

02

RESPIRATORY MAGAZINE FOR
HEALTH PROFESSIONALS

asthma

NEW ZEALAND

PREDICTING YOUR NEXT ASTHMA ATTACK
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RETRAINING YOUR BREATHING
Page 9

IS YOUR HOME AS HEALTHY AS YOU THINK IT IS ?

The environment within which we live has a huge impact on our health and the way New Zealand builds homes leave a lot of room for improvement.

Follow Asthma New Zealand's journey to improve the health of New Zealand's Homes!

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TALKING TRIGGERS
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Winter Edition 2023



start strong

Do you have COPD (often called chronic bronchitis or emphysema) and still feel breathless?

Ask your doctor if ANORO is right for you.



ANORO ELLIPTA
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Anoro Ellipta (umeclidinium [as bromide] 62.5 mcg, vilanterol [as trifenate] 25 mcg inhaler) is a Prescription Medicine. *Anoro Ellipta* is used for long-term regular treatment to relieve symptoms in adults with Chronic Obstructive Pulmonary Disease (COPD). **Anoro Ellipta** is a fully funded medicine if you are diagnosed with COPD – restrictions apply. Use strictly as directed. Do not take Anoro Ellipta to treat asthma or to relieve acute symptoms. Tell your doctor: if you have severe milk-protein allergy, or you have demonstrated hypersensitivity to either umeclidinium, vilanterol trifenate or any of the excipients in *Anoro Ellipta*; or if you are taking any other medicines including any that you get without a prescription from your pharmacy, supermarket or health food shop; if you have asthma; if you have heart problems or high blood pressure; if you have an enlarged prostate, difficulty passing urine, or a blockage in your bladder; narrow-angle glaucoma; or if you are pregnant or plan to become pregnant or are breast-feeding. Side Effects: Sore throat with or without a runny nose, cough, painful and frequent urination, infection of the upper airways, pain of the sinuses, faster heartbeat, feeling of pressure or pain in the cheeks and forehead. Anoro Ellipta has risks and benefits. If symptoms continue or you have side effects, see your doctor, pharmacist or health care professional. For more information see the *Anoro Ellipta* Consumer Medicine Information at www.medsafe.govt.nz. Ask your doctor if Anoro Ellipta is right for you. Normal doctor's charges apply.

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CEO NOTE

The Asthma and Respiratory Foundation NZ published powerful findings recently, if you haven't read it I would encourage you to.

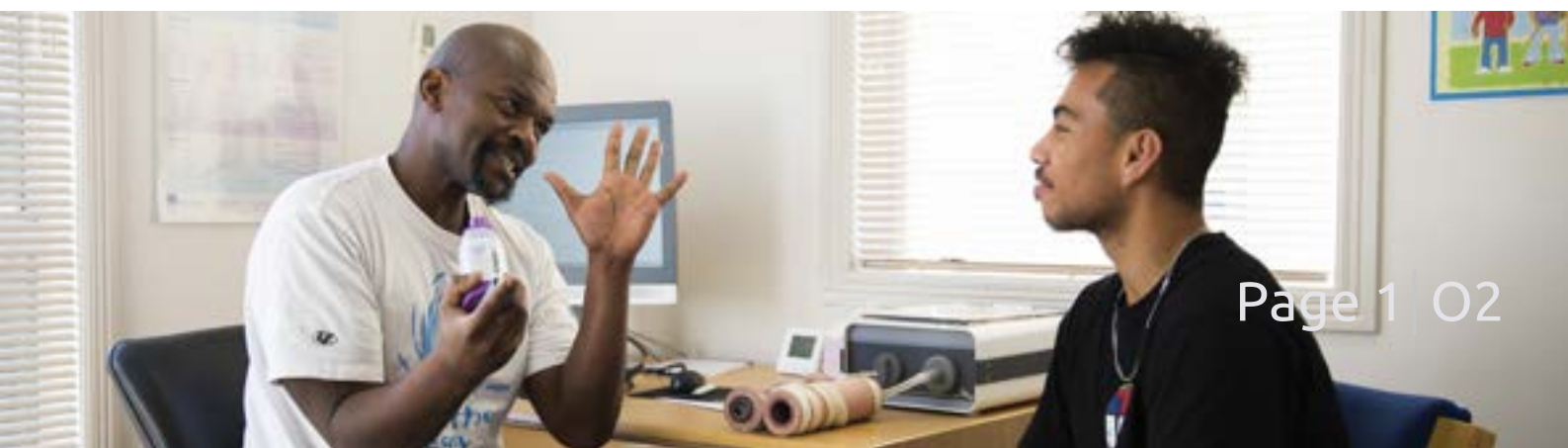
[Asthma In New Zealand - 2023 Survey Findings](#)

It highlights the many issues we are facing in NZ when it comes to achieving good asthma self-management and makes it obvious as to why NZ has one of the highest rates of asthma death in the world.

The ARFNZ survey found that many respondents are not being asked basic management questions during asthma check-ups. Only half were asked about their asthma symptoms and how these were impacting their daily lives and only 22% had their inhaler technique checked. 73% had not had their inhaler technique checked at their last appointment to discuss their asthma.



Katheren Leitner
Chief Executive
Asthma New Zealand



For Asthma NZ reading findings like this is disappointing. Asthma NZ are frustrated at the amount of time we spend “reminding” health professionals about our service.

Furthermore, so are patients when they come across us by chance rather than an effective health network. Now before you think I am taking another swing at a health system exhausted and doing the best with very little, I am not. Asthma NZ want to work with you to find ways to automate this process. It is one of the reasons Asthma NZ have invested so heavily into a new patient management portal.



I know over the years confusion has existed around the difference between the two organisations. This research does a brilliant job of clarifying this. The Asthma and Respiratory Foundation do incredible work publishing research, including the Asthma and Respiratory Guidelines, which should serve as the basis for how asthma is managed by Health Professionals. The finding of this research illustrates why the work Asthma NZ does is so critical for patients. Ensuring patients receive good education, training and support enables them to understand what they need to do to live well with asthma. Asthma NZ ensure that patients know how to use their inhalers correctly, everyone of our patients understands why a spacer is as important as the medication itself and all know that it is reasonable to expect to live well with asthma

The Asthma In New Zealand - 2023 Survey findings can be found at:

www.asthmafoundation.org.nz/assets/documents/ARFNZ-asthma-in-NZ-survey-2023-Final.pdf



Katheren Leitner, Asthma New Zealand CE, filming the Healthy Homes Series

SIX PART SERIES - AVAILABLE TO WATCH NOW

Asthma New Zealand Nurse Educators spend a lot of time in people's homes.

As New Zealand's largest Asthma education organisation we have seen inside thousands of homes and what we know to be true

is that those who live in cold, damp, mouldy homes must work much harder at managing their asthma than those that don't.

Shocked by the knowledge that New Zealand is recognised by the



World Health Organisation as having some of the unhealthiest homes in the world, Asthma NZ had to understand why!

On World Asthma Day we were excited to release the very first episode of the 6-episode series. If nothing else Asthma New Zealand want Kiwi's to understand that cold, damp, mouldy housing is not normal.

With all 6 episodes now available to watch, the way we build needs to change, using a building code 30 years behind most other countries makes maintaining good health so much more challenging.

To watch the Healthy Homes Series go to:
www.asthma.org.nz/pages/healthy-homes

Revolutionizing Asthma Management through Technological Advancements

If you live with asthma you'll understand the constant anxiety of an unpredictable asthma attack, which can disrupt daily life and lead to significant health setbacks.

Dr. Amy Chan, Asthma NZ Board Member and a Senior Research Fellow at The University of Auckland and Auckland Medical Research Foundation is at the forefront of a



Dr. Amy Chan

groundbreaking initiative that uses technology such as smart watches and smart peak flow meters to predict asthma attacks, identifies risk factors for attacks and enables you to be well prepared.

1. Unveiling the Hidden Precursors of Asthma Attacks

Although an asthma attack may feel like it comes on suddenly, what we now know is that they are preceded by numerous subtle changes within the body that often go unnoticed.

These small shifts in lung function and airway inflammation could eventually turn into a full-blown asthma attack. For individuals living with asthma, the true impact of the condition is often realized only during these distressing episodes.



2. The Groundbreaking Asthma Attack Prediction Study.

Dr. Amy Chan has embarked on an ambitious five-year study aimed at harnessing technology to predict asthma attacks. This groundbreaking research project represents the largest asthma prediction study worldwide, involving over 300 volunteers who will be monitored to gather essential data regarding the physiological changes preceding an asthma attack.



Dr. Chan aims to develop a real-time asthma attack risk monitoring system, similar to a "crystal ball," that can empower patients to get insights into their risk an impending asthma attack. . By collecting and analyzing various data, such as respiratory parameters, heart rate, medication usage, environmental factors, and symptoms, a comprehensive understanding of the body's pre- and post-attack condition can be established. This approach will allow the creation of precise predictive models, providing individuals with timely alerts and intervention strategies.

Dr. Chan says: "For so many years, decades, we have had our health being managed by others, whether that's by doctors, nurses or the hospital, we're often told what to do about our

Asthma, without really understanding what's happening to our bodies. From this study, technology will allow us to get a window into how we are feeling and how we can take control and be empowered to look after our own health and our own asthma !"

3. Transforming Asthma Management and Improving Quality of Life

The ability to predict asthma attacks would revolutionize asthma management and significantly improve the lives of those living with the condition. The benefits of this technological advancement are far-reaching:

a. Reduced Sick Days and Enhanced Productivity: By empowering individuals to anticipate an approaching asthma attack, they can take preventive measures, potentially avoiding the need for sick leave or days off school. This, in turn, reduces the number of lost work hours due to unexpected asthma attacks and enhances overall productivity.

Revolutionizing Asthma Management through Technological Advancements

b. Improved Sleep Quality: Asthma attacks often disrupt sleep patterns, leaving individuals fatigued and less productive during the day. Predictive technology could alert individuals to impending attacks during the night, allowing for prompt intervention and uninterrupted sleep. Better sleep quality translates into improved overall well-being and higher levels of productivity.



c. Personalized Treatment and Self-Management: Predictive models can equip individuals with personalized insights into their asthma triggers and warning signs, enabling them to make informed decisions regarding their treatment plans and lifestyle choices. Patients can proactively adjust their medication, modify their environment, or seek medical advice, all with the aim of minimizing the frequency and severity of asthma attacks.

Dr. Amy Chan's pioneering research represents a significant step forward in the quest to predict asthma attacks. By leveraging cutting-edge technology, her study aims to empower individuals living with asthma to anticipate and mitigate the impact of these attacks on their daily lives. The outcomes of this research have the potential to transform asthma management, reduce sick days, and improve productivity.

Find out more: www.asthma.org.nz/pages/predicting-asthma-attacks

How we can help your patients:

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- Provide Spacers
- Demonstrate devices and peak flows
- Explain Triggers
- Individual Management Plans



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NEW ZEALAND

BREATHING RETRAINED

BREATHING YOURSELF BETTER

by Nicky McLeod

Breathing Educator and Associate Buteyko Practitioner.

Breathing has a powerful and immediate effect on your body and how it works, influencing blood flow to your organs, including your brain and gut, the diameter of your airways, the production of mucus, the state of your nervous and immune systems, the quality of your sleep, the health of your mouth and even your facial growth. This explains why learning how to improve your breathing may be one of the most effective natural health interventions available.



Nicky McLeod at her Breathing Clinic
in Nelson

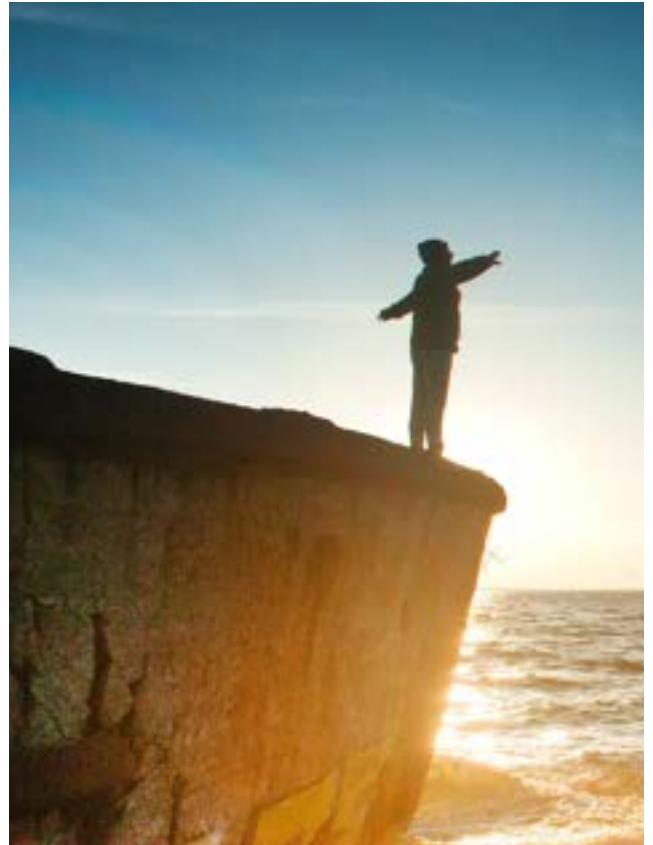


Breathing retraining is particularly helpful for those with asthma, hay fever, COPD, nasal congestion, chronic cough, snoring, sleep apnoea, anxiety, panic attacks, impaired sporting performance, and trouble with public speaking. A dysfunctional baseline breathing pattern is very common in all these conditions.



Through her training, Nicky learned many surprising things about breathing, including:

- The more you breathe, the less oxygen you get.
- Breathing too much can make you sick, just like eating too much can.
- The belief that deep breathing is good for you is a modern health disaster.
- Everything that has ever happened to you is reflected in how you breathe.
- There are three gases of respiration – carbon dioxide, nitric oxide, and oxygen, and they must be in balance.
- When carbon dioxide becomes too low in your lungs, it causes spasm in the smooth muscle around your airways.
- Poor breathing habits can cause excessive mucus production, inflammation, and smooth muscle spasm in your airways leading to wheezing, coughing, and shortness of breath.
- It's possible to see your breathing pattern on-screen using capnography and learn how it compares to normal.



Nicky's work involves looking at all aspects of a person's breathing pattern, including how fast they breathe, whether they breathe through their mouth or nose, the rhythmicity and regularity of their breathing, the amount of air they breathe, and which muscles they use to breathe.

To find out more about Nicky's work, go to www.breathingclinic.co.nz

NUTRITION AND ASTHMA

by Zoe Hunt

Asthma nutrition is extremely personal. Foods that may improve one person's asthma, may result in worsening of symptoms for another. As asthma is often associated with allergies or sensitivities, it is best to seek professional advice from a qualified practitioner to develop a nutrition plan that is specific for you and your symptoms.



Here are some dietary tips that help to improve respiratory health.

Increase Omega 3 intake

As asthma is an inflammatory condition, we need to include foods in our diet that reduce inflammation in the body such as Omega 3s. The two Omega 3s that are important in asthma are EPA and DHA. Good sources of omega 3's include oily fish like sardines, salmon, mackerel and kahawai. The smaller the fish, the better! This is because the lower down the food chain the fish are, the lower they are in heavy metals such as mercury. This is a particularly important consideration for our children as they have less capacity than adults to detoxify heavy metals. Shellfish such as mussels and oysters are also good sources of Omega 3s.



Plant based sources of Omega 3's such as nuts and seeds don't contain EPA and DHA. This means that vegetarians and vegans can become deficient in omega 3s quite easily and often require supplementation.



Eat the Rainbow

A diet that incorporates a colourful range of fruits and vegetables is beneficial for asthma on so many levels.

Bright, different coloured foods contain polyphenols. Polyphenols are a group of plant chemicals that have pre-biotic like effects on the gut. Polyphenols all have some type of antioxidant activity but the arguably more exciting role is their ability to exert a beneficial change in the microbiota composition, by promoting the growth of the good bacterial species.

The breakdown of these large polyphenols by bacteria in the gut leads to the production of short-chain fatty acids such as butyrate which has a big role in reducing inflammation in the body. As well as increasing anti-inflammatory cytokines, such as IL-10, butyrate also increases T-regulatory cells and serum IgA which is an important part of our immune defence.

Anti-microbial peptides (like a natural anti-biotic), with selective antimicrobial effects against pathogenic bacteria, are also produced which again helps increase our immune defences – especially if colds and viral illnesses are an asthma trigger.

Zoe Hunt of Sage & Well is a qualified and knowledgeable registered clinical nutritionist, registered pharmacist, and registered naturopathic practitioner.

Find out more at: www.sageandwell.co.nz



Fact: Children who regularly eat fish have a lower risk of developing asthma, and may experience fewer attacks.

Sage & Well

ASTHMA TRIGGERS



Hi, my name is Grace and I am a Nurse Educator at Asthma NZ.

An important part of my job is finding out my patient's asthma triggers and coming up with strategies to try manage them.

In the community, Asthma triggers is an important part of Asthma management. Here are some of the common questions and answers during the consult.

What is a Trigger?

An asthma trigger is anything that can set off your asthma symptoms. Triggers can make your airways more inflamed and can cause asthma attacks. A few things happen when you come into contact with a trigger:

1. Muscles around the airways tighten.
2. The lining of the airways become swollen and inflamed.
3. Sticky mucus can build up in the airways.

This is why we see symptoms such as cough, shortness or breath, chest tightness and wheeze.

Why are triggers important?

Understanding your triggers is important so you can try avoid or reduce contact with them, making your asthma easier to manage.



NURSE GRACE FUSHA
talks Asthma Triggers and how to manage them!



Atopic vs. Non Atopic Triggers

Generally, we can split triggers into two groups. Atopic (allergic) and non-atopic (non-allergic).

Atopic (allergic) triggers are very common and lots of people with asthma will be able to relate to these! Some examples when outside would be, pollens and grasses. When inside, some allergens may be dust mites, animals, cockroaches, mould and food.

Non-atopic (non-allergic) triggers are generally not related to an allergy trigger and often develop later in life. Some examples include medications, changes in temperature, viral infections, fumes and smoke, exercise and emotions.

If it is not obvious what my triggers are, how can I figure this out?

Great question! We would recommend a visit with one of our Asthma Nurses so you can have a chat about what your experiencing and they may be able to help you figure it out based on the history you recall.

Alternatively, we often recommend using a symptom diary, to see if there is any pattern on when your asthma is particularly worse or better. Also, a skin prick test may be helpful to confirm any suspected allergies.



DISCOVERY OFFERS CLUES

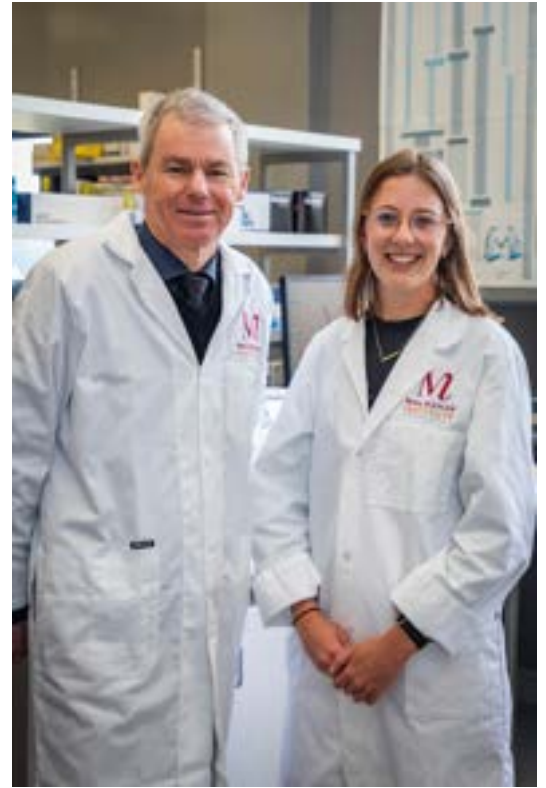
on what causes immune cells to drive allergic and inflammatory diseases such as asthma.



A study by the Le Gros Laboratory at the Malaghan Institute has uncovered genetic clues that help explain how certain immune cells can cause allergic and inflammatory diseases such as asthma.

The paper, published in *Immunology and Cell Biology*, brings us one step closer to preventing the cellular mechanisms that drive the development of allergic and inflammatory diseases by targeting the specific immune cells that trigger them.

Allergies and autoimmune conditions are caused by immune cells mistakenly labelling harmless materials, such as food, pet dander or even healthy tissue, as dangerous or life-threatening. Responding to the perceived attack as real, the resulting immune response can range from a light rash to anaphylactic shock.

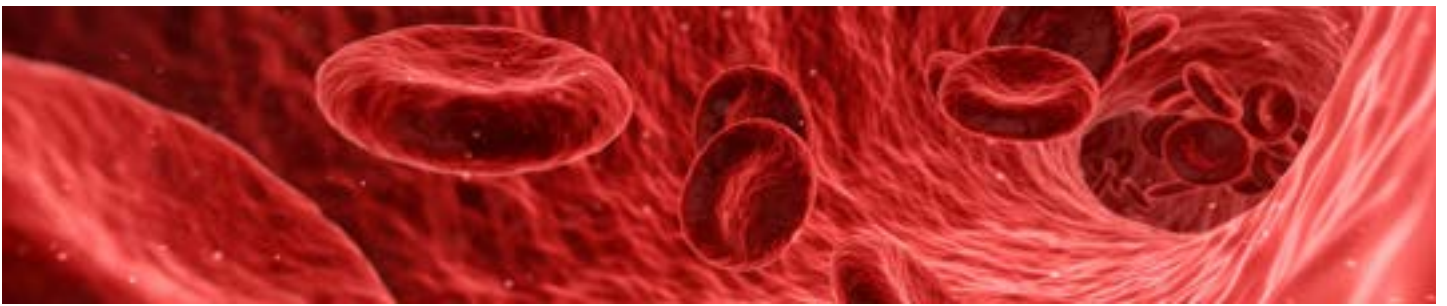


Professor Graham Le Gros and Dr Jodie Chandler of the Malaghan Institute of Medicare Research

What causes specific immune cells to trigger allergic and inflammatory responses like asthma, and whether we can design therapies to prevent this from happening, is a key area research for scientists like Dr Jodie Chandler who completed her PhD in the Le Gros lab.

"There is still a lot we don't understand about the genetic and physiological changes in immune cells that nudge the immune system towards an allergic response, which is why basic or fundamental research on the immune system is so important," Dr Chandler says.

Different immune cells play different roles in the many thousands of responses the immune system performs every day. In this study, the Le Gros lab focused on one key type of immune cell they believe plays a leading role in driving pro-allergic responses.



Th2 cells are strongly linked to the development of allergic diseases such as asthma or eczema. They are triggered when exposed to specific allergens and initiate dangerous inflammation in the body. “We found that when we delete Tfh cells in animal models we still see Th2 cells present in the skin, driving allergic disease. This indicated that no, Tfh cells do not further develop into Th2 cells – at least in the skin. – implying they’re originating from somewhere else in the body,” Dr Chandler says.

“While this isn’t a smoking gun from a disease standpoint, our findings are important as the more we know about Th2 development, and what drives their development, the more potential pathways we have to disrupt the mechanisms that promote allergic disease.”



Find out more at: www.allergy.org.nz

An advertisement for Mite Guard bedding covers. The top left features the slogan 'Breathe Easier' in a large, blue, sans-serif font. The top right features the Mite Guard logo, which consists of a shield-shaped emblem with a mite inside, followed by the text 'Mite Guard' in a bold, blue, sans-serif font, and 'Dust Mite Protection' in a smaller, black, sans-serif font below it. The central image shows a smiling family of four (a mother, a father, and two children) lying on a bed. The bottom of the advertisement contains the text 'Bedding Covers for Proven Relief from Dust Mite Allergen' in a blue, sans-serif font, followed by 'Available at asthma.org.nz' and 'Visit MiteGuard.co.nz' in a blue, sans-serif font. In the bottom right corner, there is a small black logo with the text 'NEW ZEALAND MADE' inside a white shape.



HOUSE DUST MITE ALLERGY, ASTHMA & WINTER TIME

by Kathryn Ryan - Business Owner of Miteguard

In Winter, we often hear about an increase in colds, sniffles, coughs, and respiratory issues. Damp conditions – and there has been a lot of those recently, can increase the presence of moulds and mildews. Pets stay inside for longer – adding their love, along with an extra sprinkling of dander, dust mites and allergen particles. House dust mites (HDM) love warm, humid environments and places like our cosy, warm beds provide an ideal Winter environment for them.

Scientific studies tell us that the prevalence of allergies and asthma has been rising steadily for years and has major public health and global economic impact. Our immune system's response to environmental triggers such as pollens, house dust mites and viral infections plays an important role in allergic asthma, and sensitization to HDM is one of the most common causes of respiratory allergy in the world. House dust mite allergens can be a major contributor to allergic diseases such as asthma and atopic dermatitis. Avoidance of these allergens can help decrease reactions and reliance on medications.

Practical solutions

Allergy research is complex and ongoing; there is no “magic bullet” to solve these uncomfortable and frustrating conditions. Research suggests that a mixed approach can be useful for avoiding allergens by using medicines in conjunction with other simple, practical tools such as regular vacuuming of carpets. Bedding encasements such as dust mite-protective mattress and pillow covers are just one such tool to help avoid HDM by minimizing chronic nightly allergen exposure.

So, what is the house dust mite (HDM)?

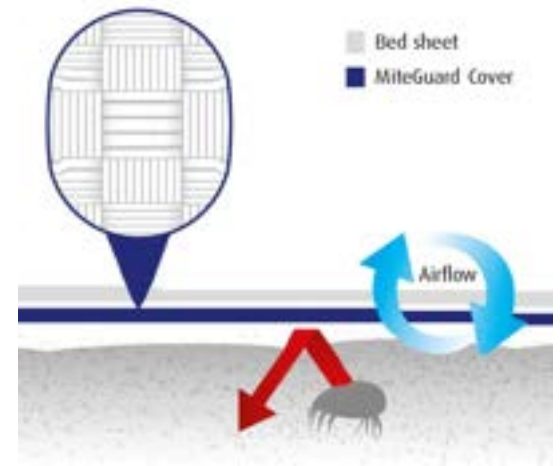
House dust mites are tiny arachnids (similar to spiders) that live in mattresses, bedding, carpets and general house dust. They feed on exfoliated skin cells and excrete proteins with enzymatic properties into their feces. These proteins in the fecaldust are triggers for chronic allergic disease and are the main source of House Dust Mite allergy. The fecal dust is tiny and can travel into the lungs carrying the active allergen. The inhalation of small amounts of allergens on a regular basis all night every night can lead to a slow development of disease or aggravated existing complaints. HDM are the most common cause of year-round allergy symptoms, and have been found on the skin of up to 35% of children with atopic dermatitis, as well as on their clothing and bedding.

Dust Mite Allergy Bedding Covers

Bedding covers are a simple tool in the medical kit. MiteGuard® NZ provides bedding encasements as a tool that allergy sufferers and their loved ones can use to reduce their exposure to dust mite allergen and help improve their health. They are not a cure, but they do provide a non-invasive, environmental control that anyone can use. Covering the mattress and bedding aims to prevent the inhalation of allergens at night, reducing chronic exposure to allergen and therefore reducing inflammatory response. If you reduce your inflammatory response, and improve your quality of sleep or breathing, you also improve your family's health.

How The Covers Work - The Technology

Over the years, new technologies have led to the development of a variety of scientifically tested fabrics that limit dust mite allergen particle transfer. Research has included fabric coating, construction and measures such as pore size, permeability, breathability, precision weaving, and thread count. A successful fabric needs a certain combination of all of these factors - high thread count on its own, for example, does not guarantee that the weave is even, or the pore size is less than 10 microns (the minimum size that will block HDM allergen). Standard cotton bed sheets are not a complete barrier to HDM.



What do we do?

MiteGuard® NZ is a home-grown brand of allergen barrier bedding. MiteGuard®NZ uses a barrier fabric that has been:

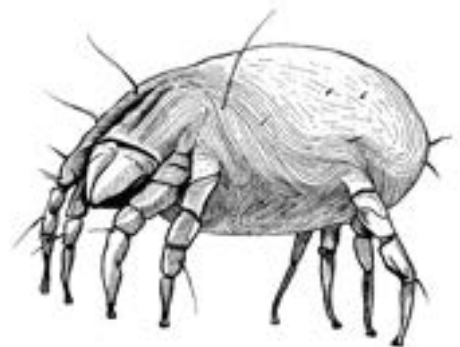
- Tested in a laboratory environment
- Precision woven and tested for a pore size of 3.5 micron
- Laboratory tested for 100 washes. Encasements only need to be washed once a season, (every 3 months) giving the products a long life.

Cotton was chosen rather than a coated fabric because cotton is breathable, which helps the sleeper regulate body temperature, moisture, and heat on the skin, promoting a healthier sleep.

Cotton bedding encasements should be washed every three months. Cotton is easy-care so can be washed and dried in a range of temperatures, and in sunlight or a tumbler drier (temperatures over 60° or exposure to UV sun for 3 hours kills dust mites and eggs).

MiteGuard® NZ manufactures its bedding products using research, sewing techniques and industry expertise to minimize the risk of any allergen transmission. Techniques include quality components, specifically designed zipper closures, security flaps, and a range of seam designs. Full encasement is used on most products.

Because MiteGuard NZ want to support Kiwis, we manufacture in Aotearoa. This allows us to offer a 5-year manufacturer guarantee - and if ever needed - a repair service. Natural fabric, local manufacture and ability to repair, also contribute to sustainability. We hope that our products help others to better manage their health and sleep.



Miteguard available at asthma.org.nz

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¹ Breo Ellipta Consumer Medical Information, GSK New Zealand, available at www.medsafe.govt.nz. Accessed 28/02/23

Breo Ellipta (fluticasone furoate/vilanterol inhalation) is a Prescription Medicine. Breo Ellipta is used for the regular treatment of asthma (12 years of age and older) and for adults with Chronic Obstructive Pulmonary Disease (COPD). Breo Ellipta 100/25mcg is a fully funded medicine; Breo Ellipta 200/25mcg is a private purchase medicine (dose indicated in asthma only). Use strictly as directed. Breo Ellipta is not for relief of acute symptoms; a separate reliever inhaler may be required. Always carry your reliever inhaler. Do not discontinue Breo Ellipta abruptly. This medicine has risks and benefits. Tell your doctor: if you are taking any other medicines or herbal remedies, you have liver disease, heart problems, high blood pressure, pulmonary tuberculosis (TB), infection of the lungs (pneumonia) or weak bones (osteoporosis). Side Effects: Headache, common cold, oral thrush, infection of the nose sinuses or throat, flu (influenza), pain and irritation at the back of the mouth and throat, inflammation of the sinuses, pneumonia (in patients with COPD) and weakening of the bones, leading to fractures. If symptoms continue or you have side effects, see your doctor, pharmacist or health care professional. For more information see Breo Ellipta Consumer Medicine Information at www.medsafe.govt.nz. Normal doctor's charges apply. Ask your doctor if Breo Ellipta is right for you.

The Asthma Control Test is a modified US version for use in NZ. This does not replace a full assessment from your Doctor. Asthma Control Test is a trade mark of QualityMetric Incorporated. Asthma Control Test is distributed by GlaxoSmithKline NZ Limited, Auckland. Trademarks are property of their respective owners. ©2023 GSK group companies or its licensor. Breo Ellipta was developed in collaboration with Inovio Inc. Marketed by GlaxoSmithKline NZ Limited, Auckland. Adverse events involving GlaxoSmithKline products should be reported to GSK Medical Information on 0800 808 500. Date of Approval: 04/2023. This material expires: 04/2025. TAPS NP19219-PM-NZ-FFV-ADVT-220005



Empowering Primary School Children to take control of their Lung Health

Asthma New Zealand has developed an innovative digital learning platform aimed at providing crucial lung health education to primary school children. This online-based platform consists of four interactive sections, covering Lung Health, Smoking, Allergies and Triggers, and Understanding Asthma. It can be used by teachers or nurses to facilitate group sessions and completed individually or as homework

The platform incorporates captivating videos and animations at the beginning of each section, capturing children's attention and setting the stage for the learning experience. This interactive approach ensures active engagement and enhances the overall learning process.

After each video, the platform presents a quiz to test comprehension and a selection of mini-games to assess retained information. This comprehensive approach reinforces key concepts and makes learning enjoyable. By incorporating varied assessment methods, the platform ensures a thorough understanding of the topics covered.



Actual Screen Shots



Actual Screen Shots



To motivate children, the platform awards points based on performance, fostering a sense of achievement. Players are encouraged to share their results with teachers or parents, facilitating ongoing communication and collaboration. This feedback loop enables educators and caregivers to provide guidance and support based on individual progress.



A noteworthy feature of this platform is its suitability for independent learning. Designed for primary school children, it offers a user-friendly interface that allows them to navigate confidently at their own pace. This promotes autonomy and self-directed learning while reinforcing knowledge outside the classroom.



The platform is flexible and adaptable to different learning environments. Teachers and nurses can utilize it for group sessions, encouraging active participation and discussion. Afterward, children can complete activities individually or as homework, reinforcing their learning and personalizing their engagement.

Asthma New Zealand's digital learning platform revolutionizes primary school children's lung health education. Through its engaging format, comprehensive learning and assessment components, and collaborative features, it empowers children to take control of their health and make informed decisions.



Offering independent learning and versatility in application, this platform equips young learners with the necessary knowledge and tools to manage their lung health effectively. Asthma New Zealand's commitment to empowering children ensures a healthier future generation.

Play2learn with O2Max at: www.asthma.org.nz/pages/o2-max

Asthma Medication Update

by Ann Wheat RN, BN

Asthma in New Zealand affects 1 in 8 adults and 1 in 8 children. The latest statistics available state that 98 people die from Asthma each year, which is almost 2 people each week. Maori and Pacifica have more hospital admissions for uncontrolled asthma than other ethnic groups. In 2021/22, it is reported over 570,000 people take medication for asthma and the cost to the country is approximately \$1.182 billion dollars a year in both direct and indirect costs.



NURSE ANN WHEAT

*updates you on the latest in
Asthma Medication*

Asthma management is mainly based on the use of Inhaled Corticosteroids (ICS) and reliever medications, both short and long-acting. Since the introduction of the 2020 New Zealand Asthma Guidelines

recommending the use of Symbicort AIR Therapy as the main-stay of asthma management for people over the age of 12 years or alternatively the traditional algorithm which is ICS alone or ICS/LABA (long-acting beta agonist) therapy with the use of SABA (short acting beta agonist), there has not been any major changes in the treatment of asthma.

Well controlled asthma should be the goal for all asthma patients. This means no or only 1 night a week of nighttime waking, the ability to participate in normal activities, little or no use of reliever therapy, little or no time off work or school, no hospital or emergency visits and no use of Prednisone/Redipred for flare ups of asthma.

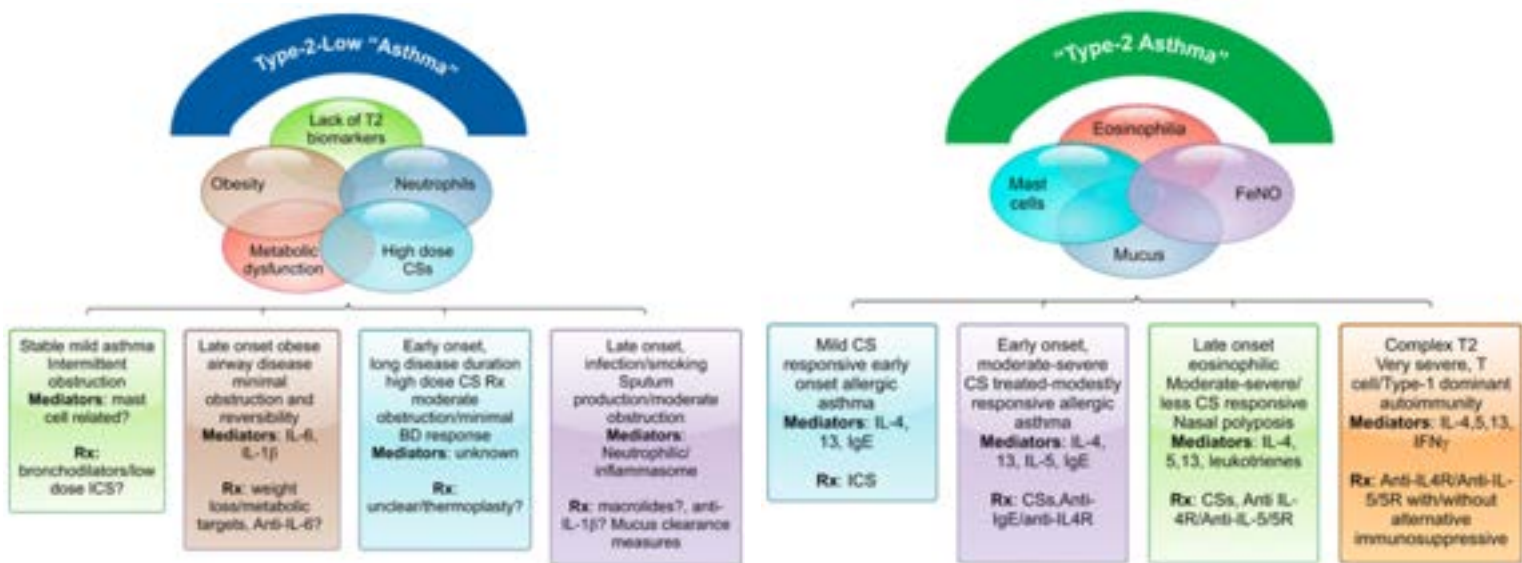


Their Asthma Control Test (ACT) score should be over 20, which indicates well controlled asthma. If a patient is still having all the above despite being on regular maintenance therapy, then their asthma is not well controlled, and their ACT score will be below 15.

They will be using frequent reliever therapy. Overuse of reliever therapy (Salbutamol) is now associated with more frequent exacerbations and life-threatening asthma requiring hospital admission. They will be requiring frequent courses of oral steroids. They will have more than one or two hospital admission and or/emergency visits to urgent care clinic. All these indicate more severe forms of asthma. In fact, it is being recognized that asthma may have many forms called Phenotypes.

So how is this more severe asthma treated?

As more and more is becoming known about asthma, it is important to decide which type of asthma it is. Is it Th2 high or Th2 low. Th2 high is normally associated with Eosinophils and IgE, while Th2 low is more Neutrophils.





Asthma Medication Update

by Ann Wheat RN, BN

To try to define which one it is, certain tests can be carried out:

- Full Blood Count – looking for Eosinophils – mainly over 0.5×10^9 cells/L
- IgE level - ≥ 30 IU/mL
- NIOX testing for exhaled Nitric Oxid
- Spirometry
- Asthma Control Test
- Skin Prick Test for allergens
- Peak flow measurement
- Monitoring of inhaler techniques with spacers if using – ensuring correct technique
- Assessment of compliance to current regimen of medication.

Once a diagnosis is made, it is essential that the patient is referred to specialist care for assessment and possible use of Biologics (Monoclonal Antibodies).

These are the latest treatments available in New Zealand. They are all given via subcutaneous injections. There are three biologics funded and they are:

1. Omalizumab (Xolair)

Is indicated for the reduction of asthma exacerbations and control of asthma symptoms when given as add-on therapy for adult and adolescent patients, 6 years and older, with severe persistent allergic asthma who have IgE ≥ 30 IU/mL, a positive skin test or in vitro reactivity to a perennial aeroallergen and whose symptoms are inadequately controlled with inhaled corticosteroids.^{2,3} It is given by SC injection every 2 – 4 weeks.



2. Mepolizumab (Nucala)

Used to treat severe eosinophilic asthma or to treat eosinophilic granulomatosis with polyangiitis (EGPA).² It is used for asthma in adolescents and adults over the age of 12 years with uncontrolled asthma, having at least 4 exacerbations in the last 12 months and are on high doses of corticosteroids both inhaled and oral and still requiring frequent use of reliever therapy as an add on medication. In New Zealand the Eosinophil count needs to be over 0.5×10^9 cells/L in the last 12 months. An ACT score of less than 10 is also one of the qualifications for Nucala. It is given by SC injection every 4 weeks.^{2,3}

3. Benralizumab (Fasenra)

Used to treat severe eosinophilic asthma. It is used for asthma in adolescents and adults over the age of 12 years with uncontrolled asthma, having at least 4 exacerbations in the last 12 months and are on high doses of corticosteroids both inhaled and oral and still requiring frequent use of reliever therapy as an add on medication. In New Zealand the Eosinophil count needs to be over 0.5×10^9 cells/L in the last 12 months. An ACT score of less than 10 is also one of the qualifications for Nucala. It is given by SC injection every 4 weeks for three doses then every 8 weeks.

Over the last couple of years, while there has been no significant way asthma has been managed, pharmacologically, biologics have become more freely available in New Zealand for the treatment of severe asthma. It is also becoming apparent that there are different phenotypes of asthma which means that patients can be treated in a much more personalized way. This is an evolving field – so watch this space!

1: Ray et al (2020). Are we meeting the promise of Endotypes and Precision Medicine in Asthma? American Journal of Physiology 100: 983 – 1017

2: Medsafe: Retrieved on 19/07/2023 from <https://www.medsafe.govt.nz> > consumers > cmi

3: Pharmac: Retrieved on 19/07/2023 from <https://www.pharmac.govt.nz> > consultations-and-decisions

REFER YOUR PATIENT TO US!

For far too long Kiwi's have suffered from Asthma and COPD. Asthma NZ know that through education, training and support we help Kiwi's live well with Asthma and COPD

Asthma NZ are committed to Kiwi's living well -
we want to see everyone Breathe Easy

Education is our priority, we will come to where you need us.

How to refer:

Online Patient Referral

The online **Patient Referral** Form is the fastest and easiest way to get your patient info in our nursing team. Go to: www.asthma.org.nz/pages/patient-referral-form

Online Self Referral

Patients can also fill in the **Self Referral** form available on our website if they wish to follow the process themselves. www.asthma.org.nz/pages/book-to-see-a-nurse

Email Referrals

Both health professionals and patients can email anz@asthma.org.nz for support and our nursing team are happy to arrange a time to connect

Reach out to our team and we'll help your
patients get control of their Asthma