the grief journey and to keep Logan's memory alive in all our hearts.

All I can say is that crossing that finish line together, arm in arm with the Team Logan banner is a moment I'll never forget. We had come together to honour a very special little boy and help his parents to fight the illness that took him from them far too soon. It was humbling....
Thanks Linda for all your help and support. I hope you get that machine very soon so that other parents might be spared the heart break that Kirsten and Dean and their family have been through this year.

Heather Clark

"Being part of Team Logan has simply made me feel useful (when words somehow did not seem enough) and that I've helped to support a wonderful family in our community through a tragic time."

Nicola Argent

All the hard work raising money and awareness for Team Logan finally took us to the big day ' The Auckland Half Marathon'. The nerves the day before were incredible and the journey to the big event started at 4.00 am with the girls on a very nervous bus. This all led me to one of the most amazing experiences of my life. The team spirit continued throughout the marathon and yes there were plenty tears at the end, for what we had achieved and for Logan that special little boy that we all miss. Go Team Logan!

Wendy Mitchell

It's all over...

Linda Thompson with flowers for Kirsten at Botany Downs Kindergarten a job well done!

Before this year I could never have seen myself doing a half marathon – but when Kirsten asked me if I would like to take part I knew at once I just had to do it. What a lovely way to honour precious Logan. It didn't take long for the word to get around and before we knew it Team Logan was formed. The goal was set, so it was time to start pounding the pavement. After all those months of training the big day came, and wow what a day it was! It was hard work, but we did it. What an amazing feeling it was to finally reach the finish line, holding up our TEAM LOGAN sign with pride.. It was such a wonderful and humbling experience to be a part of something so special, I am so proud of all the girls, especially Kirsten – you truly are an inspiration.

Amanda Harris

'Logan was a truly amazing little boy who touched the heart of everyone he met. I feel humbled to have been part of this dedicated team of fundraisers. I'm sure Logan would be very proud of us all.'

Jen Sephton

I could never believe how a community could come together, or that I might play a small part in the support of our special family the Hartnoll's. I was privileged to be part of a group of ladies who were out night after night, alone or together training hard for a half marathon and with each step showing that we are here and acknowledge the loss of a beautiful little boy. I hope that the money that was raised may spare another family the pain and grief that Dean and Kirsten have endured.

Deanne Clark

What an awesome experience to be part of Team Logan. It felt so good to be raising money for such a worthy cause. I loved every part of running the half Marathon, especially crossing that finishing line! I was certainly thinking of wee Logan whilst running the race and I do hope we have raised awareness of asthma in New Zealand. Well done to everyone!

Nicky Ivill

north & south
NEWS FROM AROUND THE REGIONS ...

asthma auckland charity golf day 2010

in association with redwood park golf club inc.

an afternoon on the greens...

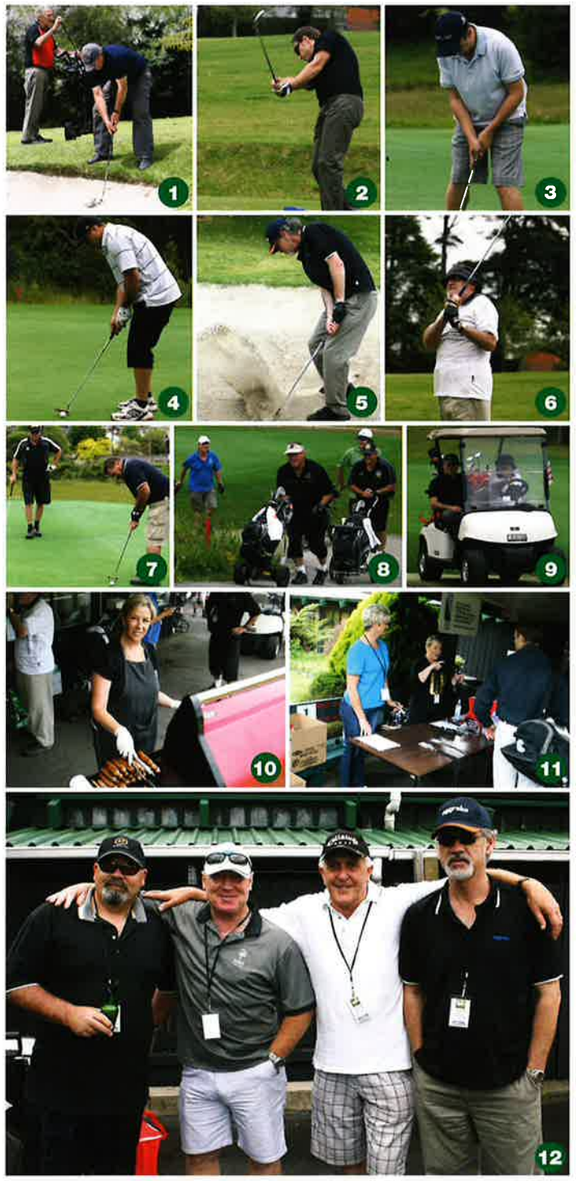
Asthma Auckland held their third annual golf day on November 19th at Redwood Park Golf Club Inc., Swanson and what a fantastic day it was; the sun was shining and again a HUGE THANK YOU to Redwood Park Golf Club for gifting us the green fees! A big "Thank You" to Fujitsu General for their sponsorship of the day, providing a Hi-Wall with Plasma filter as first prize and also the long list of companies who donated both money and prizes for the day, what would we do without companies like them prepared to go the extra mile to help out and make the day a successful one? Our shotgun start Stableford tournament got off to a great start with a sausage sizzle before sending the golfers, and those not so golf minded, out onto the course. Everyone was in great spirits and those involved made this fundraiser a fabulous fun filled day for everyone, we made over $4000 with many promising to enter two teams next year.

There were some interesting results but it was Robert Thompson who took out first prize with an individual Stableford of 43, well done Robert. The day came to a close with dinner, drinks and prize giving with everyone going home with something and by all accounts the day was a huge success raising some much needed revenue for Asthma Auckland.

Fundraising isn't an individual pursuit and although the day went very well none of it would be possible without the help of our tireless volunteers and Asthma Auckland wishes to thank Vicki Currie for her time; Vicki gives up work on this day to do her bit for charity. We would also like to thank the staff of Redwood Park Golf Club for their support in making this day a successful one. We hope to continue this annual event so keep your calendars clear next November, I'll be in touch!

Thank you...

Linda Thompson
PR / Marketing Manager
Asthma Auckland / Asthma New Zealand



Photos: —
1: Rex Wass and Gary Holder. **2:** Tyrone Hay. **3:** Dean O'Cass. **4:** Adam Burgess. **5:** Tony Goodwin. **6:** Gerry Hanna. **7:** John Fellowes, Dru Tom. **8:** Peter Glass, Graham Gracie, Steve Randall and Tom Thorn-Large. **9:** Gary Holder and Gerry Hanna. **10:** Christine Hall on sausage duty. **11:** Vicki Currie and Linda Thompson. **12:** AJ Wright, Robert Thompson (2010 Winner), Richard Dixon, Tony Goodwin.

parent & child show

From 29th to 31st October the nurses from Asthma Auckland worked at the ASG Parent and Child Show at the ASB Showgrounds Greenlane. It was a marvellous opportunity to provide advice and education to members of the public that we would not have otherwise seen. Staff saw people from the South Island and as far north as Kerikeri. We were one of the few stands that provided education without selling products.

At New Zealand's most popular parenting event, there were over 200 exhibitors promoting products and services to help with raising children. Free seminars on pregnancy and early childhood ran throughout the day, and there was an entertainment programme that was enjoyed by all.

As we are a Non-profit Organisation, we are grateful for the grants and donations which enabled us to hire the space for our stall and provide a service for the wider community.

Karen Little
& Janet Delooze
Asthma Nurse Educators

north & south

NEWS FROM AROUND THE REGIONS ...

gluten free food and allergy show

The staff at Asthma Wellington are continuing to be presented with a wide range of opportunities to provide individual and group education sessions. On the 28th and 29th of August we had a stall at the first Gluten Free Food and Allergy Show to be held in Wellington and have been invited to attend again in 2011. We were able to engage with a large number of members of the public and received 57 self-referrals for educational home visits from people who live within the CCDHB area. We received positive feedback about the range of written resources we are able to supply and about the value of the public presentation on identifying and managing asthma triggers.

Over the past three months we have spoken at in-service training sessions for pharmacy technicians and practice nurses, as well as addressing other groups such as teachers and nursing students. We continue to see a strong trend for the control of asthma symptoms to be improved when we return to individual clients for a second educational visit.

is it safe to exercise with copd?

Ann Wheat RN BM

Exercise is a very important part of being a healthy person. It is even more so for people with Chronic Obstructive Pulmonary Disease (COPD). As we age, our lung function declines, but most adults have sufficient lung function to last them a life time. The problem for people with COPD is that their lung function declines at a much faster rate and therefore their lung function may not be sufficient to maintain a good quality of life. The major symptom for people with COPD is shortness of breath which causes people to become frightened of doing exercise which then leads on to lack of fitness and because we are not as fit as we should be we become more short of breath with exercise; and so the cycle continues. It is therefore very important to remain physically active as this will improve breathing ability, and help people with COPD feel better and increase their enjoyment of life (National Lung Health Education Program (NLHEP), 2009).

Exercise is important for a person with COPD as it not only helps to control the condition by improving their quality of life but it helps in the following ways as well:

1. Improves the efficient use of oxygen in the body. This will assist the strength of the muscles in the chest which therefore makes breathing easier and so the person will not be as breathless. Secondly it will help to reduce the energy required to breathe as people's lungs with COPD work harder to breathe than people without the condition.
2. Exercise helps to maintain people's independence. The more exercise people do the easier it becomes to do routine tasks such as shopping, cooking and cleaning. This not only improves people's physical quality of life but also mental quality of life by keeping them more motivated.
3. Exercise helps with maintaining a healthy weight and can improve sleep patterns. These ensure that people with COPD have more energy during the day (Canadian Lung Association, 2010 and WebMD, 2009).

These are just some of the benefits of exercise for people with COPD.

The first and most important thing that one should do though before doing exercise is to see a doctor to ensure that it is okay for the person to undertake an exercise program and ensure that the person is taking the correct medication for the condition.

What type of exercise can people do?

Start slow and do not be impatient to run before you can walk. In fact walking is one to the best forms of exercise that people can do. It does not cost anything and it is simple, and can be done anywhere and at any time. If necessary, start with walking around inside the house, then out into the garden and finally down the street. Walk on the flat as walking up hills is too difficult because it makes you overly breathless. It is important to walk at least three times a week at a steady pace. It is worth noting that when walking; do not go too far to start with as you have to make the return journey. If it is raining another good place one can walk is in shopping centres. If breathlessness becomes a problem, stop and rest before carrying on or returning. Another form of good exercise is riding an exercise bike. Remember, like for any exercise it is very important to warm up and warm down before and after exercise. This can be done by stretching as this helps to relax and improve flexibility (Canadian Lung Association, 2010). As well as exercising the legs, it is also important to exercise the upper body, as by doing this it stops them from becoming weak and helps to decrease shortness of breath (NLHE, 2009).

Breathing exercises

It is very important for people who do not have COPD to breathe correctly but it is even more so for people with COPD. By breathing correctly it helps to obtain more oxygen and helps reduce breathing effort (WebMD, 2009). So what can you do to help with your breathing?

- Relax as this will make it easier to breathe.
- Pursed Lip Breathing – start by breathing in through your nose for a couple of seconds and then breathe out through pursed lips (as if you are whistling) for about 4 seconds. This slows your breathing down.
- While exercising lean forward slightly as this helps to control shortness of breath.
- Breathe from your diaphragm – when breathing in allow your tummy to push out and when breathing in, pull it in. This helps to reduce shortness of breath (WedMD, 2009: NLHEP, 2009).

What else can you do to help when doing exercise?

Medication is an important part of any treatment program. In the case of COPD it is important to use your medications as prescribed especially your reliever medications (Ventolin, Respigen, Salamol, Bricanyl or Atrovent) as these help the muscles around your airways relax so making it easier to exercise.

Set realistic goals and gradually increase the amount of time that you are exercising per day and the number of days per week. If necessary have rest breaks while you are exercising. It helps if you are doing something that you enjoy doing and varying what you do also helps you to stay motivated. Exercising with a friend will also keep you on track and remember to warm up and warm down just like anyone else doing exercise (WebMD, 2009: Canadian Lung Association, 2010).

In conclusion

Exercise has an important role in the management of COPD. By keeping fit and active, it will help you control your COPD, reduce breathlessness and feel better both physically and mentally. Enjoy your exercise!!

References:
Canadian Lung Association (2010). COPD: Living with COPD. Retrieved from the World Wide Web Sep 29, 2010 from National Lung Health Education Program (2009). Lung – Treatment of COPD and Asthma.
Retrieved from the World Wide Web Sep 29, 2010 from WebMD (2009). COPD and Exercise: Breathing and Exercise Programs for COPD.
Retrieved from the World Wide Web Sep 29, 2010 from http:/www.webmd.com/lung/copd-and-exercise-breathing-and-exercise-program

copd versus asthma! what is the difference?

Debra Leutenegger (RN)

It can often be difficult to distinguish whether or not the diagnosis is asthma or indeed Chronic Obstructive Pulmonary Disease (COPD). To complicate matters further you could have both asthma and COPD. With this in mind it is important to have an accurate diagnosis since the management and treatment of asthma and COPD differ.

So where do we start?

Definitions:

COPD: The Global Initiative for Chronic Obstructive Lung Disease (GOLD) uses the following working definition: "Chronic Obstructive Pulmonary Disease (COPD) is a preventable and treatable disease with some significant extra pulmonary effect that may contribute to the severity in individual patients. Its pulmonary component is characterised by airflow limitation that is not fully reversible. The airflow limitation is usually progressive and associated with an abnormal inflammatory response of the lung to noxious particles or gases."

Asthma: "Asthma is a chronic inflammatory disorder of the airways in which many cells play a role including mast cells and eosinophils. In susceptible individuals this inflammation causes symptoms which are usually associated with widespread, but variable airflow obstruction that is often reversible either spontaneously or with treatment, and cause an associated increase in airway responsiveness to a variety of stimuli" (International Consensus Report 2002).

Risk factors for Asthma may include:

- Family history of Atopy
- Hygiene hypothesis
- Antibiotics in first year of life
- Smoking during pregnancy
- Premature infants/LSCS delivery
- Significant exposure to allergens during first year of life and or Occupation
- Bronchiolitis in infancy
- Obesity in children of preschool age.
- Overuse of Paracetamol

Risk factors for COPD:

Cigarette Smoking – The most common cause for COPD is cigarette smoking or exposure to tobacco smoke. This irritates the lungs and can cause irreversible damage.

Some Occupations – such as industrial work can have exposure to airborne irritants (e.g. chemicals / fumes) which may cause lung damage.

Alpha-1 antitrypsin – is a protein produced in the liver which helps protect the lungs. This is an inherited problem which accounts for 1-2% of COPD and results in the lungs being more susceptible to damage. In patients who develop COPD at a young age (< 45 years) or who have a strong family history of the disease, it may be useful to test for Alpha-1 Antitrypsin deficiency.

The chart (above right) shows some common markers for differentiating asthma from COPD.

ASTHMA	COPD
Typically starts at a young age	Patients are generally over the age of 40 years
Episodic shortness of breath – occurs when exposed to allergen (such a dust, pollens, or grasses) or with exercise	Progressive shortness of breath especially with exertion and later even at rest
No direct relationship with smoking	May have been a smoker or ex-smoker
Typically a dry cough in the evening	Chronic, productive cough often in the morning
Wheeze may or may not be present with exacerbations of asthma	Wheeze often when breathing out
	Frequent episodes of bronchitis or chest infections

Diagnosis

It pays to note that there may be no symptoms or very few symptoms in the early stage of COPD.

Spirometry test – this is a simple lung function test that can be carried out by your General Practitioner or Practice Nurse. Respiratory specialists and some Asthma Nurse educators at Asthma Societies throughout the country may also perform this test.

What is it and what does it show?

The Global Initiative for Chronic Obstructive Lung Disease defines Spirometry as: "Spirometry is a method of assessing lung function by measuring the volume of air the patient can expel from the lungs after a maximal expiration".

RESULTS – Must be interpreted with clinical history – neither asthma nor COPD are diagnosed on Spirometry alone. It is important to look at history as well as presence/absence of symptoms.

Reversibility Test: Since asthma is considered as a "reversible" condition, a reversibility test can be carried out to differentiate between asthma and COPD. Spirometry is done first as a baseline and then a bronchodilator medication is administered before doing a second Spirometry test. This is called a post-bronchodilator Spirometry test.

In asthma the reversibility response is generally > or = to 12% (Global Initiative for Asthma, 2009)

Symptom diary monitoring – charting symptoms over a period of time to show to your doctor can also be helpful along with Peak Flow monitoring.

Chest X-Ray – your doctor may request a chest x-ray

Sputum culture – If persistent purulent sputum is present

Treatment Regimes

Options will be discussed with you by your doctor, but generally include the regular use of inhaled medications to prevent and alleviate symptoms of both asthma and COPD. Other lifestyle changes include smoke cessation, regular exercise, pulmonary rehabilitation programmes and maintaining a healthy weight and eating a balanced diet.

Trigger avoidance/reduction in exposure is particularly important when managing asthma.

Outcomes:

There is no cure for COPD but there are lifestyle modifications and medications that can be taken to help prevent or slow down further decline in lung function and successfully manage symptoms.

There is also no cure for asthma however the severity of asthma may change through ages and stages. Some people have periods where asthma symptoms appear resolved, however these can return at any time throughout one's life.

Remember if you are diagnosed with either asthma or COPD contact your nearest Asthma Society for information and advice including an education session.

References:
Global Initiative for Chronic Obstructive Lung Disease (GOLD) 2008 www.goldcopd.com
International Consensus Report 2002

world copd day
november 17th 2010

World COPD Day is an annual event organised by the Global Initiative for Chronic Obstructive Lung Disease (GOLD) to improve awareness and care of chronic obstructive pulmonary disease (COPD) around the world.

Chronic obstructive pulmonary disease (COPD) is a chronic respiratory condition presenting as slowly progressive breathlessness, often associated with cough and sputum production. It includes both chronic bronchitis and emphysema in variable proportions in any one patient.

Many patients present to their doctor late in the disease and it is not uncommon to have serious impairment of lung function at the time of diagnosis. By this stage it is irreversible. Early detection is therefore a significant challenge for primary care practitioners.

An excellent response was elicited from an advertisement that Asthma Auckland's P/R Marketing Manager Linda Thompson placed in the Herald Aucklander Insert. Could it be COPD?

Four asthma nurse educators worked from 10am to 3pm at our office at 581 Mt Eden Rd providing free COPD education and advice to approximately 30 people.

All nurses also provided ABC for smoking cessation as required. (Ask, Brief advice and cessation support).

World COPD Day 2010

November 17 2010

A number of free spirometry tests were performed with results given to the participants to take to their GP's. Spirometry is the lung function test of choice for diagnosing COPD and for assessing control in response to treatment.

Karen Little R.N.
Asthma Nurse Educator

Asthma New Zealand's partner societies around New Zealand:

AUCKLAND ASTHMA SOCIETY (INC)
581 Mt Eden Road, Auckland 1024
Ph (09) 630 2293

CANTERBURY ASTHMA SOCIETY
275 Cashel Street, Christchurch 8013
Ph (03) 366 5235

RESPIRATORY SUPPORT GROUP
22 Manawa Avenue
Raumati, Kapiti Coast 5032

ROTORUA ASTHMA SOCIETY
Community House
1115 Haupapa Street, Rotorua 3010
Ph (07) 347 1012

SOUTH CANTERBURY ASTHMA SOCIETY
PO Box 267
Timaru 7940
Ph (03) 687 7379

SOUTHLAND ASTHMA SOCIETY
70 Forth Street, Invercargill 9810
Ph (03) 214 2356

WAIRARAPA ASTHMA SOCIETY
Wairarapa Community House
170 Dixon Street, Masterton 5810
PO Box 2097, Kuripuni, Masterton 5810
Ph (06) 377 1175

WELLINGTON REGIONAL ASTHMA SOCIETY
Level 4 Pember House
16 Hagley Street, Porirua 5022
Ph (04) 237 4520

WHAKATANE ASTHMA AND COPD GROUP
141-143 King Street, Whakatane 3120
Ph (07) 307 1447

NORTH OTAGO ASTHMA SOCIETY INC
Community House
100 Thames Street, Oamaru 9400
Ph (03) 434 3202

Questions, Letters, Articles, Advertisements

O_2 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 editor@asthma-nz.org.nz

newstream

J Pediatr. 2010 Sep 25. [Epub ahead of print]

Vitamin D Serum Levels and Markers of Asthma Control in Italian Children.

Chinellato I, Piazza M, Sandri M, Peroni D, Piacentini G, Boner AL.
Department of Paediatrics University of Verona, Verona, Italy.

Abstract

OBJECTIVE: To establish the relationship between vitamin D serum levels, pulmonary function, and asthma control in children.

STUDY DESIGN: We studied the relationship between 25-hydroxy cholecalciferol [25(OH)D] concentrations and baseline spirometry and levels of asthma control, assessed according to Global Initiative for Asthma guidelines and the Childhood Asthma Control Test, in 75 children with asthma (age range 5-11 years; 43 males) in a cross-sectional study carried out during the winter and early spring.

RESULTS: Only 9.4% of our children had a sufficient serum 25(OH)D (at least 30 to 40 ng/mL). A significant positive correlation was found between forced vital capacity percent predicted and serum 25(OH)D ($r = 0.25$, $P = .040$). This was true also for forced expiratory volume in 1 second, even though it was not statistically significant ($r = 0.16$, $P = .157$). Subjects with well-controlled asthma had higher serum levels of 25(OH)D than children with partially controlled or noncontrolled asthma, with values of (median [Q1; Q3]) 22.2 (16.3; 25.4), 17.8 (11.8; 22.1) and 18.1 (15.0; 18.5), respectively ($P = .023$). Furthermore, a positive correlation was found between 25(OH)D and the Childhood Asthma Control Test ($r = 0.28$; $P = .011$).

CONCLUSIONS: Our results indicate that hypovitaminosis D is frequent in children with asthma living in a Mediterranean country. In those children, lower levels of vitamin D are associated with reduced asthma control.

Note: See article on Vitamin D in this publication

BMJ. 2010 Sep 15;341:c4616. doi: 10.1136/bmj.c4616.

Paracetamol use in early life and asthma: prospective birth cohort study.

Lowe AJ, Carlin JB, Bennett CM, Hosking CS, Allen KJ, Robertson CF, Axelrad C, Abramson MJ, Hill DJ, Dharmage SC.

Murdoch Childrens Research Institute, Royal Children's Hospital, Parkville, Vic 3052, Australia. lowe.adrian@gmail.com

Abstract

OBJECTIVE: To determine if use of paracetamol in early life is an independent risk factor for childhood asthma.

DESIGN: Prospective birth cohort study.

SETTING: Melbourne Atopy Cohort Study.

PARTICIPANTS: 620 children with a family history of allergic disease, with paracetamol use prospectively documented on 18 occasions from birth to 2 years of age, followed until age 7 years.

MAIN OUTCOME MEASURES: The primary outcome was childhood asthma, ascertained by questionnaire at 6 and 7 years. Secondary outcomes were infantile wheeze, allergic rhinitis, eczema, and skin prick test positivity.

RESULTS: Paracetamol had been used in 51% (295/575) of children by 12 weeks of age and in 97% (556/575) by 2 years. Between 6 and 7 years, 80% (495/620) were followed up; 30% (148) had current asthma. Increasing frequency of paracetamol use was weakly associated with increased risk of childhood asthma (crude odds ratio 1.18, 95% confidence interval 1.00 to 1.39, per doubling of days of use). However, after adjustment for frequency of respiratory infections, this association essentially disappeared (odds ratio 1.08, 0.91 to 1.29). Paracetamol use for non-respiratory causes was not associated with asthma (crude odds ratio 0.95, 0.81 to 1.12).

CONCLUSIONS: In children with a family history of allergic diseases, no association was found between early paracetamol use and risk of subsequent allergic disease after adjustment for respiratory infections or when paracetamol use was restricted to non-respiratory tract infections. These findings suggest that early paracetamol use does not increase the risk of asthma.

Arch Bronconeumol. 2010 Sep 9. [Epub ahead of print]

[Relationship between Lower Respiratory Tract Infections in the First Year of Life and the Development of Asthma and Wheezing in Children.]

[Article in Spanish]

Puig C, Fríguls B, Gómez M, García-Algar O, Sunyer J, Vall O.

Unitat de Recerca Infància i Entorn (URIE), Servicio de Pediatría, IMIM-Hospital del Mar, Barcelona, España.

Abstract

INTRODUCTION: There is limited knowledge on the relationship between lower respiratory tract infections (LRTI) and asthma and wheezing during infancy, as there are few studies with prospective design, birth cohort and in non selected population. The objectives of the present study were to determine the prevalence of asthma and recurrent wheezing in childhood and to analyse the relationship between LTRI during the first year of life and the development of asthma and/or wheezing in childhood.

PATIENTS AND METHODS: Prospective birth cohort study conducted in the Hospital del Mar (Barcelona). We recruited 487 children, followed up from the pregnancy to the 6th year of life. As outcomes we studied: the presence of asthma and wheezing. As independent variables we studied: LTRI occurring during the first year of life, and some covariables including, among others: prematurity, birth weight, maternal history of asthma and atopy, breastfeeding, prenatal exposure to tobacco.

RESULTS: The asthma prevalence at 6 year of age was 9.3%. The variables associated with the development of asthma were LTRI, prematurity, atopic mother and formula breastfeeding. LTRI during the first year of life were also related with early recurrent wheezing and persistent wheezing.

CONCLUSIONS: Our results confirm that LTRI during the first year of life are related to the diagnosis of asthma and with the clinical phenotypes of early wheezing and persistent wheezing. These results are in accordance with the concept that LTRI occurring during a critical period of development, as are the first years of life, have an important role on in the later development of asthma and recurrent wheezing.

Respir Med. 2010 Nov;104(11):1659-67. Epub 2010 Aug 17.

COPD in young patients: a pre-specified analysis of the four-year trial of tiotropium (UPLIFT).

Morice AH, Celli B, Kesten S, Lystig T, Tashkin D, Decramer M.

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Abstract
Whilst recent large-scale studies have provided much evidence on the natural history and therapeutic response in patients with chronic obstructive pulmonary disease (COPD), relatively little is known about the effect in younger patients. We report a pre-specified post-hoc analysis of 356 patients with COPD <_ 50 years old from the four year randomised, double blind placebo controlled Understanding Potential Long Term Impact on Function with Tiotropium (UPLIFT) trial. Inclusion criteria included a post-bronchodilator forced expiratory volume in 1 s (FEV(1)) of ≤70%, FEV(1)/FVC < 0.70, age ≥40 years, and smoking history of ≥10 pack years. Younger patients had a mean FEV(1) of 1.24 L (39% predicted) and an impaired health-related quality of life (St. George's Respiratory Questionnaire (SGRQ)) compared to the entire UPLIFT population. There were 40.2% women and 51.1% current smokers in the younger age group. Tiotropium was associated with a sustained improvement in spirometry and SGRQ. Mean decline in post-bronchodilator FEV(1) was 58 ml/year (placebo) vs. 38 ml/year (tiotropium) (p = 0.01). Corresponding values for pre-bronchodilator FEV(1) were 41 ml/year (placebo) compared with 34 ml/year (tiotropium) (p = 0.34). The hazard ratio (95%CI) for an exacerbation in the younger age group was 0.87(0.68, 1.13)). The rate of exacerbations was reduced by tiotropium (rate ratio (95%CI) = 0.73(0.56, 0.95)). Tiotropium resulted in sustained bronchodilation, improved quality of life, and a decreased exacerbation rate in younger patients. Tiotropium also resulted in a significant reduction in the decline in post-bronchodilator FEV(1), suggesting possible disease modification by tiotropium in younger patients with COPD.

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Bronchodilators accelerate the dynamics of muscle O2 delivery and utilisation during exercise in COPD.

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Abstract
BACKGROUND: Expiratory flow limitation and lung hyperinflation promote cardiocirculatory perturbations that might impair O(2) delivery to locomotor muscles in patients with chronic obstructive pulmonary disease (COPD). The hypothesis that decreases in lung hyperinflation after the inhalation of bronchodilators would improve skeletal muscle oxygenation during exercise was tested.
METHODS: Twelve non- or mildly hypoxaemic males (forced expiratory volume in 1 s (FEV(1))=38.5+/-12.9% predicted; Pao(2)>60 mm Hg) underwent constant work rate cycle ergometer exercise tests (70-80% peak) to the limit of tolerance (Tlim) after inhaled bronchodilators (salbutamol plus ipratropium) or placebo. Muscle (de)oxygenation (approximately fractional O(2) extraction) was determined in the vastus lateralis by changes (Delta) in the deoxyhaemoglobin/myoglobin signal ([HHb]) from near-infrared spectroscopy, and cardiac output (QT) was monitored by impedance cardiography.
RESULTS: Bronchodilators reduced lung hyperinflation and increased Tlim compared with placebo (454+/-131 s vs 321+/-140 s, respectively; p<0.05). On-exercise kinetics of QT and pulmonary O(2) uptake V(o(2))were accelerated with active treatment; Delta[HHb] dynamics, however, were delayed by approximately 78% and the signal amplitude diminished by approximately 21% (p<0.01). Consequently, the ratio between V(o(2)) and Delta[HHb] dynamics decreased, suggesting improved microvascular O(2) delivery (tau-V(o(2))/MRT-Delta[HHb]=4.48+/-1.57 s vs 2.08+/-1.15 s, p<0.05). Of note, reductions in lung hyperinflation were related to faster QT kinetics and larger decrements in tau-V(o(2))/MRT-Delta[HHb] (p<0.01).
CONCLUSIONS: Decreases in operating lung volumes after the inhalation of bronchodilators are associated with faster 'central' cardiovascular adjustments to high-intensity exercise with beneficial consequences on muscle oxygenation in patients with moderate to severe COPD.

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Effects of nutritional supplementation combined with low-intensity exercise in malnourished patients with COPD.

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Abstract
STUDY OBJECTIVES: The first aim of this study was to investigate the effects of nutritional supplementation combined with low-intensity exercise on body components, exercise tolerance, and health-related quality of life (HRQOL) in malnourished patients with COPD. The second aim of this study was to examine the degree of systemic inflammation and the actual changes in levels of systemic CRP, TNFalpha, IL-6 and IL-8 actual changes after a combination of nutritional supplementation and low-intensity exercise in these patients.
DESIGN: A prospective randomised trial.
PATIENTS: Thirty-two moderate to severe, clinically stable malnourished COPD patients.
METHODS: Patients were randomly divided into a nutritional supplementation with low-intensity exercise group and a control group. Lung function, maximum inspiratory and expiratory muscle force, the Chronic Respiratory Disease Questionnaire (CRQ), the 6-min walking distance (6MWD), and the Borg scale were measured at baseline and were re-assessed at 3 months after intervention. The degree of systemic inflammation and the changes in levels of systemic CRP, TNFalpha, IL-6 and IL-8 were assessed before and after a combination nutritional supplementation with low-intensity exercise.
RESULTS: Body weight and FFM increased significantly after 12 weeks of nutritional supplementation therapy in patients with COPD. The dietary intake energy increased and the REE:REEpred ratio decreased significantly in the nutrition with low-intensity exercise group. PI(max), Quadriceps muscle force and the 6-min walking distance (6MWD) increased significantly from baseline through week 12. Health status, as assessed by CRQ, improved in the domains of dyspnea and total sores significantly in the nutrition with low-intensity exercise group after intervention. In this group, hsCRP, IL-6, IL-8, and TNFalpha, decreased significantly after intervention compared with the control group.
CONCLUSIONS: The combination of nutritional supplementation with low-intensity exercise training was successful in increasing weight and energy intake as well as exercise capacity and health-related QOL in our patients. Moreover, REE and major inflammatory cytokines decreased significantly after nutritional supplementation with low-intensity exercise training. The present study results suggest a potential role for the combination of nutritional supplementation and low-intensity exercise in the management of malnourished patients with COPD.

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