



# Breath of L I F E

Lung Information & Friendship for Everyone

People with long term lung conditions, their family & carers

Summer 2019-20

Dec-Jan-Feb

ISSN 2207-0028 Digital

## SUMMER



Your body is about 60% water. So we hardly need remind you about drinking water during our long Western Australian summers. You constantly lose water - mainly through urine and sweat. Besides being vital to so many of our body's functions, it's particularly important for many people with chronic lung conditions.

Mucus secretions naturally accumulate in your lungs. Your mucus becomes thicker and harder to cough up unless you are adequately hydrated. With thicker mucus building up you'll find it harder to breathe and run the risk of a respiratory infection or a flare-up.

There are different opinions about how much water you should drink every day. But health authorities commonly recommend about 2 litres - eight 250ml glasses, including the water you drink in coffee or tea - unless you are on a fluid restricted diet. In this case, follow your health professional's advice.

### L I F E Christmas Party

**Wed 4 Dec 2019 from 12 noon**

**Level 2 Harry Perkins Building**

Don't hesitate! RSVP today.

We need your booking for catering.

**MORE INSIDE**



## E-COPY



### Please consider...

We can email **Breath of L I F E** to you - or you can read it online on the L I F E webpage

<https://tinyurl.com/IRH-Breath-of-LIFE>

Two-thirds of your annual membership fee gets absorbed by printing & postage.

An e-copy - gives you a full colour magazine with clickable links, saves trees, and lets more of your membership fee support L I F E and the Institute for Respiratory Health. Contact us [life@resphealth.uwa.edu.au](mailto:life@resphealth.uwa.edu.au)



### Breath of L I F E Archives

A copy of each issue of Breath of L I F E is lodged with the State Library of WA and the National Library of Australia, via their E-Deposit Scheme. Our digital record number (ISSN) appears in the top right corner of the cover.

Started as LISA News in 1993, we became the Breath of L I F E in 2009.

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## L I F E EVENTS

### Recently

#### September

Our scheduled September speaker was involved in an accident and was unable to attend. We'll try to reschedule a speaker on the role of the respiratory nurse in the community in 2020. Instead, members got to know each other better, aided and abetted by the Take5 cards, in which you pick a random question card which asks you to share the answer to the group.

Deputy Sal Hyder took over leading the group as coordinator Jenni Ibrahim was in hospital across the other side of the QEII medical campus. Well done everyone for their contributions to the smooth running of the meeting while Jenni was on "sick leave". As they say, L I F E goes on!

### Talking Research

Researchers at the Institute for Respiratory Health, Associate Professors Cecilia Prele and Steve Mutsaers told us they would like to have our health consumer input into their research planning. A 2



hour session, **Talking Research**, was held on Thurs 26 September.

Researchers presented some short consumer-friendly overviews of their proposed projects followed by a lively discussion. It was so successful that another will be held early in 2020, possibly mid March..

#### October

Respiratory educator Sara Coleman from the Department of Respiratory Medicine at SCGH was our guest speaker on 2 October. She brought her case

of puffers and model airways to illustrate a very informative and clear update on inhaler techniques, including some of the newer (and trickier?) ones. Thank you Sara.



For our spring lunch on 14 October we ventured to East Perth, to the City Farm Cafe, located inside the City Farm Community Garden, and opposite the Health Department. Lovely garden verandah location. The menu was interesting and as usual the conversation spirited.

## November

At our November meeting we focused our minds on getting the most out of doctor's visits, sharing issues, tips and strategies. They will be summarised in a future issue of Breath of L I F E.

## Coming up

### **L I F E Christmas Party 2019**

**Wed 4 Dec 2019 from noon**

**Level 2 Harry Perkins Building** (not level 6, where we usually meet)

**Please RSVP as soon as possible**, or by **Wed 27 Nov at the latest** to Mary

E [mvfedele@bigpond.com](mailto:mvfedele@bigpond.com) T 9337 1286

Dig out some Christmas attire – a Christmas T shirt, Christmas earrings, tinsel in your hair, or a red, green or white outfit.



### Images from Christmases past

Like last year, we will partly cater this lunch. Please bring a plate of Christmas goodies to share – dessert, a drink, cake, or fruit. We will provide nibbles and the main course. Please advise of any dietary restrictions.



*Details of meetings in the first quarter of 2020 are listed on the back cover. We are holding a Planning 2020 meeting in January and the year's program will be developed after that, distributed early in 2020 at a future meeting and posted on [our Facebook page](#).*

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## RESPIRATORY NEWS

**Have A Go Day 2019** was held on Wed 13 November at Burswood Park, near the casino. It's the major event of the Seniors Recreation Council. L I F E jointly hosted a booth with the Institute for Respiratory Health's Clinical Trials Unit. Report in the next issue.

### **New Postal Address & Website for the Institute for Respiratory Health**

The Institute for Respiratory Health has a new postal address following the move of the Clinical Trials Unit from E Block at Sir Charles Gairdner Hospital to Level 2 at the Harry Perkins Building where its administrative and research sections reside.

So if you send your membership renewal by mail each 1 July, this is the address to use:

L I F E c/- Institute for Respiratory Health  
Harry Perkins Institute for Medical Research  
6 Verdun Street, Nedlands WA 6009

The Institute for Respiratory Health also has a new look website. Same web address – [www.resphealth.uwa.edu.au](http://www.resphealth.uwa.edu.au) - but it's had a makeover and the pages are organised a little differently.



It's now even easier to find L I F E and the Breath of L I F E at the RespHealth website. Click on the SUPPORT FOR YOU tab at the top of the homepage, and you'll see.

## Member News

Recently **Gaye Cruickshank** took a wonderful tour through Croatia, Hungary, and Bulgaria sharing her photos on Facebook.

Days after her return to Perth, disaster struck. Luckily she was at home. Her toaster caught on fire, she quickly unplugged it and stuck it in the sink.



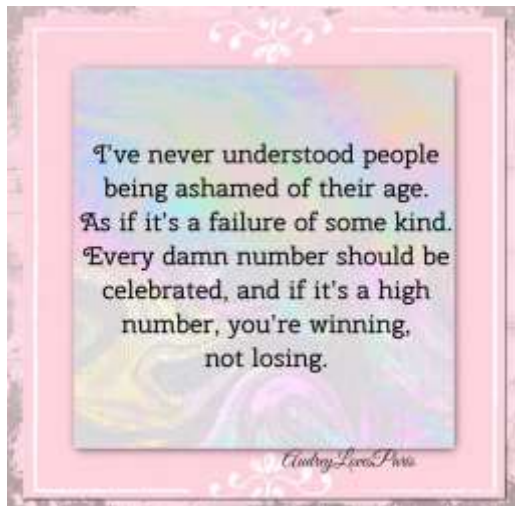
There was some smoke and ash damage in her house. Unfortunately the kitchen bench and PVC piping under her sink didn't come out too well. Here is a picture of the aftermath. Imagine what might have happened if this had happened while she was in Europe!

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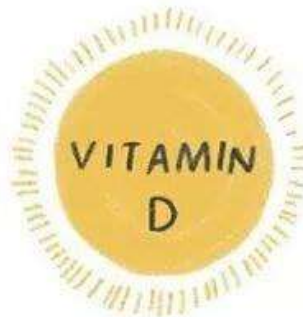
## INSPIRATIONS

**"Life" is a gift to you**

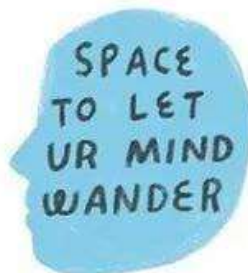
*The way you live your life is your gift to those who come after. Make it a fantastic one*



## 6 REASONS TO GO ON A WALK



MOVING UR  
BODY FEELS  
NICE



@avamarietdoodles

## LUNG LAUGHS

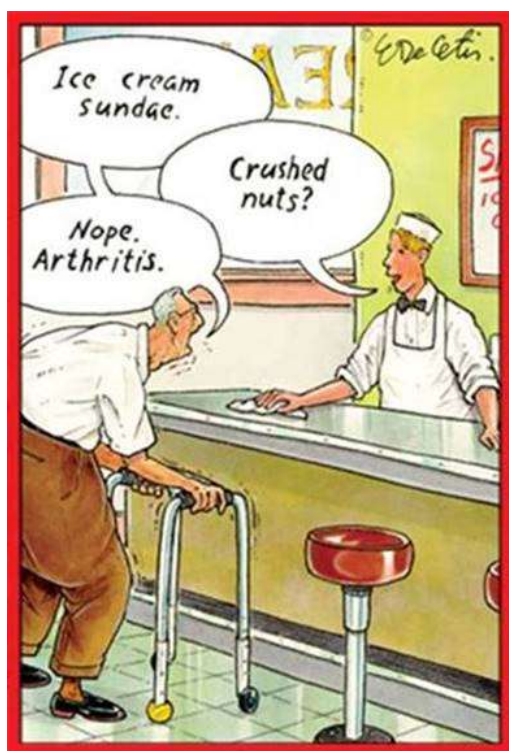
### Getting older is great

Your children are becoming you.

Going out is good. Coming home is better!

You forget names...But that's OK because other people forgot they even knew you!

You finally accept that you're never going to be really really good at anything.



You sleep better on a lounge chair with the TV blaring than in bed. It's called "pre-sleep".

You miss the days when everything worked with just an "ON" and an "OFF" switch.

Everybody whispers.

You use more 4 letter words ...  
"what?"..."when?"..."what?"

You have three sizes of clothes in your closet...two of which you will never wear.

But old is still good in so many ways -  
Old Songs, Old movies, and best of all,  
OLD FRIENDS!

*Contributed by Janelle Griffiths, Bunbury support group SWILS*

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### L I F E CARD CLUB

L I F E member **Jan Maiorana** looks after our card club. We send a card for birthdays or if we know someone is going through a tough time with a bereavement or illness. Let us know about other members.

If you'd enjoy receiving a card from us, please let Jan know - at a meeting, T 9339 3617 or E [janjohn1968@bigpond.com](mailto:janjohn1968@bigpond.com). (It's up to you whether to include your birth year, but we do like to help you celebrate the milestones.).

## SHORTS

*Links to source articles are available [online](#) at the L I F E webpage or in the emailed electronic edition.*

### **COPD SURVEY**

If you have COPD, Lung Foundation Australia invites you to take part in an online survey aimed at understanding how people with COPD feel about their lung condition, how it impacts their life, their needs and preferences for treatment to alleviate symptoms.

People aged 40 or older, who regularly experience symptoms of cough and mucous secretion are invited to take this 30-minute online questionnaire. You may experience COPD flare-ups which lead to increased reliance on medication or have to visit the hospital/emergency department. By getting involved you can help strengthen the consumer voice and influence key decision-makers in the development and approval of new drugs.

Click here to start <https://tinyurl.com/LFA-COPD-survey>

### **ALTERNATIVES TO LUNG TRANSPLANTS – NEW MEDICAL TECHNOLOGY**

Lung transplants are currently the ultimate therapeutic strategy for many people with cystic fibrosis (CF) and other chronic lung diseases, but they are scarce due to the severe shortage of donor organs, currently the only way of obtaining a lung.

Research in the lab of Laura Niklason, MD, PhD, the Nicholas M. Greene professor of anaesthesiology and professor of biomedical engineering at Yale University, is trying to solve this problem. She's trying to understand and use the laws underlying lung regeneration to create lungs in the lab.

"It's an exciting time to be working in lung regeneration," Niklason said. "Our understanding of how the lung is put together is growing very rapidly right now," Niklason said.

Lungs are delicate organs, as shown by the low rate of success — only 15% — when harvested from deceased people, a clear contrast to the 88% success rate for kidneys removed from deceased donors.

Moreover, they are highly susceptible to damage — patients from which lungs are harvested often linger on ventilators — and need to be transplanted within hours. Another shortcoming is the need for transplanted patients to undergo a lifetime of immunosuppressive therapies to prevent them from rejecting the donor organs.



Readers may be aware that here in Perth, Associate Professor Yuben Moodley head of the Stem Cell Unit at the Institute for Respiratory Health, has been working in this field too.

Sources

[Cystic Fibrosis News Today](#) [Yale University Medicine](#)  
[Institute for Respiratory Health – Assoc Pro Yuben Moodley](#)

## COUGHING AND THE SPREAD OF BACTERIA



Breathe a sigh of relief!  
Although people with **bronchiectasis** and **chronic obstructive pulmonary disease (COPD)** release bacteria when they cough, this process does not appear to

contribute to the spread of infection to the other people, a recent Queensland study shows.

The bacteria *Pseudomonas aeruginosa* are associated with multiple respiratory conditions including **cystic fibrosis** (CF), bronchiectasis, and COPD. The transmission of these bacteria through the air followed by another individual inhaling it — aerosol transmission — is thought to be a mechanism by which the infection can spread among CF patients.

It was unclear whether this process also occurs in other respiratory conditions, but researchers at the QIMR Berghofer Medical Research Institute in Brisbane, Australia, have now shown that this is unlikely to be the case.

Cough testing was performed on 16 patients with bronchiectasis and four patients with COPD, all of whom were infected with *P. aeruginosa*. The test assessed whether the bacteria were released when the patients coughed, and for how long and how far the bacteria could survive in the air.

Results showed that 35% of bronchiectasis and COPD patients (seven out of 20) released aerosols containing the bacteria during coughing.

The distance the bacteria could survive in the air (4 meters) was similar among bronchiectasis, COPD, and CF patients. However, bacteria from bronchiectasis patients survived for a shorter amount of time in the air than bacteria from those with CF — 15 minutes versus 45 minutes.

Furthermore, the amount of bacteria released by coughing was lower in bronchiectasis and COPD patients than in those with CF.

Source [Bronchiectasis News Today](#)

## ALPHA1- ANTITRYPSIN TRIAL HERE IN PERTH

The Institute for Respiratory Health is taking part in a 3-year Phase III study designed to investigate the safety and efficacy of two dose regimens of the study drug, which involves weekly infusions.

To find out if you could be suitable to take part contact the Clinical Trials Recruitment Officer, Alana T 6151 0838 or T 6151 0888 W [alana.perchard@resphealth.uwa.edu.au](mailto:alana.perchard@resphealth.uwa.edu.au).



To take part you need to

- Be 18- 70 years old
- Have a diagnosis of Alpha 1 Antitrypsin Deficiency with evidence of emphysema
- Have had no flare up of your condition in the 5 weeks before your first clinical visit
- Have not had cancer in the last 5 years

You will need to come to Sir Charles Gairdner Hospital for treatment once a week for 3 years, including health checks. CT scans of your lungs will be required on 5 occasions throughout the trial period.

Source [Clinical Trials Unit](#)

## VITAMIN D AND LUNG FUNCTION IN ASTHMA

There is a growing body of scientific literature suggesting a link between vitamin D and asthma lung function, but the results from systematic reviews are inconsistent. Chinese researchers<sup>1</sup> conducted a meta-analysis<sup>2</sup> to investigate the relationship between vitamin D levels in the blood serum and lung function in asthma patients.

They found that people with asthma and low vitamin D levels had lower forced expiratory volume in 1 second (FEV1)<sup>3</sup> than those with sufficient vitamin D levels.

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<sup>1</sup> Department of Intensive Care Unit, the First Affiliated Hospital, College of Medicine, Zhejiang University, Hangzhou, Zhejiang Province, China

<sup>2</sup> Meta-analysis is a systematic examination of data from a number of independent studies of the same subject, in order to determine overall trends

<sup>3</sup> mean difference (MD) = - 0.1, 95% CI = - 0.11 to - 0.08,  $p < 0.01$ ;  $I^2 = 49\%$ ,  $p = 0.12$ ) and FEV1% (MD = - 10.02, 95% CI = - 11 to - 9.04,  $p < 0.01$ ;  $I^2 = 0\%$ ,  $p = 0.82$ )

The meta-analysis suggested that serum vitamin D levels may be positively correlated with lung function in asthma patients. Future comprehensive studies are required to confirm these relations and to elucidate potential mechanisms.

Source [Biomed Central](#)

## **SHORT-TERM VAPING EFFECTS ON IN NON-SMOKERS**

E-cigarette use is rising at concerning levels among both smokers and non-smokers, and new research data suggests that even short-term e-cigarette use can cause cellular



inflammation in adults who have never smoked.

Using bronchoscopy to test for inflammation and smoking-related effects, researchers reported a measurable increase in inflammation after just 4 weeks of e-cigarette use, according to a study published in Cancer Prevention Research.

Although the size of the change was small compared with a control group, the pilot data suggests that even short-term usage can result in inflammatory changes at a cellular level.

Any level of cellular inflammation correlated with e-cigarette use is concerning because the biological and health effects of e-cigarettes constituents such as propylene glycol and vegetable glycerine -- while "generally regarded as safe" by the US Food and Drug Administration (FDA) when used in foods and cosmetics -- are unknown when heated and inhaled with e-cigarettes, said Peter G. Shields, MD, Ohio State University, Columbus, Ohio.

"The implication of this study is that longer term use, increased daily use, and the addition of flavours and nicotine may promote additional inflammation," he said. "The general perception among the public is that e-cigarettes are 'safer' than cigarettes. The reality is the industry is changing so fast -- and with minimal regulation -- that usage is outpacing the rate of our scientific understanding."

“[E-cigarette use] is becoming a public health crisis [that] we should all take very seriously from a general pulmonary health, cancer risk, and addiction perspective,” he added. “E-cigarettes may be safer than smoking, but that is not the same as safe, and we need to know how unsafe they are.”

In this study, Min-Ae Song, PhD, Ohio State University, and colleagues recruited 30 healthy, non-smoking volunteers to directly assess the impact of tobacco and e-cigarette use on their lungs through bronchoscopy. Participants were randomised to a 4-week intervention with e-cigarettes containing only 50% propylene glycol or 50% vegetable glycerine **without nicotine or flavours**. Results from these tests were then compared with a separate control group of never-smokers.

In August 2016, the US FDA was granted regulatory authority over e-cigarette product design. Data about e-cigarette toxicity in humans is urgently needed to establish scientific evidence-based regulatory policies.

“Human clinical trials can provide valuable information regarding actual toxicant exposure and risk for disease,” said Dr. Song. “Through the randomised clinical trial of healthy never-smokers over a month, we found that an increase in urinary propylene glycol, a marker of inhalation-e-cigarette intake, was significantly correlated with increased inflammatory response in the lung.”

“Future studies could be of longer duration, include an assessment of flavours, the effect by varying ratios of propylene glycol and vegetable glycerine, and examine randomisation of smokers to e-cigarettes,” she concluded.

Sources [Cancer Prevention Research](#) [DGNews](#)

*Note: Australian laws vary by State but all make it illegal to sell, advertise, and import for resale electronic cigarettes and related products that contain nicotine. But there are e-cigarette companies in Australia that sell electronic cigarettes and products that contain no nicotine. There are many websites telling Australians how to import their own vaping equipment and supplies. Until the safety research is clearer L I F E does not recommend readers take up e-cigarettes. This study shows that even nicotine-free e-cigarettes have an impact on lung health.*



## SURVIVING LUNG CANCER IF YOU LIVE IN THE COUNTRY



Rural populations of the United States have not experienced the same degree of decline in death from lung cancer that was recently seen nationwide. Several investigations examining survival differences in rural lung cancer patients have been inconsistent. A recent report investigated the association between living in rural areas, early-stage non-small cell lung cancer (NSCLC) survival and receiving treatment meeting clinical guidelines in

This retrospective study focussed on people with NSCLC diagnosed from 2004 to 2015 on the US National Cancer Data Base. Comparisons of survival outcomes and management consistent with clinical guidelines with lobectomy<sup>4</sup> or stereotactic body radiation therapy <sup>5</sup>among rural and non-rural patients, classified according to the US Department of Agriculture's Rural-Urban Continuum Codes.

They identified 840,566 patients; 18.7% lived in rural areas. Rurality was associated with greater proportions of males, white patients, and higher comorbidities<sup>6</sup>. Larger proportions of rural stage I patients (53.4%) did not undergo guidelines-consistent management with lobectomy or stereotactic body radiation therapy relative to non-rural patients (50.1%,  $P < 0.001$ ). Although rural patients within each stage at diagnosis have a significant disparity in **overall survival** (OS), stage I NSCLC had the largest absolute difference (non-rural=61.4 months, rural=50.3 months, difference of

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<sup>4</sup> Surgical removal of a lobe of the lungs

<sup>5</sup> Stereotactic body radiation therapy is specially designed coordinate-system is used for the exact localisation of the tumours in the body to treat tumours with limited, but highly precise treatment.

<sup>6</sup> Comorbidity is another condition along with the primary one being discussed

11.1 months,  $P < 0.0001$ ). In multivariable Cox regression, rurality was independently associated with impaired survival in both all-stages (hazard ratio=1.08,  $P < 0.001$ ) and stage I NSCLC (hazard ratio=1.09,  $P < 0.001$ ).

Small differences exist in OS among all rural NSCLC patients, but rural patients with stage I NSCLC have a marked disadvantage in OS. Rurality is an independent risk factor for decreased survival in all-stages and stage I NSCLC.

Source [Full text](#) [DocGuide](#)

*Is this also true in Australia? The answer is yes.*

*The Australian Institute for Health and Welfare reports that about one-third of the people affected by cancer live in regional and rural areas. For them, the burden of cancer is disproportionately heavy. People living with cancer in regional and rural areas have poorer survival rates than those living in major cities, and the further from a major city patients with cancer live, the more likely they are to die within five years of diagnosis.*

*Factors which contribute to lower survival rates for people with cancer in rural areas include: less availability of diagnostic and treatment services; later diagnosis; lower socioeconomic status; reduced rates of physical activity; increased rates of high risk alcohol consumption; higher rates of smoking; the higher proportion of Aboriginal and Torres Strait Islander people; and increased sun exposure.*

*(A)vailable evidence suggests that people living remotely in Australia have poorer outcomes from NSCLC because they are often not referred to specialist thoracic surgical centres where their disease will be adequately staged and, if appropriate, they will be offered potentially curative surgery.*

Sources [Tracey et al 2016 article in Medical Journal of Australia](#)  
[National Rural Health Alliance Fact Sheet on cancer in rural Australia](#)

## **IPF: TREAT THE DISEASE OR THE UNDERLYING PATTERN?**

Some people with **interstitial lung diseases** (ILDs), such as **rheumatoid arthritis** (RA)-associated **ILD** and **chronic hypersensitivity pneumonitis**, experience a disease course similar to patients with **idiopathic pulmonary fibrosis** (IPF). They also often have a **usual interstitial pneumonia** (UIP) pattern of fibrosis. Although the standard of care for patients with RA-ILD and chronic hypersensitivity pneumonitis is immunosuppression, the optimal treatment for patients with progressive disease and a UIP pattern remains unknown.

Recent research has highlighted shared risk factors, disease behaviour and pathobiology between RA-ILD, chronic hypersensitivity pneumonitis and IPF. The presence of a UIP pattern, in both RA-ILD and chronic hypersensitivity pneumonitis, is associated with a worse prognosis. Moreover, genetic risk factors, previously well characterised in IPF, are increasingly being linked to RA-ILD and chronic hypersensitivity pneumonitis. There are also some genetic factors linked to an increased susceptibility to pulmonary fibrosis in RA and chronic hypersensitivity pneumonitis.

IPF shares several clinical, genetic and biological features with other ILDs exhibiting the UIP pattern. The optimal pharmacologic management of these patients remains uncertain. Several ongoing trials are evaluating the efficacy of anti-fibrotic medications in these other diagnoses and may change how we approach ILD treatment.

Source [Full text](#)

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## TRICKS OF THE TRADE



Here are some ideas for avoiding buying expensive supermarket and hardware store products containing chemicals you don't recognise. Many of these are chemicals too - but much simpler, cheaper, and things you'll probably have on hand anyway. Can't promise their effectiveness. This is what others have found works for them.

<b>Lemons</b>	When you have too many lemons on your tree, juice them, mix with a little vinegar and pour into a spray bottle. Spray on weeds. No harsh chemicals
<b>Charcoal</b>	A few small pieces of charcoal can be used in the fridge to absorb smells, or even to refresh soil in a garden pot
<b>Onion Skins</b>	Dig in around roses and grapes and other plants prone to fungus.

<b>Petroleum jelly (Vaseline)</b>	Deter snails and other crawlies from your garden pots by smearing around the side walls. Attract aphids to an old tennis ball covered in petroleum jelly. They won't get to your plants.
<b>Beer (cheap brand)</b>	Slugs and snails die with a smile on their faces when they encounter your beer paddle pools. Container ideas: shallow box lined with aluminium foil, squeezed grapefruit or orange halves. Empty out in the morning and refresh the bar!
<b>Old nails or other rustable items</b>	Add iron to your garden soil by putting a flattened out nail in the bottom of a planting hole or soak old rusty nails in a container of water. Pour off the water to the plants that need iron.

More in the next issue. If you have some tips too please let us know.

*Contributed by L I F E member David Payne*

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## HEALTHY EATING

### PLEASE READ THIS

*We should get most of our nutrients from food, advises the federal government's [Australian Guide to Healthy Eating](#). Foods contain vitamins, minerals, dietary fibre, and other substances that benefit health. In some cases, fortified foods and dietary supplements may provide nutrients that otherwise may be consumed in less-than-recommended amounts.*

*If you are thinking of taking a vitamin or mineral supplement consider whether you can get adequate amounts of it in your diet, whether you have any need for extra, the dangers of taking an excess of that vitamin or mineral, and whether it interacts with other medications you are taking.*

Over past issues we've covered vitamins A, B, C, D, E and K. Now we'll deal with some of the **minerals** we need in our diet.

There are two kinds of minerals: **macrominerals** and **trace minerals**.



You need larger amounts of macrominerals. They include calcium, phosphorus, magnesium, sodium, potassium, chloride and sulphur.

You only need small amounts of trace minerals. They include iron, manganese, copper, iodine, zinc, cobalt, fluoride and selenium.

Today we'll tackle **calcium**.

### **What is calcium and what does it do?**

Calcium is a mineral found in many foods. The body needs calcium to maintain strong bones and to carry out many important functions.

Almost all calcium is stored in bones and teeth, where it supports their structure and hardness.

The body also needs calcium for muscles to move and for nerves to carry messages between the brain and every body part. In addition, calcium is used to help blood vessels move blood throughout the body and to help release hormones and enzymes that affect almost every function in the human body.

### **What foods provide calcium?**

Calcium is found in many foods. You can get recommended amounts of calcium by eating a variety of foods, including the following:

Milk, yogurt, and cheese are the main food sources of calcium for the majority of people in many parts of the world.

Kale, broccoli, and Chinese cabbage are fine vegetable sources of calcium. Fish with soft bones that you eat, such as canned sardines and salmon, are great animal sources of calcium.

### **What's the difference between Vitamins and Minerals?**

Although they are all considered micronutrients, vitamins and minerals differ in basic ways.

**Vitamins** are organic and can be broken down by heat, air, or acid.

**Minerals** are inorganic and hold on to their chemical structure.

So why does this matter? It means the minerals in soil and water easily find their way into your body through the plants, fish, animals, and fluids you consume.

But it's tougher to shuttle vitamins from food and other sources into your body because cooking, storage, and simple exposure to air can inactivate these more fragile compounds.



Most grains (such as breads, pastas, and unfortified cereals), while not rich in calcium, add significant amounts of calcium to the diet because people eat them often or in large amounts.

Calcium is added to some breakfast cereals, fruit juices, soy and rice beverages, and tofu<sup>7</sup>. To find out whether these foods have calcium, check the product labels.

### How much calcium do I need?

<i>Life Stage</i>	<i>Recommended Amount</i>	<i>Life Stage</i>	<i>Recommended Amount</i>
Birth to 6 m	200 mg	Adults 19-50 y	1,000mg
Infants 7-12 m	260 mg	Adult men 51-70 y	1,000 mg
Children 1-3 y	700 mg	Adult women 51-70 y	1,200 mg
Children 4-8 y	1,000 mg	Adults 71+ ys	1,200 mg
Children 9-13 y	1,300 mg	Pregnant & b/feeding teens	1,300 mg
Teens 14-18 y	1,300 mg	Pregnant & b/feeding adults	1,000 mg

<sup>7</sup> This refers to US foods

The amount of calcium you need each day depends on your age and gender. Average daily recommended amounts are listed above in milligrams (mg):

### **What kinds of calcium dietary supplements are available?**

Calcium is found in many multivitamin-mineral supplements, though the amount varies by product. Dietary supplements that contain only calcium or calcium with other nutrients such as vitamin D are also available. Check the label to determine the amount of calcium provided.

The two main forms of calcium dietary supplements are **calcium carbonate** and **calcium citrate**. Calcium carbonate is inexpensive, and absorbed best when taken with food. Some over-the-counter antacid products, such as Tums® and Rolaids®, contain calcium carbonate. Each pill or chew provides 200-400 mg of calcium. Calcium citrate, a more expensive form of the supplement, is absorbed well on an empty or a full stomach. In addition, people with low levels of stomach acid (a condition more common in people older than 50) absorb calcium citrate more easily than calcium carbonate. Other forms of calcium in supplements and fortified foods<sup>8</sup> include calcium gluconate, calcium lactate, and calcium phosphate.

Calcium absorption is best when you consume no more than 500 mg at one time. So if you take 1,000 mg/day of calcium from supplements, for example, it's better to split the dose, rather than take it all at once.

Calcium supplements may cause gas, bloating, and constipation in some people. If any of these symptoms occur, try spreading out the calcium dose throughout the day, taking the supplement with meals, or changing the supplement brand or calcium form you take.

### **Am I getting enough calcium?**

Many people don't get recommended amounts of calcium from the foods they eat, including:

Boys aged 9 to 13 years,

Women older than 50 years,

Girls aged 9 to 18 years,

Men older than 70 years.

When total intake from both food and supplements is considered, many people—particularly adolescent girls—still fall short of getting enough calcium, while some older women likely get more than the upper limit.

Certain groups of people are more likely than others to have trouble getting enough calcium:

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<sup>8</sup> <http://www.foodstandards.gov.au/consumer/nutrition/vitaminadded/pages/default.aspx> Australian regulations about food fortification with vitamins and minerals

- **Postmenopausal women** because they experience greater bone loss and do not absorb calcium as well. Sufficient calcium intake from food, and supplements if needed, can slow the rate of bone loss.
- **Women of childbearing age whose menstrual periods stop** (amenorrhea) because they exercise heavily, eat too little, or both. They need sufficient calcium to cope with the resulting decreased calcium absorption, increased calcium losses in the urine, and slowdown in the formation of new bone.
- **People with lactose intolerance** cannot digest this natural sugar found in milk and experience symptoms like bloating, gas, and diarrhea when they drink more than small amounts at a time. They usually can eat other calcium-rich dairy products that are low in lactose, such as yogurt and many cheeses, and drink lactose-reduced or lactose-free milk.
- **Vegans** (vegetarians who eat no animal products) and ovo-vegetarians (vegetarians who eat eggs but no dairy products), because they avoid the dairy products that are a major source of calcium in other people's diets.

Many factors can affect the amount of calcium absorbed from the digestive tract, including:

- **Age.** Efficiency of calcium absorption decreases as people age. Recommended calcium intakes are higher for people over age 70.
- **Vitamin D intake.** This vitamin, present in some foods and produced in the body when skin is exposed to sunlight, increases calcium absorption.
- **Other components in food.** Both oxalic acid (in some vegetables and beans) and phytic acid (in whole grains) can reduce calcium absorption. People who eat a variety of foods don't have to worry about this. They are accounted for in the calcium recommended intakes, which take absorption into account.

Many factors can also affect how much calcium the body eliminates in urine, feces, and sweat. These may include consumption of alcohol- and caffeine-containing beverages as well as intake of other nutrients (protein, sodium, potassium, and phosphorus). In most people, these factors have little effect on calcium status.

### **What happens if I don't get enough calcium?**

Insufficient calcium intake does not produce obvious symptoms in the short term because the body maintains calcium levels in the blood by taking it from bone. Over the long term, calcium intake below recommended levels have



health consequences, such as causing low bone mass (osteopenia) and increasing the risks of osteoporosis and bone fractures.

Symptoms of serious calcium deficiency include numbness and tingling in the fingers, convulsions, and abnormal heart rhythms that can lead to death if not corrected. These symptoms occur almost always in people with serious health problems or who are undergoing certain medical treatments.

### **What are some effects of calcium on health?**

Scientists are studying calcium to understand how it affects health. Here are several examples of what this research has shown:

#### *Bone health and osteoporosis*

Bones need plenty of calcium and vitamin D throughout childhood and adolescence to reach their peak strength and calcium content by about age 30. After that, bones slowly lose calcium, but people can help reduce these losses by getting recommended amounts of calcium throughout adulthood and by having a healthy, active lifestyle that includes weight-bearing physical activity (such as walking and running).

Osteoporosis is a disease of the bones in older adults (especially women) in which the bones become porous, fragile, and more prone to fracture. Osteoporosis is a serious public health problem for more than 10 million adults over the age of 50 in the United States<sup>9</sup>. Adequate calcium and vitamin D intakes as well as regular exercise are essential to keep bones healthy throughout life.

Taking calcium and vitamin D supplements reduce the risk of breaking a bone and the risk of falling in frail, elderly adults who live in nursing homes and similar facilities. But it's not clear if the supplements help prevent bone fractures and falls in older people who live at home.

#### *Cancer*

Studies have examined whether calcium supplements or diets high in calcium might lower the risks of developing cancer of the colon or rectum or increase the risk of prostate cancer. The research to date provides no clear answers. Given that cancer develops over many years, longer term studies are needed.

#### *Cardiovascular disease*

Some studies show that getting enough calcium might decrease the risk of heart disease and stroke. Other studies find that high amounts of calcium,

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<sup>9</sup> 2.2 million **Australians** are affected by osteoporosis (163). About 11% of men and 27% of women aged 60 years or more are osteoporotic, and 42% of men and 51% of women are osteopenic

particularly from supplements, might increase the risk of heart disease. But when all the studies are considered together, scientists have concluded that as long as intake is not above the upper limit, calcium from food or supplements will not increase or decrease the risk of having a heart attack or stroke.

### *High blood pressure*

Some studies have found that getting recommended intakes of calcium can reduce the risk of developing high blood pressure (hypertension). One large study in particular found that eating a diet high in fat-free and low-fat dairy products, vegetables, and fruits lowered blood pressure.

### *Pre-eclampsia*

Pre-eclampsia is a serious medical condition in which a pregnant woman develops high blood pressure and kidney problems that cause protein to spill into the urine. It is a leading cause of sickness and death in pregnant women and their newborn babies. For women who get less than about 900 mg of calcium a day, taking calcium supplements during pregnancy (1,000 mg a day or more) reduces the risk of pre-eclampsia. But most women in the United States who become pregnant get enough calcium from their diets.

### *Kidney stones*

Most kidney stones are rich in calcium oxalate. Some studies have found that higher intake of calcium from dietary supplements are linked to a greater risk of kidney stones, especially among older adults. Calcium from foods does not appear to cause kidney stones. For most people, other factors (such as not drinking enough fluid) probably have a larger effect on the risk of kidney stones than calcium intake.

### *Weight loss*

Although several studies have shown that getting more calcium helps lower body weight or reduce weight gain over time, most studies have found that calcium—from foods or dietary supplements—has little if any effect on body weight and amount of body fat.

### **Can calcium be harmful?**

Getting too much calcium can cause constipation. It might also interfere with the body's ability to absorb iron and zinc, but this effect is not well established. In adults, too much calcium (from dietary supplements but not food) might increase the risk of kidney stones. Some studies show that people who consume high amounts of calcium might have increased risks of prostate cancer and heart disease, but more research is needed to understand these possible links.

The **upper limits for calcium** are listed below.

Life Stage	Upper Limit	Life Stage	Upper Limit
Birth to 6 m	1,000 mg	Adults 19-50 y	2,500 mg
Infants 7-12 m	1,500 mg	Adults 51+ y	2,000 mg
Children 1-8 y	2,500 mg	Pregnant & b/feeding teens	3,000 mg
Children 9-18 y	3,000 mg	Pregnant & b/feeding adults	2,500 mg

Most people do not get these amounts the upper limits from food alone; excess intakes usually come from the use of calcium supplements. Surveys show that some older women in the United States probably get amounts somewhat above the upper limit since the use of calcium supplements is common among these women.

#### **Are there any calcium interactions that I should know about?**

Calcium dietary supplements can interact or interfere with certain medicines that you take, and some medicines can lower or raise calcium levels in the body. Here are some examples:

Calcium can reduce the absorption of these drugs when taken together:

- Glucocorticoids (such as prednisone) can cause calcium depletion and eventually osteoporosis when people use them for months at a time.
- Antibiotics from the fluoroquinolone and tetracycline families
- Diuretics differ in their effects. Thiazide-type diuretics (such as Diuril® and Lozol®) reduce calcium excretion by the kidneys which in turn can **raise blood calcium levels** too high. But loop diuretics (such as Lasix® and Bumex®) increase calcium excretion and **thereby lower blood calcium levels**.
- Antacids containing aluminum or magnesium increase calcium loss in the urine.
- Mineral oil and stimulant laxatives reduce calcium absorption.
- Bisphosphonates (to treat osteoporosis)
- Levothyroxine (to treat low thyroid activity)
- Phenytoin (an anticonvulsant)
- Tiludronate disodium (to treat Paget's disease).

Always tell your doctor, pharmacist, and other healthcare providers about any dietary supplements and medicines you take. They can tell you if those dietary supplements might interact or interfere with your prescription or over-the-counter medicines, or if the medicines might interfere with how your body absorbs, uses, or breaks down nutrients.

*Based on Calcium Fact Sheet from [US National Institutes of Health: Office of Dietary Supplements](#)*

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## HOW CAN I GIVE BACK?

Doing something that helps make the world a better place, feels good too. There's always something 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. Help in the Breath of L I F E mail out or 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  
E [salhyder1@gmail.com](mailto:salhyder1@gmail.com)
2. **Spread the word** with family and friends. Tell them about L I F E, the Institute for Respiratory Health and respiratory conditions. Our business cards have L I F E contact details and a space for your name and phone number. Contact us for a bundle.
3. **Register with the Clinical Trials Unit** of the Institute for Respiratory Health to take part in the trial of a new respiratory medication.  
T 6457 3198
4. **Volunteer to be a research subject** in a medical research project described in Breath of L I F E or in your local paper
5. **Donate** to the work of the Institute for Respiratory Health. Call 6151 0815 or donate [online](#). Mention the Institute's important research into lung disease to friends and relatives who also might be interested to make a donation. Or make a bequest in your will.



## SOME USEFUL CONTACTS

Please let us know of any others you have found helpful

### Respiratory

[Flying with Oxygen](#) - L I F E's own practical guide endorsed by Prof P J Thompson, Respiratory Physician, Lung Health Clinic.



[Lung Foundation Australia](#) T 1800 654 301 (Queensland time zone)

[Pulmonary Rehabilitation](#) programs (scroll down to WA) or T 1800 654 301  
Need referral from a respiratory specialist who has admitting rights to a WA public hospital (even if you see them privately).

[Pulmonary Hypertension Network Australia](#) – a sister support group to  
L I F E E [phnaustralia@gmail.com](mailto:phnaustralia@gmail.com)

[Alpha-1 Association of Australia](#) for people with Alpha-1 Anti-Trypsin Deficiency – has an online forum, and on Twitter, Facebook, M 0410 108 104  
T 07 3103 3363 (Brisbane)

[HealthyWA](#) - lung condition information from the WA Health Department

[BetterHealth](#) – lung condition information from the Victorian Health Department

[Asthma Foundation](#) WA T 1800 278 462

[Bronchiectasis Toolbox](#) for health professionals

[Active Cycle of Breathing Technique](#) (video) helps you clear your airways of phlegm

[Asbestos Diseases Society of Australia](#) (WA) T 1800 646 690 (08) 9344 4077

[National Quit line](#) – help to quit smoking T 13 78 48

### Mental Health

[Connect Groups](#) – peak body for support groups in WA T (08) 9364 6909

[Act Belong Commit](#)- activities to promote mental health T (08) 9266 3788

[Beyond Blue](#) mental health support service T 1300 22 4636

[Australian Men's Shed Association](#) – find a men's shed near you T 1300 550 009

[Lifeline](#) 24 hour personal crisis support and suicide prevention association T 13 11 14

## General Health

[Health Direct](#) look up reliable health information or speak to a registered nurse T 1800 022 222

[Better Health Channel](#) Victorian Government's health information website

[Cancer Council WA](#) T 13 11 20

[Health Report](#) with Norman Swan ABC Radio National (810 AM), listen to past programs on your computer or smartphone

[ABC Health Online](#) find reliable health news and information

[Stay On Your Feet](#) information and resources to prevent falls and keep Western Australians active, because falls are preventable no matter what age T 6166 7688 or Country callers 1300 30 35 40. Level 2, 297 Vincent Street, Leederville, WA

[Independent Living Centre](#) (08) 9382 0600 Country callers 1300 885 886 choose and access equipment, technology and services for independence and wellbeing of people with disability and older people throughout WA. Centres at Nedlands, Westminster and Busselton.

## Seniors

[Council on the Aging](#) (COTA) voice of older Australians T (08) 9472 0104

[MyAgedCare](#) aged care services you may be eligible for. Speak to your GP

[National Seniors](#) voice of older Australians T 1300 76 50 50

[Seniors Services](#) guide database of services and activities for older Australians

[Seniors Recreation Council](#) WA T (08) 9492 9773. Runs Have A Go Day each year.

[The Move Into Aged Care](#) tools and resources supporting you and your family. Advocare is the WA contact.

[Advocare](#) advocating for Western Australians receiving aged care services at home or in an aged care facility T 9479 7566 Country callers 1800 655 566

[WA Elder Abuse Helpline](#) (operated by Advocare) 1300 724 679

[CentreLink](#) 13 24 68

[HaveAGoNews](#) read seniors' news online

[Computer basics guide](#) for seniors (free)

### **Health Consumer and Carer Rights**

[Carers WA](#) supporting friends and family who care for others T 1300 227 377

[Health Consumers Council](#) an independent voice advocating for patients in WA T (08) 9221 3422 and 1800 620 780

[Patient Opinion Australia](#) share your experience as a patient and ensure the message gets passed on to the right people T 1300 662 996

### **Other**

[TED Talks](#) watch videos of great speakers on a topic that interests you. Free

[Do Not Call Register](#) – stop unwanted marketing calls to your home phone or mobile, renew every 2 years, market research, charitable organisations and political organisations excepted T 1300 792 958

[The Australian Bereavement Register](#) stop unwanted mail to a family member who has passed away T 1300 887 914

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## **INSTITUTE FOR RESPIRATORY HEALTH**

The [Institute for Respiratory Health](#) 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 and subscriptions fall due each 1 July.

[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 extremely 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](mailto:life@resphealth.uwa.edu.au) 7 Ruislip St, W. Leederville, WA 6007. [Read it online](#).

### L I F E Membership

Join L I F E by becoming a community member of the Institute. Come to a meeting or contact Sarah at the Institute T **6151 0815** or E [life@resphealth.uwa.edu.au](mailto: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 be sure to tell us if you change address.

**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!**

### Contacts

**Phone** Coordinator **Jenni Ibrahim** T 9382 4678 M 0413 499 701

Deputy Coordinator **Sal Hyder** T 0409 336 639 [salhyder1@gmail.com](mailto:salhyder1@gmail.com)

**Postal** L I F E c/- Institute for Respiratory Health, Harry Perkins Institute for Medical Research, 6 Verdun Street, Nedlands WA 6009 **(NEW POSTAL ADDRESS)**

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



### Meetings

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

Level 6 Meeting Room 612A, Perkins Institute Building, Queen Elizabeth II Medical Campus, Nedlands. Directions [here](#). Wheelchair and gopher accessible. Light refreshments. If you can, please bring a plate to share. Buggy pick-up from the car park or bus stop call M 0481 438 731 (Mon-Fri 9am-4pm) or ask at Gairdner Voluntary Group Enquiries Desk just inside the main entrance in E block.

### COMING UP

<b>Wed 13 Nov</b>	Have A Go Day at Burswood Park	
<b>Wed 4 Dec</b>	L I F E Christmas Lunch -- <b>RSVP</b>	Level 2, Perkins Building. More inside this issue.
<b>Wed 22 Jan 2020</b>	2020 Planning Meeting	All welcome. Ideas for activities, topics, speakers in 2020
<b>Wed 5 Feb</b>	Social meeting	Catch up over a cuppa.
<b>Wed 4 Mar</b>	Fitting exercise into my life	Share your tips in this group discussion.
<b>Mid Mar</b>	Research Talks #2 -	Discussion with researchers. Details to be advised
<b>Wed 1 Apr</b>	April Fool's Day Meeting	Please bring a funny story, a joke to share.

