



Breath of L I F E



Lung Information & Friendship for Everyone

people with long term lung conditions, their family & carers

Spring 2016

Sep-Nov

SPRING – AAAAA-TISHOO!



People with allergies often dread spring with all the pollen about. They sneeze frequently, and their eyes and noses run like taps. Others find their eczema or their asthma gets much worse. What is it all about and what can you do about it, short of moving to another country?

This issue of Breath of L I F E includes an article on hay fever (seasonal allergic rhinitis sounds way more serious, doesn't it?)

One in five Australians are affected by one or more allergic conditions. But this rises to 78% of Australians aged 15-64! That's millions of us.

Where you live in Australia makes a difference because of the prevailing winds, the land formation and the types of plants.

LATE EDITION

This issue of Breath of L I F E is the "late edition" because it is **late**, due to your editor's recent hospital stay. Apologies!

ELECTRONIC COPY

Get your Breath of L I F E delivered to your inbox or read it online on the L I F E page of the Institute for Respiratory Health website.

\$8 of your \$20 membership fee now gets swallowed up in postage.

If you move to an electronic copy you get a full colour magazine, save trees, and allow more of your membership fee to go to support L I F E and the Institute.



Email

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L I F E MEETINGS & EVENTS COMING UP

Our August meeting featured Institute for Respiratory Health's **Dr Andrew Lucas** who gave an interesting presentation about the research he and others are doing into the regeneration of lung tissue, i.e. growing new lungs. Very exciting that WA researchers are at the cutting edge.

Spring Is Sprung Lunch

For our next community lunch please wear a floral for spring

Wah Do Chinese Restaurant

Wednesday 21 September 12 noon

207 Wanneroo Rd, Tuart Hill
corner Morley Drive, Tuart Hill
9349 6300. BYO - no corkage
charge. Plenty of parking.
Wheelchair accessible. Lunch
special available.



Getting there Several buses pass this location including # 386, 387, 388 & 389 from stands 13-16 at the new Busport. Alight at the stop **after** Morley Drive and cross the road at the lights to the shops. For more options ring Transperth Infoline 13 62 13 or visit.

RSVP by Monday 19 Sep to Mary T 9337 1286 E mvfedele@bigpond.com or Raema T 9349 0617

NEWS

Welcome new members of L I F E and the Institute for Respiratory Health. If you are seeking information about any aspect of your lung health or services that can help, contact Jenni on E life@resphealth.uwa.edu.au T 9382 4678 or Sal on T 9331 3651 E salhyder1@gmail.com

Farewell

Our dear friend and long-time member **Shirley Shehan** died on 11 July after a long struggle with Idiopathic Pulmonary Fibrosis. Several L I F E members attended her funeral in Fremantle. Shirley contributed her dry sense of humour to our meetings and, until recently, was the one responsible for sending out greeting cards for the L I F E Birthday Club as well as get well and condolence cards. Our deepest sympathies to Shirley's husband Ken and their family. We will all miss Shirley.



Farewell to **Dorothy Koh**, formerly Membership and Philanthropy Coordinator at the Institute for Respiratory Health. Due to financial constraints there's been some staff restructuring at the Institute and Dorothy has left to seek other opportunities. Dorothy has been a good friend and supporter of L I F E. You may have met her at one of our monthly meetings where she dropped in regularly. We will miss her quiet and supportive presence and wish her the best in her future career. Thank you Dorothy, and Good Luck!



L I F E Coordinator **Jenni Ibrahim** has been away camping up north and missed both June and July meetings of L I F E. Luckily other members stepped into the breach and meetings went off well (even when an advertised speaker failed to arrive!). Thank you to everyone who contributed, especially **Sal Hyder**. Unfortunately a month after returning to Perth, she took her first ambulance



ride and spent a week in Charlie's due to a health crisis unrelated to lung disease. Here she is in healthier times, in Purnululu National Park (the Bungles), reminding us all that we need to look after our whole health, not just our lung health. Anything can happen.

Membership renewal

Some members have said that they are unsure whether they had renewed their membership of L I F E, due 1 July each year, and do not recall receiving a renewal letter. With the recent staff changes at the Institute for Respiratory Health, renewal letters have been delayed and should be with you shortly.

You renew your L I F E membership by renewing your community membership of the Institute for Respiratory Health. It costs just \$20 a year. To renew for 2016-17 call **Sarah Cermak** on 6151 0815. Other ways to renew: follow [this online link](#) or bring your \$20 to the next L I F E meeting.

L I F E Birthday Club

Member **Jan Maiorana** has kindly taken on our Birthday Club (as well as the condolence and get well card service). If you'd like a card from us on your special day let Jan know your birthday either at a meeting, by E janjohn1968@bigpond.com or T 9339 3617. If you know a member who needs cheering up with a get well card please let Jan know.

Phone numbers changed

The phone numbers at Sir Charles Gairdner Hospital have changed since 6 August. All the numbers that started with 9346 XXXX now begin 6457 XXXX. For example, the Charlie's switchboard was 9346 3333 and has now become 6457 3333. The reception at the Institute for Respiratory Health was 9346 3198, and is now 6457 3198. The Institute for Respiratory Health's Clinical Trials Unit has become 6457 4882.

LUNG LAUGHS

Family Court Ruling from Perth, Western Australia

A seven year old boy was at the centre of a courtroom drama recently when he challenged a court ruling over who should have custody of him.

The boy has a history of being beaten by his parents and the judge initially awarded custody to his aunt, in keeping with the child custody law and regulations requiring that family unity be maintained as far as possible.

The boy surprised the court when he proclaimed that his aunt beat him more than his parents and he adamantly refused to live with her. When the judge

suggested that he live with his grandparents, the boy cried out that they also beat him.

After considering the remainder of the immediate family and learning that domestic violence was apparently a way of life among them, the judge took the unprecedented step of allowing the boy to propose who should have custody of him.



After two recesses to check legal references and confer with child welfare officials, the judge granted temporary custody to the Fremantle Dockers, whom the boy firmly believes are not capable of beating anyone.

Thanks to Paul Davies and Noemi Reynolds of Facebook for this cruel story. Guess they're Eagles' fans.

WOW. LOOKS LIKE YOU WENT TOO FAR WITH THE PLASTIC SURGERY!



Irish story

Did you hear about the Irish man who hobbled into the doctor's waiting room? "I hope to God the doctor finds something wrong with me because I'd hate to feel like this if I was well!"

Contributed by Mike Watteau, Bentley Bronchiatrix

RESPIRATORY RECIPES

Fish and Wedges

A simple meal with very little preparation.

Ingredients: 1 potato per person, 1 packet hot smoked salmon¹ (2 serves per pack, available from the fridge section in your supermarket, near the



¹ Hot smoked salmon doesn't like regular sliced (cold) smoked salmon. It looks like a piece of already cooked salmon and has a milder taste than (cold) smoked salmon.

smoked salmon), 1 T oil, salad ingredients.

Allow one large potato for each person. Peel, cut into thick slices, then cut each lengthwise to make thick wedges. Boil or microwave in boiling water till almost, but not quite, done (microwave on high for about 12 mins). While this is happening heat up a cast iron frypan if you have one. (Yes, they are heavy to lift but cook evenly.) Drain the potato wedges when they are done.

Pour the 1 T olive oil into the hot pan and arrange the wedges in it. Sprinkle on any spices and seasonings you like. I like pepper, salt, sumac (a dark red-brown powder made from a sour Middle Eastern berry, now widely available, even in supermarkets) and paprika. Turn the wedges once till brown on both sides.

While that is happening take out a packet of hot smoked salmon from the fridge. It needs no further cooking. You can serve the fish cold or warm. Assemble a salad. Enjoy!

(You could also coat the wedges in the olive oil and seasonings and bake at 190C till brown.)



Sal's Unbelievable 8 Minute Microwave Lemon Curd

Repeated from Autumn 2014 by popular response.

3-4 whole eggs (55-60g each)

¼ c / ~60ml orange juice

¾ c / 165g granulated sugar

¼ c / ~60ml water or extra juice

1 t finely grated lemon rind

125g butter chopped into small cubes (use salted or unsalted)

¼ c / ~60ml lemon juice

1 t finely grated orange rind

In a large microwavable bowl or jug (e.g. heatproof glass), whisk the egg and sugar together till the sugar dissolves. You can do this by hand. Stir in all the rest of the ingredients, butter cubes last.

Cook uncovered at 55% full power for 6 minutes, stopping every 2 minutes to stir. As all microwave ovens are a bit



different, continue for up to 2 more minutes until it's the consistency of pouring custard.

Pour into dry hot sterilised jars (boiled for 5 mins). Cover each jar with a cellophane disk or cling wrap and then a lid - while still hot. Store in the fridge for up to 6 weeks - if you can keep yourself from eating before then. Makes about 2 cups, which Sal divides into smaller jars.

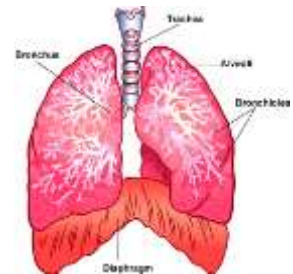
Ideas: Fill small bought tartlet cases, stir a spoonful into plain yoghurt, spread on fruit toast.

Contributed by Sal Hyder. This recipe was tested with a 900 watt microwave oven. First time you make it use a low setting and cook as long as needed. Sal substitutes limes when her tree is producing. Or use all lemon.

PULMONARY POETRY

Respiratory²!
I'll tell you my story,
After I breathe some O-2,
Then exhale the air,
As I go and prepare,
This story I'm telling to you...
To breathe it's a breeze,
We all need to breathe,
Animals, insects,
Fish in the seas!
Air through our mouth,
Or in through our nose,
Down through our trachea,
That's how it goes!
Through bronchial tubes,
Into the lungs,
For body to use,

Like ladders use
rungs...
Alveoli come
next,
Cool little sac,
Like ravioli and cheese,
They deliver a snack!
Oxygen to blood,
They're really quite nice,
Remove C-O-2,
They're all working twice...
When we exhale,
It lets humans speak,
Move vocal cords,
To sing or to squeak...
Respiration is cool,
It's not very shoddy,
It's a really great system,



² Pronounced the US way, with the stress on the 4th syllable (TOR), not as in Australia and the UK where the stress is on the 3rd syllable (PIR).

Found in our body...

More

<http://sciencepoems.net/sciencepoems/respiratory.aspx#.V0aYRvI95D8>

Watch the video, listen to the respiratory song, learn how your respiratory system works.

Google search terms: poems respiratory lungs breathing - for more respiratory poetry. Or write a verse yourself – we'll publish it here!

SHORTS

BREATH OF LIFE – OR LIFE OF BREATH?

In your hand is the **Breath of L I F E**, the magazine produced by Lung Information and Friendship for Everyone, the Perth based group for people with chronic lung conditions.

But did you know, on the other side of the world, there's a cutting edge, interdisciplinary research project called the **Life of Breath?**

Its aim is to explore breathing and breathlessness at the boundary between arts, humanities and medical practice.

- How does the lived experience of 'healthy' breathlessness differ from breathlessness related to ill health?
- What is the cultural significance of breath and breathing, and what are the origins of contemporary attitudes?
- Are there differences between how clinicians and ordinary people understand breathlessness?
- Can these approaches inform or influence the clinical detection and management of breathing problems?

Funded by the [Wellcome Trust in the United Kingdom](#) this research project is led by Professor Jane McNaughton at [Durham University](#) and Professor Havi Carel from the [University of Bristol](#). It involves a large team of researchers from many fields, including medical humanities, anthropology, dance, respiratory medicine, general practice, history, religion, spirituality, philosophy.

Professor Jane McNaughton visited Perth in March 2016 and gave a public lecture about this fascinating project she co-leads.

More <http://lifeofbreath.org/>

TED TALKS

Do you wish you had had a chance at further education? Are you fed up at being couped up at home? Nothing at all on TV? Do you wish you could get out to some of the interesting public talks you hear about, but don't go out at night?



Well TED is waiting just for you and is free! All you need is a computer with speakers.

TED stands for technology, entertainment and design. TED is a place for people to share ideas worth spreading. Started in 1984 as a face-to-face conference where technology, entertainment and design came together, today TED shares ideas from a broad spectrum — from science to business to global issues — in more than 100 languages.

The very well-presented talks (no more than 18 minutes long) can be viewed on your computer or other device (tablet or smart phone). People are invited to record a TED talk and coached in their presentation style. All the speakers are of a very high standard. Many are truly inspiring.

Visit the website and go to the list of 20 most popular TED talks. Or search for a topic that ignites your passion. There are over 2,000 of them in many different languages, mainly English. There are 4 on breathing, 3 on lungs, 33 on mental health and more than 200 on health. Be inspired!

More www.ted.com

PNEUMONIA - WHO'S MOST AT RISK?

Researchers have developed a prediction score to help health professionals work out which older people might be most at risk for developing pneumonia.

Potential risk factors for pneumonia included increasing age, chronic lung disease, smoking, being **underweight**, and having difficulty

functioning.

To determine their prediction score, Dr Michael L. Jackson, of the Group Health Research Institute, in Seattle, USA and his colleagues studied older people enrolled in the Adult Changes in Thought (ACT) study. The pneumonia risk study's participants included 3,392 older people living near Seattle. All were 65 years or older, were dementia-free, and did not have any cognitive problems.

During the study, 642 participants were diagnosed with pneumonia; 574 died. The researchers determined that the seven factors critical to a pneumonia prediction score included

age, sex, chronic obstructive pulmonary disease, congestive heart failure, body mass index (being underweight or overweight), and prescriptions for inhaled or oral corticosteroids.

The risk score based on these seven variables, commonly available in electronic medical records, was a better predictor of pneumonia than adding in more detailed data such as functional status.

Health professionals could potentially use this pneumonia prediction score to encourage older people to get the pneumococcal vaccine, lose or gain weight, or quit smoking.

Source Health in Aging Foundation July 25, 2016. [*Findings published in the Journal of American Geriatrics Society*](#)

ASTHMA

Do you have chronic asthma? If not, you're one of the nine of out ten lucky Australians not affected by this potentially life-threatening condition which involves an estimated 2.3 million Australians.

Recently released research from the University of Western Australia into chronic asthma examined the repair of surface level cells in children with or without asthma.

Whenever the epithelial cells (the uppermost layer of the lining of the airways) need repair a growth factor kicks in. This is a type of protein molecule called TGF- β 1 (beta 1). This doesn't necessarily happen when there are wounds to the lungs and can be just the general wear and tear caused by breathing in a normal amount of dust, allergens, and germs.



The researchers took epithelial cells from kids with and without asthma, and looked for evidence of TGF- β 1. For the asthmatic kids, they found that there are lower levels of the growth factor making the epithelial layer faulty.

Unfortunately the researchers say that you cannot just increase the TGF- β 1 to treat asthma as its balance could affect other parts of the body. But they do suggest that further research could look at ways to specifically target an effect on the epithelial layer.

This study opens the doors to new avenues of treatment for chronic asthma.

Source <http://riaus.tv/blogs/latest-asthma-research-all-surface> *Original article*

If you like reading popular translations of Australian scientific discoveries check out the RI-AUS (Royal Institution of Australia) website, Australia's Science Channel. There are short videos, podcasts (short downloadable programs you listen to via your computer) and blogs (short articles)
<http://riaus.org.au/>

FLU VACCINE FOR PREGNANT WOMEN CAN PROTECT BABIES

Giving pregnant women the trivalent inactivated influenza vaccine (IIV3) during pregnancy can protect their babies against symptomatic influenza infection, at least up to the first 8 weeks of their babies' lives.

Marta C. Nunes, PhD, University of the Witwatersrand, Johannesburg, South Africa, and colleagues followed babies born to women who'd taken part in a randomised clinical trial of this vaccine, which they had been given when pregnant.

They studied the vaccine's efficacy for the 1,026 babies born to these immunised mothers and the 1,023 babies born to women given a placebo vaccine.

The vaccine worked best (i.e. at 86%) in preventing influenza when babies were under 8 weeks old but was less effective for infants as they

got older.

The authors consider that the most likely mechanism of protection is through the trans-placental transfer of maternal antibodies.

Source [Study published online by JAMA Pediatrics 7 July, 2016](#)

BIOMARKERS FOR PULMONARY ARTERIAL HYPERTENSION

Pulmonary arterial hypertension is a serious condition characterised by raised blood pressure in the arteries of the lungs and can lead to right ventricular hypertrophy and heart failure.

The gold standard diagnostic test is to put a catheter into the right hand chambers of the heart, but the down side of the test is that it is an invasive procedure. The course of the disease is monitored by checking on the systolic pressure in the pulmonary artery by an echocardiogram (an ultrasound of the heart).

A simpler non-invasive test to frequently monitor people with this condition is much needed. There has been ongoing research for a biomarker³ that can be detected by a simple test and many different options are being studied.

A recently published study reviews some of the options for potential pulmonary hypertension biomarkers. They can be broadly categorised based on their association with endothelial cell dysfunction, inflammation, epigenetics, cardiac function, oxidative stress, metabolism, extracellular matrix, and volatile compounds in exhaled breath condensate.

A biomarker that can be detected in blood, urine or breath condensate and correlates with disease severity, progression and response to therapy may result in significant cost reduction and improved patient outcomes.

Source [Anjum Anwar, et al. in Respiratory Research 2016 17:88 DOI: 10.1186/s12931-016-0396-6](#)

³ A **biomarker** is a naturally occurring molecule, gene, or characteristic by which a particular pathological or physiological process, disease, etc. can be identified.

BATTLE FOR BREATH REPORT UK

The British Lung Foundation has recently released a report into the respiratory health of Britain.

The report, *The Battle for Breath*, examines the overall extent and impact of lung disease across the UK. It also takes a closer look at the impact of 15 major lung conditions. The new report is a valuable resource for policymakers, researchers, health care providers and more. It explains in detail the new findings, and the changes that need to be made to tackle them.

The 15 specific conditions examined more closely are:

Asthma, Bronchiectasis (non-cystic fibrosis), Chronic obstructive pulmonary disease (COPD), Cystic fibrosis, Idiopathic pulmonary fibrosis (IPF), Lung cancer, Mesothelioma, Obstructive sleep apnoea (OSA), Pneumoconiosis and other lung diseases caused by external agents, Pneumonia and other lower respiratory tract infections (LRTIs), Pneumothorax, Pulmonary embolism, Pulmonary hypertension and other pulmonary vascular diseases (excluding pulmonary embolism), Sarcoidosis, Respiratory tuberculosis (TB).

Key findings

- Lung disease is one of the top three killer diseases in the UK
- 115,000 people a year die from lung disease - 1 person every 5 minutes
- Mortality figures are roughly the same as 10 years ago, yet heart disease has fallen by 15%
- 1 in 5 people in the UK have been diagnosed with a lung disease
- Every day, 1,500 people are newly diagnosed with a lung disease



The six recommended strategies are

1. Establish taskforces for lung health in England and Scotland, to produce new five year strategies for tackling lung disease
2. Make respiratory one of the mandated priority areas for strategic clinical networks in England, to better integrate care and reduce lung health inequalities
3. Establish a national respiratory intelligence network and improve data recording, collection and analysis across the UK
4. Put respiratory disease research funding on an equal footing with cancer and cardiovascular research funding
5. Update the NHS Health Check in England, and invest in awareness campaigns, evidence-based screening and greater diagnostic capacity throughout the UK
6. Invest in prevention, including tackling smoking, obesity, physical inactivity and air pollution

Source [Battle for Breath Report](#)

In 2014 Lung Foundation Australia released a somewhat similar report prepared by the Woolcock Institute about lung disease in Australia.

The corresponding Australian statistics were:

- *Lung disease contributes to more than 10 per cent of the overall ill health burden in Australia*
- *One in seven deaths were due to lung disease (2012)*
- *The report found (in 2011-12) lung disease was the cause of 276,505 hospitalisations, representing 3% of all hospitalisations, and more than 1.4 million hospital patient-days, representing 5% of patient-days*
- *Among people with lung disease in Australia lower respiratory infections are the leading cause of hospitalisation*
- *Asthma represents the leading cause of disability*
- *Lung cancer represents the leading cause of death (40% of deaths from lung disease)*
- *COPD contributes one-third of the burden of ill health*
- *COPD contributes almost one-third of all deaths.*

It is not clear whether the Australian rates are very different from the UK or the available statistics are simply different. The Australian report can be accessed [here](#).

DOES REHAB IN ICU REDUCE HOSPITAL STAY FOR RESPIRATORY FAILURE?



Peter E. Morris, from the University of Kentucky, USA and colleagues compared outcomes for standardised rehabilitation therapy to usual care in the intensive care

unit (ICU) for people with acute respiratory failure.

Acute respiratory failure is associated with high mortality and prolonged illness, with impaired physical function for those who survive. Interventions directed at reducing the profound muscle wasting in people with acute respiratory failure are patient-centred. Such therapies, designed to improve weakness and impaired physical function could reduce recovery time.

Reports have suggested that a rehabilitation program, delivered by an ICU rehabilitation team, could reduce length of stay and improve physical function, although there are some contradictory findings as well.

In this study, 300 patients admitted to an ICU with acute respiratory failure requiring mechanical ventilation were randomly assigned to standardised rehabilitation therapy (n=150) or usual care (n=150) with a 6-month follow-up.

People in the standardised rehabilitation therapy group received daily therapy until hospital discharge. This consisted of passive range of motion, physical therapy, and progressive resistance exercise. The usual care group received weekday physical therapy when ordered by the clinical team.

The researchers found that the median hospital length of stay was 10 days for the standardised rehabilitation therapy group and 10 days for the usual care group. There was no difference in duration of ventilation or ICU care. Functional-related and health-related quality-of-life outcomes were similar for the two study groups when they were discharged from hospital.

Source [Parsippany, N., JAMA, June 28, 2016](#)

RISK FACTORS FOR FIBROSIS FLARE UPS

Acute flare-ups of idiopathic pulmonary fibrosis (IPF) are major causes of hospitalisation and death among people with this condition. But these flare-ups are quite unpredictable. This Japanese study aimed to investigate what might predict there was to be an acute flare-up.

The study cohort included 65 people, followed up for a median of 2.6 years. Over this period over a third of the people had acute flare-ups. The flare-ups had a significant impact on overall survival among these people with the disease.

A log-rank test showed that these factors were associated with being less likely to be free of flare-ups:

- baseline cardiovascular diseases
- higher GAP (gender, age, physiology) stage (\geq II)
- higher serum lactate dehydrogenase level (\geq 180 U/L),
- higher serum surfactant protein-D level (\geq 194.7 ng/mL),
- higher neutrophil (\geq 1.77 %) and eosinophil (\geq 3.21 %) percentages in bronchoalveolar lavage fluid⁴ samples, and
- treatment with an immunosuppressive agent after diagnosis.

In further analysis, baseline cardiovascular diseases, higher GAP stage (\geq II), and higher eosinophil percentage (\geq 3.21 %) in bronchoalveolar lavage fluid samples were the best predictors of the onset of an acute flare-up of IPF.

⁴ **Bronchoalveolar lavage** is a medical procedure for taking a sample of the cells of the airways and alveoli by passing an instrument called a bronchoscope is passed through the mouth or nose into the lungs and fluid is squirted into a small part of the lung and then collected for examination. It is typically performed to diagnose lung disease.

LETTER TO MY LUNGS

A part of the UK Life of [Breath Project](#) mentioned on page 8 was **Letter to My Lungs**, a project

facilitated by **Elsbeth Penny**, an arts, health and communication specialist.

Elsbeth runs a project called Scent, aimed at reviving the lost art of handwritten letters. She facilitated a group of people with chronic lung



conditions at the Forest of Dean Breathe Easy Group, in Gloucestershire, near the Welsh border. What would they write to their lungs or their breath?

Here is an example from Clare, aged 85, using a feather dipped in beetroot ink:

My Dear Breath, I have lived with you for 83 years, the first 23 were good! but you have been unkind'

She has had asthma since she was a child.

I used to wonder if I'd wake up dead.

As a warm up exercises the Forest of Dean Breathe Easy Group did some breathing exercises and wrote five short messages to their five year old self. What would you say to yourself as a child?

A participant later wrote about the letter writing workshop:

Our workshop last Tuesday gave our Breathe Easy members food for thought and a creative outlet not experienced often enough ... I hope you agree that the varied response, in words and images, is proof of the value of the afternoon to those present, not least the fun of it. The procession of the exercises

led (me) to realise (I) could rise above negativity and begin again to enjoy life.

What would you write to your lungs? Find some interesting material to write on and a writing implement that suits you.

What do you want to say to your breath – or your lungs? What do you feel? Anger, frustration, fear, gratitude, acceptance, something else?

What will you do with your letter to your lungs? Pin it up, hide it, show someone, or destroy it? If you'd like to share yours with Breath of L I F E readers (anonymously, if you prefer), we could publish it here. Or maybe we'll have our own letter writing workshop at one of our future L I F E meetings.

More

[Letter to My Lungs](#) at the Life of Breath Project

[Elspeth's TED talk](#) about the lost art of letter writing

ALLERGY – HAY FEVER

Before there was the Institute for Respiratory Health, there was the Lung Institute of Western Australia (LIWA), its earlier incarnation. But did you know that even before LIWA, there was the Asthma and Allergy Research Institute? So allergy and asthma are topics close to the core history of the Institute for Respiratory Health. With spring about to come into bloom it's timely to visit this topic that affects millions of Australians.

Allergic disease in Australia

Allergies have emerged as a major public health problem in developed countries during the twentieth century. Australia and New Zealand have among the highest prevalence of allergic disorders in the developed world. A 2007 report⁵ estimated that 4.1 million Australians (19.6% of the population) had at least one allergic disease. The highest prevalence of allergies is in the working age population aged 15-64, where 78% had allergies. Allergic diseases include asthma, eczema,

⁵ [ASCIA-Access Economics Report](#) 2007

hay fever, insect stings and food allergy. Severe allergic reactions may cause life threatening anaphylaxis.

Since it's the start of spring we'll focus here on hay fever, or known by its more accurate name, **seasonal allergic rhinitis**. In a future issue we will look at other allergic conditions.

Hay Fever

Pollen from grasses, weeds or trees can trigger symptoms of allergic rhinitis (hay fever) and asthma. Pollen seasons can last for several months and exposure is difficult to avoid. However, there are several ways to prevent or reduce symptoms.

What is pollen?

The word pollen is derived from the Greek word meaning 'fine flour' and the role of the pollen grain is to fertilise the female flower to reproduce plant species.

Pollen grains can be spread by birds, bees or wind:

- Some plants (such as flowering plants, including wattle trees) produce small amounts of pollen which are distributed by **birds and bees** from one plant to another.
- Other plants (such as pasture grasses and weeds) rely on the **wind** to spread their pollen. These pollen are produced in vast quantities, blow long distances and cause allergies in people, even if they live a long way from the source.

Allergy Fast Facts for Australia & New Zealand

Hay fever (allergic rhinitis)

1/10 children aged 6-7 years

1/6 children aged 13-14 years

2/5 adults

Asthma currently affects

1/5 children

1/10 adults

Eczema currently affects

1/6 children aged 6-7 years

1/10 children aged 13-14 years

1/14 adults

Most of the pollen that cause allergies in Australia is produced by **airborne pollen** from grasses, trees and weeds of plants originally grown in the northern hemisphere.

- Improved pasture grasses are more allergenic than Australian native grasses.
- Pollen from exotic trees, which are planted for their autumn colours, is more allergenic than pollen from Australian trees.

Several types of weeds with highly allergenic pollen have also been introduced, including:

- **Pellitory weed** (commonly known as asthma weed) was accidentally introduced in a shipload of marble from Italy in the early 1900s. It is mainly found in Sydney.
- **Paterson's Curse** (*Echium plantagineum*) is an attractive flowering plant that was deliberately brought from England in the late 1800's by Dr Paterson. This plant has taken over large tracts of pasture in rural Australia and produces highly allergenic pollen.
- **Ragweed and Parthenium weed** were introduced in pasture seed imported from the United States. They have spread throughout Queensland and northern New South Wales.



Pollen allergy causes hay fever

The correct name for hay fever is **seasonal allergic rhinitis**. As early as the early 1800s it was known that pollen, rather than hay, was the cause, the term hay fever is still commonly used. Allergic rhinitis symptoms are caused by the body's immune response to inhaled pollen, resulting in chronic inflammation of the eyes and nasal passages.

Allergic rhinitis symptoms include:

- Runny, itchy, congested nose
- Irritable, itchy, watery and red eyes
- Itchy ears, throat and palate.

Allergic rhinitis is a common and debilitating disease

- Allergic rhinitis affects around 1 in 5 people in Australia and New Zealand
- Allergic rhinitis predisposes people to more frequent sinus infections
- People with allergic rhinitis often suffer from fatigue due to poor quality sleep
- Moderate or severe allergic rhinitis impairs learning and performance in children, results in more frequent absenteeism in adults and reduced productivity, and therefore can cause considerable impairment in quality of life
- Around 8 in 10 people with asthma have allergic rhinitis, and having allergic rhinitis can make asthma more difficult to control

Pollen can also trigger asthma

Some people with moderate or severe allergic rhinitis believe that their allergic rhinitis 'turns' into asthma or that it makes them tight in the chest or wheeze. However, pollen can directly trigger asthma as well as allergic rhinitis. Small particles of allergens can penetrate deep into the airways of the lung. Thunderstorms can also contribute to this:

- When pollen granules come into contact with water, starch granules are released that are small enough to be breathed into the airways, causing allergic rhinitis and asthma in some people
- If you wheeze mostly during spring - summer, see your doctor for appropriate advice.

Pollen seasons can last for several months

Pollination times vary with the plant variety and location. For example, trees pollinate in late winter and early spring. Grasses flower next, and the weed 'Plantain' flowers from August through to May. Grass pollen

numbers are also higher in inland areas, where there are no natural barriers to wind dispersal.

In Australia pollen numbers are lower on the east coast where the prevailing winds come from the sea and where there is protection from westerly winds by the Great Dividing Range. In South Australia and Western Australia, the concentration of pollen can vary according to the prevailing winds. Pollen numbers are higher on the Victorian south coast because the prevailing winds are from the north carrying pollen from the northerly grasslands.

The principal grasses growing in the northern coastal areas are subtropical and mainly flower between January and March. Allergenic grasses in the southern part of Australia are mostly Northern hemisphere grasses, with the main flowering period October to December.

White Cypress (Murray) Pine is the only Australian tree that produces highly allergenic pollen. Its growth extends from the western slopes and plains of Eastern Australia across to Western Australia, south of the Tropic of Capricorn and it flowers from late July through to the end of August.



Wattle (*acacia*) trees are frequently blamed for early spring symptoms but allergy tests (skin prick tests) seldom confirm that. There are many species of *casuarina* or Australian oak trees, which produce pollen throughout the year

and may cause allergic rhinitis symptoms at any time of the year.

Diagnosis is important

If you get hay fever it is important to get it properly diagnosed. A doctor should take a careful history of when you get symptoms, what plants and trees grow in the area and whether relief is obtained by going away on holiday.

When this history has been obtained, confirmatory allergy tests (skin prick tests and/or blood allergen specific IgE tests) might be performed using allergens which are appropriate for the area of residence and work.

The relevance of the test results can then be interpreted by a doctor trained in allergy, in conjunction with your history.

Tips for reducing pollen exposure

- Stay indoors until after midday, if possible, to reduce your exposure to pollen, particularly in the pollen season and on windy days
- Try to avoid going out on windy days or after thunderstorms
- Wear sunglasses to protect your eyes
- Do not mow the grass. Stay inside when it is being mown (by someone else). If mowing is unavoidable, wear a mask or consider taking a non-drowsy antihistamine if your doctor has suggested this



- Consider planting a low allergen garden around your home
- Keep windows closed both at home and particularly when in your car (and where possible use recirculating air conditioning in your car)
- Do not picnic in parks or in the country during the pollen season
- Try to plan your holidays out of the pollen season or holiday at the seaside

- If you are sensitive to particular weeds or trees that outside your bedroom window, have them removed
- If landscaping at home, research plants less likely to trigger allergic rhinitis or asthma.
- Shower when you arrive home and rinse your eyes frequently with water
- Carry a supply of tissues

Effective treatments available

Ask your pharmacist or doctor about medications or treatments that can relieve your symptoms. Although medications do not cure allergies, they are much more effective with fewer side effects than medications available 20 years ago.

You just need to know the best way to use them, and avoid medicines that can cause you extra problems. For example avoid frequent use of decongestant nose sprays or tablets.

- **Antihistamine tablets or syrups** (non-sedating, like Zyrtec, Telfast or Claratyne) help to reduce symptoms (sneezing, itchy and irritating eyes), but they are not as effective in controlling severe nasal blockage and dribble. The advantage of antihistamines is their flexibility; you can take them when you have problems, and avoid them when you are well. Antihistamine eye drops can also be helpful in controlling watery eyes due to allergies.
- **Intranasal corticosteroid nasal sprays (INCS) (like Beconase and Flixonase)** have a potent action on inflammation when used regularly (like asthma preventer medications). These need to be used regularly and with careful attention to the way in which they are used. Different brands of INCS vary in strength and effectiveness, so it is important to read the labels and check details with your doctor or pharmacist.
- **Combination medications containing an antihistamine and intranasal corticosteroid nasal spray** (Dymista) are available and offer the combined advantages of both medications.

- **Decongestant sprays** (like Otrivin) unblock and dry the nose, but should not be used for more than a few days as they can cause long term problems in the nose



- **Decongestant tablets** (like Sudafed) unblock and dry the nose, but should be used with caution as they can have 'stimulant' side effects like tremors, trouble sleeping, anxiety or an increase in blood pressure. People with high blood pressure should not take this medication.
- **Combination medications containing an antihistamine and decongestant** are also available, but these need to be used with caution as the decongestants can cause many side effects. Telfast and Claratyne both have combination forms like this.
- **Natural products** such as salt water nasal sprays or douches can be effective in relieving symptoms.
- Appropriate management of 'pollen asthma' includes commencing **anti-inflammatory asthma medication** either preventatively or with the first 'wheeze' of spring. Some patients undergoing allergen immunotherapy for their allergic rhinitis find that their seasonal asthma improves as well.

Allergen immunotherapy - a long term treatment option

Medications only reduce the severity of symptoms and do not cure allergic rhinitis. Another treatment option is allergen immunotherapy (also known as desensitisation), which switches off the allergic reaction, by repeatedly introducing small doses of allergen extracts, by injection, drops under the tongue or tablets.

Allergen immunotherapy is a long term treatment usually given over a few years. You would need to see a clinical immunologist or allergy specialist to determine if this is suitable for you.

More

[Allergy](#), the website of ASCIA, The Australasian Society of Clinical Immunology and Allergy is the peak professional body of Clinical Immunologists and Allergists in Australia and New Zealand.

THANK YOU!

The medical content of each issue of Breath of L I F E is reviewed by a respiratory specialist, so you can be sure of its reliability. L I F E



would like to extend a huge thank you to **Dr Siobhain**

Mulrennan who currently does this for us, in addition to her many other roles.

In addition to being a Respiratory Specialist at Sir Charles Gairdner Hospital, and Clinical Associate Professor in Respiratory Medicine at the University of Western

Australia, she is also a young mother. Aren't you just breathless working out how she fits all this into her busy days! Thank you for reviewing our medical content each issue, Dr Siobhain Mulrennan.



HOW CAN I GIVE BACK?

Doing something that helps make the world a better place, feels good too. There are lots of things you can do, no matter how advanced your condition.

1. **Volunteer** for L I F E - help our L I F E group. Or another community organisation near you.
2. **Join the L I F E working bee** which helps the Institute for Respiratory Health's Clinical Trials Unit. Just speak to Sal at the next L I F E meeting or call her T 9331 3651.
3. **Register with the Clinical Trials Unit** of the Institute for Respiratory Health to take part in the trial of a new respiratory medication. Call



Leisa T 6457 4482 E leisa.wilson@resphealth.uwa.edu.au .

4. **Become a simulated patient** at the University of Western Australia's School of Medicine and help train doctors of the future. Call the Doctor of Medicine Team T 6488 7528 E mdpatients-fmdhs@uwa.edu.au
 5. **Volunteer to be a research subject** in a project advertised here or in your local paper.
 6. **Donate** to the work of the Institute for Respiratory Health. Call 6457 3198. Mention the Institute's important research into lung disease to friends and relatives who also might be interested to make a donation.
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INSTITUTE FOR RESPIRATORY HEALTH

The [Institute for Respiratory Health](#) (formerly LIWA) is a collaborative research organisation.

It aims to improve the life of Australians living with respiratory conditions by bringing together world class researchers and dedicated clinicians to investigate, diagnose, treat and prevent respiratory conditions.

The Institute conducts and fosters innovative basic and clinical research and translates their work into improved treatments for people with respiratory conditions in Australia.

The Institute includes a Clinical Trials Unit and the community support group – L I F E for people living with chronic respiratory conditions.

[Membership](#) is open to community members, researchers, health professionals and research students.

[Your tax deductible donation to the Institute](#) or bequest supports respiratory research.



About Lung Information & Friendship for Everyone (L I F E)

L I F E - a group for anyone with a chronic lung condition, their family and carers. It's run by, and for, people with chronic lung conditions. Started in 1992 as LISA, our name changed to L I F E in 2009. L I F E is the community support group of [the Institute for Respiratory Health](#). More about the Institute on page 27.

L I F E is also a member of [Lung Foundation Australia](#)'s network of respiratory self help groups T 1800 654 301. L I F E is thankful for the support of the Department of Respiratory Medicine at Sir Charles Gairdner Hospital.

Breath of L I F E magazine

Our magazine is published 4 times a year - March, June, September & December. It is distributed to all community members of the Institute, including L I F E members. Send your contributions to the editor, Jenni Ibrahim E life@resphealth.uwa.edu.au 7 Ruislip St, W. Leederville, WA 6007. [Read it online](#).

PHONE NO. HAS CHANGED

L I F E Membership

Join L I F E by becoming a community member of the Institute. Come to a meeting or contact the Institute T **6457 3198** or E life@resphealth.uwa.edu.au. Membership fee of \$20 a year (incl. GST) is due each 1 July. Members' help and ideas are always welcome - magazine, speakers, social events. Please tell us if you change address.

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Email life@resphealth.uwa.edu.au **Web** [L I F E on the Institute website](#) [L I F E also on Facebook](#)

Meetings

1st Wednesday of every month, February to November from 12 - 2.30pm. Speaker starts at 1.00pm.

Level 6 Meeting Room 612A, Perkins Institute Building, Queen Elizabeth II Medical Campus, Nedlands. Wheelchair and gopher accessible. Light refreshments. If you can, please bring a plate to share. (We no longer meet at the Respiratory Library, Department of Respiratory Medicine, 1st floor, B Block.)

COMING UP

Wed 7 Sep	Lung disease and genetics	Dr Svetlana Baltic, Institute for Respiratory Health
Wed 21 Sep	Spring lunch	Wah Do Chinese Restaurant, Tuart Hill. RSVP please. Details inside.
Wed 5 Oct	Home Medicine Reviews	Jim Grehan, pharmacist
Wed 2 Nov	Aged care rights & responsibilities	Advocate from Advocare
Wed 7 Dec	L I F E Christmas party	Perkins Building, level 2. More details in the next issue.
Jan 2017	No meeting	



**Seeking information
about your lung
condition and how to
cope with it?**

**Like to meet others in
a similar situation?**

Join L I F E!

