Antihistamines found safe during pregnancy

News
Sensitive teeth common among Malaysians

Feature
First year is tough on babies – and mums

Spotlight
Anaphylaxis requires prompt action

Refresh® range of lubricating eye drops keep your eye healthy and away from these dry eye related condition:
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“My father has red eyes; My mother has itchy eyes; My husband has dry eyes But I have healthy eyes with Refresh®”
Significantly Reduces HbA1c
when Added to Metformin

A double-blind, randomised study of 24 weeks* treatment with 50 mg vildagliptin twice daily (n=143) or placebo (n=130) as add-on to metformin (2.1g mean daily dose) in patients with T2DM. Baseline HbA1c was 8.4% and 8.3%, respectively

Vildagliptin does not cause weight gain in combination with metformin

Incidence of hypoglycaemia is similar to placebo (0.7% vs 0.8%)

Overall incidence of adverse events is comparable with placebo when vildagliptin is added to metformin (63.5% vs 65.0%, respectively)

* Between-treatment difference (vildagliptin-placebo) in adjusted mean change in HbA1c


Galvus®

Note: Before prescribing, please consult full prescribing information. Presentation: Vildagliptin Tablets, 50 mg. Indications: Galvus® is indicated in the treatment of type 2 diabetes mellitus. As monotherapy in patients inadequately controlled by diet and exercise alone and for whom metformin is inappropriate due to contraindications or intolerance. As dual oral therapy in combination with metformin, it is indicated in patients with insufficient glycaemic control despite maximal tolerated dose of monotherapy with metformin. Galvus® should be used in patients with insufficient glycaemic control for whom the use of a thiazolidinedione is inappropriate.

Dosage: The usual dose is 50 mg or 100 mg (in two divided doses of 50 mg or 100 mg) in the morning and evening. In patients with renal impairment or patients receiving dialysis, the recommended dose is 50 mg once daily. Galvus® is not recommended in patients with severe renal impairment or Stage 5 Renal Disease (EUGAD). The recommended dose is 50 mg once daily. Galvus® is not recommended in pediatric patients.

Contraindications: Contraindicated in patients with severe renal impairment or Stage 5 Renal Disease (EUGAD). It is not recommended in patients with severe hepatic impairment or patients with a pre-existing ALT of AST >3x the upper limit of normal. Liver function tests (ALT, AST) should be performed prior to treatment initiation and periodically thereafter. During the first year and periodically thereafter. Withdrawal of therapy with Galvus recommended if an increase in AST or ALT of 3X upper limit normal or greater persist. Following withdrawal of treatment with Galvus and LFT normalization, treatment with Galvus should not be restarted. Not recommended in patients with NYHA functional class IV due to lactation. Pregnancy: Should not be used. Breastfeeding: Should not be used. Interactions: Vildagliptin has a low potential for drug interactions. No clinically relevant interactions with other oral antidiabetics (gliptins, biguanides, thiazolidinediones, metformin) dipeptidyl peptidase 4 inhibitors or metformin. Adverse reactions: Rare cases of amylase/lipase increase. Rare cases of hematological (including hepatitis) monotherapy: common side effects - anaemia, neutrophilia, leucocytosis, eosinophilia, periosteal. Combination with metformin - common headache, tremor, diarrhea. Combination with a sulfonylurea - common headaches, tremors, diarrhea, vomiting, nausea, hypoglycaemia, edema, abdominal pain, edema, flatulence, constipation, hypoglycaemia, asthenia, dizziness, hypertension, edema, skin reactions such as erythema, urticaria and angioedema. Other effects with combination of Vildagliptin and Metformin: Common headaches, tremor, diarrhea. For full prescribing information, please consult
Antihistamines may not be linked to an increased risk of a specific birth defect, shows a new US study.

The study, by researchers at Boston University’s Slone Epidemiology Center, was based on interviews with more than 20,000 mothers within six months of delivery about their use of prescription and nonprescription medications.

“We were fortunate that our study was able to consider commonly used antihistamines that were available OTC as well as those available only with a prescription. While our findings provide reassurance about the relative
Rates of eczema are almost twice as high in people regularly exposed to cleaning agents through their jobs compared with those in other occupations, according to a New Zealand study.

Researchers at Massey University’s Centre for Public Health looked at skin symptoms in 425 people involved in cleaning hospitals, tertiary institutions, schools, commercial buildings and the meat works industry. They compared the results with workers from the retail and clerical sectors and bus drivers who were not exposed to cleaning agents in their jobs.

Among the cleaners surveyed, 14.8% experienced eczema in the three months preceding the survey period, compared with 10% of the non-exposed workers. In addition, 11% reported having an itchy skin rash on their hands, compared with 5.3% of the general population.

Occupational dermatitis is often overlooked because it is not life-threatening, but it is more problematic than people realize, lead researcher and Centre for Public Health director Jeroen Douwes said in a media release.

The research suggested that cleaners were also incorrectly applying anti-dermatitis creams and aggravating the condition by using old gloves, Mr Douwes said.
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People generally lack vocabulary to describe pain

By Seah Yee Mey

Although chronic pain affects many people from different socioeconomic backgrounds, most do not know how to properly describe their pain to doctors, a survey of Malaysian patients has found.

In light of that, Pfizer Malaysia recently invited members of the press to a ‘Know Your Pain, Stop the Pain’ workshop to educate the public on helpful vocabulary that can be used to describe pain.

Mary Suma Cardosa, president of the Malaysian Association for the Study of Pain (MASP) and a speaker at the workshop, said that in a random survey of 428 patients aged between 25 and 65, all of whom were experiencing chronic pain, almost all (83%) agreed that their lives were affected by pain.

Chronic pain impacted many aspects of these patients’ lives, from their mental wellbeing and personal growth, to their work performance. Sufferers fall into a vicious cycle of limited rest, energy levels, physical activity and mental wellbeing, said Dr. Cardosa.

Despite pain being a constant feature in their lives, most of the patients surveyed (76%) had trouble specifically describing the sensation of pain that they experienced. This appeared to be true regardless of education level; 78% of survey respondents had attended college or university.

Professor Ramani Vijayan, of the department of anesthesiology, Faculty of Medicine, Universiti Malaya, and advisor to MASP, noted that as part of its public education efforts, Pfizer has launched a website to help patients identify and describe their pain at knowyourpainasia.com

Some helpful pain descriptors that patients can use are burning, shooting, stabbing, tingling or feeling numb, Dr. Cardosa said. Other descriptive phrases include pins and needles or crawling ants.

Patients should also be able to self-assess the severity of their pain: for example, on a scale of zero to 10, with zero being no pain and 10 the worst pain possible. Pain sufferers should be aware, Dr. Cardosa pointed out, that the perception of pain is different for each individual due to variation in physiology and psychology, and that there is no such thing as pain being just imaginary.

Using a pain diary to record the description and severity of pain, alongside other pertinent details such as when pain was felt, can be helpful for doctors to evaluate patients’ condition and provide better treatment and recommendations.

She reminded the audience that not all pain is the same; unlike ordinary acute (or nocicep-
Kleenex®, a name synonymous with tissues, recently received the prestigious honor of being recognized as a Superbrand in Malaysia.

This closely follows the success of the recent Kleenex ‘Hug the Softness’ campaign, which aims to spread ‘softness’ in Malaysia and the successful innovation of the country’s first scented bath tissues.

‘Hug the Softness’ is one of many campaigns organized by Kleenex to remind Malaysians that daily acts of ‘softness’ and care are important, from welcoming children when they return from a long day at school, to paying attention to the quality of everyday items like Kleenex Bath Tissues in order to provide the best for the family.

Kleenex’s recent collaboration with Focus on the Family, a non-profit organization that champions the importance of a strong family unit, emphasizes the commitment of Kleenex in strengthening the family bond.

“We are doubly glad to celebrate the success of the campaign and the brand’s new status. Receiving Superbrands status further underscores that Kleenex is synonymous with softness, comfort and care, and being an advocate for softness, we strive to bring these same elements into the lives of all fellow Malaysians,” said Soo Woon Yee, marketing director of Kimberly-Clark.

“We are proud to have surpassed our target and delighted that with the help of Focus on the Family, Kleenex can bring the message of sharing softness and care to many children,” said Ms. Soo.

In the spirit of promoting softness and care among Malaysians, as well as spreading the joy of its double celebration, Kleenex will be donating over 10,000 rolls of Kleenex Ultra Soft bath tissues to 10 charity homes.

“We believe that bonds between families and loved ones are built by simple gestures like hugging, and we’re very proud to be associated with the Kleenex Hug the Softness campaign. Now that it has achieved its goal, we are thrilled that many less privileged children will be able to benefit from the message of this wonderful campaign,” said Lee Wee Min, Executive Director of Focus on the Family.
First of its kind concept store opens in Mid Valley

By Pank Jit Sin

Although stores dedicated to the sale of supplements are nothing new, Blackmores® recently launched its flagship concept store with a difference.

The difference is the presence of qualified naturopaths to assist customers seeking a natural, non-pharmacological path to wellness.

Monitar Tan, one of the naturopaths based in the store said: “With people living such busy lives these days rest, regular exercise and or/balanced meals often take a back seat, taking a toll on their health and wellbeing. But by making simple, natural changes to our lifestyles, we can all progress towards achieving great health.”

“Following naturopathic principles, the onus is on us to care for our health naturally and holistically, enabling us to live stronger and better,” she said. Those who have consulted a naturopath are advised to return for a follow-up session to determine the efficacy of the naturopath’s advice and its effect on the individual.

During the launch, guests were given the chance to experience a personalized one-to-one naturopathy consultation session to obtain further insights into their wellbeing. The highlight of the consultation session was an iris analysis (iridology) performed by the naturopaths. By looking at the color patterns of the iris, a naturopath can determine health issues and suggest lifestyle changes to overcome the problem.

Goh Sue San, marketing manager of Blackmores Malaysia, said the store was not meant to overshadow its products being sold at pharmacies nationwide. Rather, it will serve as a place for consumers to get to know Blackmores’ entire range of products and to learn what supplements they require from the naturopaths stationed there.

Blackmores was founded by Maurice Blackmore, an Australian who believed in the healing and health benefits of natural herbs and minerals. He was a strong advocate of natural wellness and all the products combine scientific evidence with traditional knowledge, thus combining the best of both worlds.
A large number of Malaysians are afflicted by teeth sensitivity. However, many ignore the problem and live in discomfort.

“Teeth sensitivity can arise due to gum recession or loss of the enamel, resulting in exposure of the underlying dentine. This gives rise to discomfort. People with teeth sensitivity should adopt good oral hygiene and use a toothpaste formulated for sensitive teeth. They should continue using this toothpaste even after the discomfort goes away. This is to prevent sensitivity from returning. Dentists play an important role in educating consumers about teeth sensitivity,” said Dr Neoh Gim Bok, president of the Malaysian Dental Association.

New toothpaste for sensitive teeth

Sensodyne® Complete Protection, tailored for people with sensitive teeth, is now available in leading pharmacies. Marketed by GlaxoSmithKline Consumer Healthcare Sdn Bhd (GSK), the toothpaste protects users from the discomfort of sensitive teeth, strengthens tooth enamel, helps control plaque, helps maintain healthy gums, freshens the breath, helps maintain natural whiteness and gives users a clean feeling after brushing.

The toothpaste uses NovaMin® technology, which delivers calcium and phosphate to the sensitive areas of the tooth to form a protective mineral layer over the exposed dentine surfaces. This helps protect users from discomfort.

The fluoride in the toothpaste helps prevent enamel loss, a major problem in sensitive teeth. The toothpaste also helps maintain healthy gums, preventing them from receding and exposing the dentin.

The toothpaste helps promote good oral hygiene, leaving the mouth feeling clean and fresh with its minty taste.

Teeth-whitening ingredients in non-specialized toothpaste can aggravate sensitive teeth. Sensodyne Complete Protection helps maintain the natural whiteness of teeth without causing discomfort, making it suitable for people with sensitive teeth.

“Teeth sensitivity is a common problem that affects millions of people, and studies have shown that 1-in-3 people in Malaysia are sensitive teeth sufferers. However, more than...
70% of sensitive teeth sufferers do not seek help or deal with their sensitive teeth problems. At GSK, we are committed to improving oral health and wellbeing, working with dental healthcare professionals to address the gap in tooth sensitivity. Sensodyne has also been spearheading research and development of new products for teeth sensitivity for over 50 years. We work with dental scientists in creating greater understanding of oral care needs and to develop new innovative products. We look at meeting our consumer needs and continue to chart our future innovation strategy development for our products,” said Katharine Chen, Marketing Director, GSK Consumer Healthcare Sdn Bhd.
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The use of essential phospholipids (EPLs) may improve symptoms of various liver conditions, say researchers.

Phospholipids play important roles in the treatment of liver diseases as they are the building blocks of the liver cell membrane. The normal human liver consists of about 300 billion hepatocytes, and many biological reactions take place at and in the membrane surface.

An assault to liver cell membranes and the organelles occurs in certain liver diseases, particularly those associated with reduced phospholipid levels, altered phospholipid composition and/or decreased membrane fluidity, which may inhibit optimal liver function. Supplementation of EPLs may help prevent, stabilize or improve these conditions.

In fact, EPLs, which contain a highly purified extract of polyenylphosphatidylcholine (PPC) molecules from soya bean, have been widely used in the treatment of liver diseases, from viral hepatitis to fatty liver disease.

In in vitro and animal studies, EPL supplementation has been shown to exert beneficial effects on membrane-dependent cellular functions and lipid regulation in intoxication models. EPLs are also known for their antioxidative, anti-inflammatory, anti-fibrotic, apoptosis-modulating, regenerative, membrane-repairing and -protective, cell-signalling and receptor-influencing properties.

A review by Gundermann and colleagues found that these properties translate to real clinical results. By selecting only studies using the purification grades of no lower than 72% (3-sn-phosphatidyl) choline, they evaluated and summarized results from various trials that assessed patients with chronic hepatitis, hepatic intoxication and fatty liver disease. (Pharmacological Reports 2011;63:643-59)

An impressive number of trials showed that the use of EPLs as an adjuvant medication for chronic hepatitis reduced symptoms such as asthenia and tiredness. Clinical findings such as hepatomegaly, cytolysis, hepatic synthesis and the liver histology also appeared to be improved by EPLs.

The authors added that a treatment period of at least six months may be necessary as long-term data indicated a stabilization of liver function and a significant reduction in disease activity.

The efficacy of EPLs also extends to treatment of toxic liver damage due to anti-tuberculosis (TB) drugs and alcohol. In patients on anti-TB drugs, the administration of EPLs may help prevent the hepatotoxicity of these anti-TB agents, especially in patients with concomitant liver damage. Indeed, damage to hepatocyte membranes occurred two to three times less frequently in the EPL-treated patients compared to those on placebo.

The use of EPLs in alcoholic liver damage also confers significant improvement in biochemical variables such as transaminases, bilirubin and immunoglobulins. During alcohol consumption, the liver cells display reduced membrane phospholipid levels. Supplementation with EPLs helps to incorporate new
phospholipids into the liver cell membrane and normalize the activity of membrane-bound enzyme, hence reducing alcohol-induced liver injury. In patients with acute alcoholic hepatitis, EPLs may improve the two-year survival rate.

An increasing number of studies also found that EPLs improved symptoms, hepatomegaly, ultrasonography, liver enzyme levels, liver function and histopathology of patients with non-alcoholic fatty liver disease (NAFLD).

In conclusion, the review indicated that EPLs accelerate the improvement or normalization of subjective symptoms in chronic viral hepatitis, fatty liver disease and hepatic intoxication. Moreover, the results were supported by imaging profiles, biochemical markers and histology.

Future studies may be necessary to assess the extent of EPLs’ efficacy, especially in preventing or treating fibrosis, and to optimize the treatment regimen.
Your patients' lifestyle may be hurting their livers

FATTY LIVER MAY BE CAUSED BY:—

<table>
<thead>
<tr>
<th>Metabolic Syndromes</th>
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<tr>
<td>Overweight (BMI 23-27.41)</td>
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<td>Obesity (BMI above 27.5)</td>
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<td>Diabetes</td>
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<tr>
<td>Malnutrition</td>
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<td>Excess alcohol consumption</td>
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<td>Rapid weight loss (dieting)</td>
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Majority of Malaysian Fatty Liver Patients have associated metabolic syndromes.2

ESSENTIALE® IS EFFECTIVE FOR FATTY LIVER3-5

- Essentiale® reduces mean levels of ALT, AST and GGT.6

Essentiale® reduces mean levels of ALT, AST and GGT.6

* p < 0.05 for all 3 sites compared to before treatment.
** p < 0.05 for the visit 6 months after treatment compared to before treatment.

- Significant reduction in GGT observed within 1 month (p=0.005).3

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- Regenerates liver cell membrane.4
- Restores cell metabolism.7
- Improves excretion by the liver.6
- Improves and normalises biochemical variables (ALT, AST and bilirubin).6,8
- Well tolerated.8

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Looking forward to healthcare transformation in Malaysia

By Pank Jit Sin

Speaking at the recent Malaysian Pharmacological Society’s (MPS) Pharmacy Health Transformation Seminar 2013, Health Minister Datuk Seri Dr. S. Subramaniam quoted the writer James Thurber: “Let us not look back in anger, nor forward in fear, but around in awareness.” He used the quote in reference to the changes facing the pharmaceutical industry.

“I am aware that there are 2106 community pharmacies operating throughout the country. However, as we move forward towards transforming our healthcare system, it is imperative that the rakyat in rural areas have equal access to high-quality healthcare, similar to that which is provided in the urban areas.”

To this end, the Pharmaceutical Services Division of the MOH and the MPS are collaborating to develop a geo-mapping project to look at the community pharmacy and general practitioner clinic mix in the country.

During his tenure as a doctor, Subramaniam had seen a shift in the pharmacy practice. “I am aware that there has been a paradigm shift in pharmacy practice and pharmacists today are no longer just product-centered, but are also patient-focused and service-oriented.”

He said pharmacists represent an important group of healthcare professionals in the country as they are experts in medicines and matters relating to drug therapy. This makes them well-positioned to contribute to the health and well-being of the nation.

While the MOH is doing its best to develop pharmacy services in the country through the development and regulation of the required workforce and its practice, Subramaniam hopes the MPS will work hard to uphold the reputation of the profession as a trustworthy member of the healthcare team.

Subramaniam said: “I, therefore, look forward to your continuing support and cooperation in all our healthcare programs aimed at enhancing the quality of life, not only of our rakyat, but also those who may come from elsewhere to seek treatment in Malaysia under the health tourism initiatives.”
A helping hand for expectant mothers

By Malvinderjit Kaur Dhillon

As women embark on the journey of motherhood, it is only natural that they feel a host of emotions, ranging from excitement to awe and even surprise as the body changes to accommodate another living, breathing being.

For some women, being pregnant is a roller-coaster ride of shifting emotions caused by hormonal changes. Their diet may change and they may start to favor tastes or food they disliked prior to being pregnant. They have to strike a balance between catering to their growing nutritional needs and giving in to their cravings. They also see changes in their physical fitness as they may become less mobile. An expectant mother may also have to change her skincare regimen as she may experience breakouts due to fluctuating hormones.

Keeping in mind all these needs, Palmer’s held the second installment of its Palmer’s Wellness Enrichment Sessions (P.W.E.S), following on the success of the first one held last year entitled ‘What to Expect When You’re Expecting with Palmer’s’.

Young Malaysian mothers were invited to learn about ‘Palmer’s Four Pillars’ from a panel of experts on how to live healthily and happily while expecting.

“We at Palmer’s truly believe that the journey to motherhood is beautiful and should always be filled with joy and love. Just as our theme – ‘Cherishing my Motherhood Experience. Cherished Memories’ – suggests, expectant mothers should cherish themselves and the gift of life that they carry, and they should be cherished by their circle of loved ones. A little pampering and being treasured is conducive to creating a healthy and happy environment for the baby to grow,” said Daniel Deans, regional director of Palmer’s Australia.

“Organizing the P.W.E.S. for expecting parents for the second consecutive year, we understand that every moment of pregnancy brings incredible feelings of joy and anticipation of the new arrival to their family. Every expectant mother has her very own distinct pregnancy experience. Thus, for this particular round, we extended our focus to other important aspects of pregnancy, from management of emotions, hormonal changes, dietary needs and cravings, exercise, skin care as well as the wellbeing of the expectant parents, to enhance the expecting experience and to inspire expecting mothers to love and appreciate the journey of maternity,” said Mr. Deans.

The workshop also advised mothers on how to deal with stretch marks and the importance of taking precautions to protect and maintain the skin during this period. Stretch marks affect up to 90% of women, and they may lower self-esteem. Parents were recommended Palmer’s Cocoa Butter Formula products, as ingredients like cocoa butter, vitamin E and collagen help prevent stretch marks.
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Scar Serum is formulated with five powerful ingredients. This concentrated serum penetrates quickly, forming a moisture-proof barrier to heal and minimize unsightly marks caused by injury, surgery, burns, acne, stretch marks, cuts or insect bites.

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Type ‘natural allergies’ into a search engine and a whole lot of natural remedies for allergies come up, along with natural alternatives to allergy causing chemicals.

However, there is scant mention of the natural ingredients in skincare products which can also irritate the skin.

The growing trend towards using natural products, due to their perceived gentleness on the skin, is based on a misconception, allergy specialist Vincent Crump said on the Allergy New Zealand website (www.allergy.org.nz).

There are a number of plants commonly used in cosmetics which are known to cause contact dermatitis or photo-contact dermatitis (caused by sunlight on the skin while using the product), Dr Crump said.

Allergenic members of the daisy family are often found in natural skincare and hair products. They include artichoke, chamomile, chrysanthemum, dandelion, feverfew, marigold, pyrethrum, ragweed and thistle.

Common plants that can cause photo-contact dermatitis include angelica, bergamot, celery, citron, dill, fennel, fig, lemon, lime, parsnip and wild carrot.

Tea-tree is another common natural product used in everything from soap to deodorant. According to webMD, tea-tree products are likely safe for most people when put on the skin, but can cause irritation and swelling. There are also questions over whether it is safe to use on pre-pubescent boys, as tea-tree and lavender oil may disrupt normal hormones in a boy’s body.

Tea-tree oil should never be taken orally. Reactions to swallowing even small quantities include confusion, inability to walk, unsteadiness, rash and coma.”
WHEN YOU SUFFER FROM LIVER OXIDATIVE STRESS,

OILY FOOD
FATTY FOOD
ALCOHOL
SMOKING
LACK OF EXERCISE
VIRUS
LACK OF SLEEP
OILY FOOD
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FATTY FOOD
ALCOHOL
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LACK OF EXERCISE
VIRUS
LACK OF SLEEP

YOU SUFFER.

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- Highest Silybin bio-availability via Patented Extraction Method (MZ80)

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![Images of alcohol, smoking, and fatty food]

To know more about liver oxidative stress, please ask your pharmacist about it.

Call Eva at 03 7956 7677 to know more about liver health.
Keeping active to stop spider veins

Varicose veins can cause discomfort and pain, but leading a healthy lifestyle and using products available in pharmacies can help to treat the condition.

Varicose veins, also referred to as spider veins, develop when blood pools in the veins, causing them to increase in pressure and enlarge. They appear blue or purple under the skin and can also appear as twisted clumps of veins, which can cause skin above them to harden and swell.

Symptoms include aching, throbbing or itching. The symptoms tend to be worse if people are standing for long periods of time, according to health information website everybody.co.nz.

However, many people will not experience symptoms other than the condition’s appearance.

Pharmacies should stock treatment options such as support stockings, also known as graduated compression therapy. These stockings help blood to flow from the lower legs towards the heart. They are tightest at the ankle and looser as they go up the leg, which helps blood to move gently up the legs and prevent it from pooling.

Pharmacy staff should measure people to ensure they get the right fit bandage for their leg.

Compression hosiery is usually worn for 24 hours a day, including while sleeping and showering for the first week. People may need to use a hairdryer to dry stockings after showering. Alternatively, they can cover the hosiery with a plastic bag.

Other treatment options include using hirudoid cream, which contains enzymes that help disperse fluid in swollen areas to reduce swelling and bruising.

To help prevent developing varicose veins, people should focus on maintaining a healthy lifestyle, exercising regularly, not smoking and avoiding standing still for long periods.
Combining medical-grade honey and antibiotics to treat skin and wound infections is far more powerful than using either treatment on its own, an Australian researcher says.

Liz Harry, ithree Institute director at the University of Technology in Sydney, recently discussed research on the synergy between these two treatments in treating skin infections at the Comvita Science Symposium in Auckland, New Zealand.

In wounds and skin infections, bacteria live in communities in a yellow film layer called the biofilm. It is thought that about 80% of skin infections occur in the biofilm, Liz Harry said.

People can use antibiotics alone to treat the infection, but there are many strains of bacteria in these infections which are highly resistant to antibiotics. On the other hand, there is no evidence to show people develop any resistance to honey, she said.

In a PLOS ONE study, researchers tested the effect of combining rifampicin, an antibiotic commonly prescribed to treat infections, and Comvita Medihoney – a manuka honey product.

The team first used Medihoney on its own which slowed down the growth of the bacteria, but after 24 hours the bacteria growth was at the same level as in the samples of bacteria which had not been exposed to any treatment.

A test using rifampicin on its own completely stopped bacteria growth, but after eight hours the growth was at a level similar to that of the untreated bacteria cultures.

However, when the researchers treated the bacteria using Medihoney and rifampicin together, there was a decrease in the number of bacteria colonies.

“Manuka honey has broad-spectrum antibacterial activity and is effective against antibiotic-resistant wound pathogens,” the study concluded.

Using this combination treatment means people can use a lower dose of antibiotics, which helps to decrease resistance to antibiotics over long-term use.

It is also more likely to encourage physicians to advise people to use a honey treatment if it is prescribed in combination with antibiotics, Professor Harry said.

In the case of rifampicin, bacteria become resistant to it very quickly and so it should not be used on its own for treating wound or skin infections, she said.

As the studies were all done in vitro in a lab setting, further clinical studies are needed to investigate the effect of using honey and antibiotics as a combination treatment for skin infections and wounds, Professor Harry said.
In this Series, find out what these experts have to say about the importance of early diagnosis of rheumatoid arthritis, their perspectives on overcoming compliance issues and updates on novel treatments.

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Professor Robert Moots discusses how treatment has evolved for patients with rheumatoid arthritis and the importance of compliance.

Dr Chi-Chiu Mok shares his perspectives on overcoming the challenges and issues in the management of rheumatoid arthritis in Asia.

For A 5-minute Update
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Reassurance and self-confidence are some of the best things pharmacists can give to parents with new babies.

Pharmacist and mother-of-two Tania Adams said nothing prepared her for questions from mothers as much as motherhood itself, and she clearly remembers the things people worry about.

“Being a mum is hard. My little boy tested me out with fevers. When you’re a mum, you go into a bit of a panic mode, and it doesn’t even help that you are a pharmacist. I had to make myself sit down and think, ‘What would I tell somebody in the same situation’.”

Pharmacies are often the first point of call for families as they are conveniently located, with extended hours and no appointments needed.

“In some respects, we are a bit like an information place. Sometimes, we can help, but we
also know when the baby should be referred to a doctor,” said Ms Adams, who owns a pharmacy in New Zealand.

Often, mums just need some reassurance they are doing the right thing and fever is normal for a baby.

“I try to give mums the confidence that they know their baby best and to ask for advice when they need it, or to keep coming back if a particular treatment is not working.”

A baby medicine cabinet is a boon

For new or expectant mothers, it is a good idea to have a baby medicine cabinet on hand. As many a parent will tell you, things will invariably happen on Friday nights when few medical facilities are open.

Also, those first few months with a new baby, especially if it is the first, can be difficult. Even getting out to the pharmacy can be a challenge, so it helps to be prepared with a few basics.

“It is important to check that the rash is not infected as a fungal infection or, more rarely, a bacterial infection may be present

A good thermometer, a small bottle of paracetamol with a syringe and dosage chart, a barrier cream for nappy rash, and for mums who intend to breastfeed, a nipple cream, are all items virtually guaranteed to be used at some stage.

When it comes to babies, the list of problems people might experience is endless, from ear ache to chickenpox, vomiting or mosquito bites. However, one of the most common complaints is the common cold, Ms Adams said.

If the baby has a cough, a vapourizer can help, while a saline spray and an aspirator can help clear nasal congestion. This is especially important for breastfeeding as babies need to be able to breathe through their nose to feed.

The New Zealand Ministry of Health advises that cough mixture should not be given to children under the age of six, unless prescribed by a doctor.

Ms Adams said fevers are another ‘biggie’ for parents and a thermometer not only gives an accurate temperature reading, but is useful to see if any treatment is having an effect.

Ear thermometers are often the easiest to use, she said. “They are a little expensive, but they are a worthwhile investment. They will get used a lot.”

Ear thermometers should be used from six months onwards. Before this, the baby’s temperature can be taken rectally.

Cold baths no longer recommended for fever

The Royal Plunket New Zealand Society’s clinical advisor Maxine Williams said when babies have a fever, parents should take off layers of clothes, cover them with a single sheet if they are sleeping and keep the room cool, but not too cold.

Cold sponge baths or baths are no longer recommended as they can cause a baby to go into shock.

Babies under two months with a fever should be taken straight to a doctor as this can be the only indicator the child gives of a very severe infection.

Paracetamol should be regarded as a medication for pain, rather than fever, Ms Williams said. “We are very careful about ensuring people get their paracetamol from the chemist, rather than using what they might have for older children or adults in the cupboard.”

It can be easy to give the wrong dose and, if parents think they may have overdosed, they should see a doctor urgently, she said.

Pharmacybrands, a pharmacy retail group in New Zealand, recently developed an information card for parents, with advice on treat-
ing pain and fever in children and the recommended doses for paracetamol and ibuprofen.

Doses are calculated on weight, not age, said Ms Adams. “The policy in our pharmacy is to weigh every child that comes in, despite what is written on the prescription.”

Many people actually under-dose and then wonder why the medication is not working, she said. It’s important to make sure they have something, like a syringe, to measure the medicine at home.

People often give a teaspoonful, but many teaspoons only hold 3ml or 4ml.

**Beware of infection with nappy rash**

Another common problem is nappy rash, Ms Adams said. It is important to check that the rash is not infected as a fungal infection or, more rarely, a bacterial infection may be present. Plunket advises lots of air time with the nappy off, cleaning the area with a warm, wet cloth, and use of a barrier cream such as zinc and castor oil. A tell-tale sign of an infection is if parents are using a barrier cream, but the rash is not clearing up.

New Zealand College of Midwives Canterbury and West Coast co-chair Margaret Kyle said the thing to remember with babies is “there is no one size fits all. The reality of coming home with a new baby is not what people expect,” Ms Kyle said.

Parents need correct information, reassurance that the majority of times this is normal newborn behavior – and there is a wide range of newborn behavior – and confidence in themselves.

“Most of the time they are doing everything perfectly.”
Long-lasting relief from congestion with an added moisturising ingredient

Otrivin® contains two moisturising ingredients frequently used in pharmaceutical and cosmetic products.

- Sorbitol
  - Normalises level of liquid in mucosa, does not cause dryness and irritation
  - Provides soothing effect
  - Is used as a moisturiser

- Methylhydroxypropylcellulose
  - Strengthens moisturising effect
  - Prevents nasal mucosa from dryness

### Benefits for your patients

- **Double action**
  - Vasoconstrictor effect of Otrivin®
  - Moisturising formula of Otrivin®

- **Fast relief of nasal congestion within few minutes**
- **Significantly decreased common cold symptoms**
  - Le blocked nose, runny nose, sore throat and ear ache
- **Prevent drying of nasal mucous membrane, soothes away irritation caused by dryness**

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**Composition:** Active ingredients: Xylometazoline hydrochloride. Pharmaceutical forms: Nasal spray 0.05% and 0.1%, Nebuliser 0.1%, Nasal spray 0.1%. Nebuliser 0.1%. At least one nasal spray 0.05% and 0.1% contains 0.05 ml (10 μl) of 0.5% solution of xylometazoline hydrochloride. **Preservatives:** Xylometazoline hydrochloride is an acidified product. Otrivin may be administered in the nasal cavity, where it exerts a vasoconstrictor effect leading to desiccation of the nasal and paranasal mucosa. Otrivin thus makes it easier to breathe through the nose when suffering from a cold or allergy. Otrivin contains various ingredients which should be considered when using nasal decongestants. The effect of Otrivin is felt within a few minutes and lasts for up to 15 hours. When using the mucous membranes are sensitive. Otrivin is well tolerated and does not impair the function of the taste papillae. Otrivin is particularly designed to ease congestion in the nose and sinuses. The nasal content contains the preservatives for the nasal mucosal membrane and is gently acting. It is to specifically adapt to the treatment of rhinitis with nasal decongestants. **Pharmacokinetics:** Following a local application, the plasma concentration of the active ingredient of Otrivin is low due to limitations with current analytical methods. **Indications:** The use of Otrivin is intended to improve nasal breathing and to reduce symptoms of nasal congestion. It is also used as a preventative measure to reduce symptoms of rhinitis. **Contraindications:** For use in children younger than 4 years of age. **Interactions:** None known. **Dosage:** Little or no effect was observed in a single-dose study on normal volunteers or a double-dose study on normal volunteers. **Regressions:** In some volunteer studies, Otrivin showed a potential for drug-induced hypotension after the first dose of nasal spray or the first dose of nasal drops. It is possible that this effect can be increased by using the spray or drops more frequently than recommended. **Precautions:** Use all products belonging to the same class of active ingredients. Otrivin should be used with caution in patients suffering from hypertension, cardiovascular disease or impaired cardiovascular function, or those on cardiac medications, anti-dysrhythmics, or anti-hypertensives, as well as in elderly patients, patients with cardiovascular or respiratory disease, and pregnant or breastfeeding women. **Sorbits:** Use all products belonging to the same class of active ingredients. Otrivin should be used with caution in patients suffering from hypertension, cardiovascular disease or impaired cardiovascular function, or those on cardiac medications, anti-dysrhythmics, or anti-hypertensives, as well as in elderly patients, patients with cardiovascular or respiratory disease, and pregnant or breastfeeding women. **Methylyhydroxypropylcellulose:** Use all products belonging to the same class of active ingredients. Otrivin should be used with caution in patients suffering from hypertension, cardiovascular disease or impaired cardiovascular function, or those on cardiac medications, anti-dysrhythmics, or anti-hypertensives, as well as in elderly patients, patients with cardiovascular or respiratory disease, and pregnant or breastfeeding women. **Warnings:** Use all products belonging to the same class of active ingredients. 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Pregnant women should be encouraged to have the influenza vaccine as they, their unborn baby and new infant are at greater risk of complications associated with influenza.

New Zealand National Influenza Specialist Group’s Lance Jennings said healthy, pregnant women are 18 times more likely to be admitted to hospital when infected with influenza than women who are not pregnant.

Vaccinating a pregnant woman offers protection to the mother, the unborn child and the newborn baby. WHO’s Strategic Group of Experts recommends that pregnant women should be the highest priority in seasonal influenza vaccination programs, Dr Jennings said.

Immunisation Advisory Centre GP medical advisor Gary Reynolds said influenza is often misunderstood. “The true flu is a real step up from the boring old cold. You are out of action for five to seven days and feeling pretty washed out for the next two weeks afterwards. Once you have had it once, you don’t ever want to have it again.”

During the 2009/2010 H1N1 swine flu pandemic, pregnant women were “much more severely affected by that strain” than non-pregnant women.

Education is important, in particular that the influenza vaccination is safe during pregnancy, Dr Reynolds said.

Vaccinations can be given at any time during pregnancy, but it is preferable to give it as soon as it is available, usually in early March, before the influenza season starts.

Women vaccinated in pregnancy can give protection to newborn infants, in part by passing antibody across the placenta, and offering passive protection during breastfeeding.

Allowing trained pharmacists to give influenza vaccinations should help improve coverage and is a move that makes sense, Dr Reynolds said.

However, IMAC would like to see the Ministry of Health put in more infrastructure around giving vaccinations.

“We want each injection to be recorded on the national immunization register,” he said. “We want to know who is being immunized.”

According to the New Zealand Ministry of Health, 1.25 million people have been vaccinated this year based on the number of doses distributed. Of those, 650,000 were funded immunizations and the remainder were purchased privately, either by individuals or workplace immunization programs.

Information is not collected about who receives vaccinations. About 1.1 million people are eligible for a funded influenza vaccine.
Breastfeeding can be a challenge

An issue that is seldom discussed, but which may affect breastfeeding mothers, is sore or cracked nipples, or an infected breast.

A New Zealand pharmacy owner and mother-of-two, Tania Adams, admits that breastfeeding is not always easy. “Lots of people suffer really badly with cracked nipples or an infection in the breast. Then they keep on doing it, because they really want to breastfeed. I have noticed people put up with it for a really long time.”

A good cream can help heal the nipple, and there are gel discs available that can help cool and soothe the area. In some cases, it can help to give the nipple a rest and time to heal, and the mother can express milk for the baby in the short term.

Often, the primary cause of the problem is due to the baby not latching properly and mothers need specialized help from their midwife, a lactation consultant or a breastfeeding organization.

New Zealand College of Midwives Canterbury and West Coast co-chair Margaret Kyle said the key point is to get help early. Breastfeeding is a learnt skill, Ms Kyle said. With perseverance, along with help and support from family, friends and health professionals, it is usually successful.

When a mother comes home with a new baby, it usually takes the first six weeks to establish breastfeeding.

Mothers need to take some time out to develop a relationship with their baby, Ms Kyle said.
LOSE
FAT,
GAIN
LIFE

Active Ingredient: Orlistat
Therapeutic Indications: Xenical is indicated in conjunction with a reduced-calorie diet for the treatment of obesity (BMI ≥30 kg/m²) and overweight (BMI ≥27 kg/m²) patients, including patients with risk factors associated with obesity. In type 2 diabetic patients who are overweight (BMI ≥27 kg/m²) or obese (BMI ≥30 kg/m²) and in conjunction with a reduced-calorie diet, provides additional glycemic control when used in combination with antidiabetic agents such as metformin, sulfonylureas, and/or insulin. Dosage & Administration: The recommended dose is one 120 mg capsule with each main meal during or up to one hour after the meal. The patient should be on a Multimedia, balanced, reduced calorie diet that contains approximately 30% of calories from fat. Contraindications: Xenical is contraindicated in patients with chronic malabsorption syndrome, cholestasis, and in patients with severe hypercholesterolemia to control or any of the other components contained in the medicinal product. Warnings & Precautions: In order to ensure adequate nutrition, the use of a multi-vitamin supplement could be considered. Patients should be advised to adhere to dietary guidelines. Undesirable effects: Adverse effects are Xerostomia (dry mouth), gastrointestinal in nature and related to the pharmacologic effect of the drug in reducing the absorption of ingested fat. Common adverse events are diarrhea, flatulence, flatulence, abdominal discomfort, increased fat in stools, and increased stools. Pregnancy & Lactation: Xenical is not recommended for use during pregnancy in the absence of clinical data. Xenical should not be taken during breastfeeding. Drug Interactions: See monograph for composition, indication, contraindications, side effects, dosage, and precautions on request. Packaging: Capsules 120 mg (84, 210) Xenical 112130022.

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XENICAL
Orlistat
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84 capsules
Obesity is associated with a wide range of metabolic and cardiovascular (CV) conditions which substantially increases a person’s risk of stroke, coronary heart disease and myocardial infarction. On top of that, the combination of widespread consumption of energy-dense Western diets and increasingly sedentary lifestyles have led to an increase in the global prevalence of overweight and obesity.

The goals of any weight management programs are aimed primarily at weight loss, weight loss maintenance and risk reduction of comorbidities. Because obesity can have substantial adverse effects on health and quality of life, interventions to support these goals are important. Such interventions should always incorporate lifestyle and behavioral changes which can be monitored by the Ministry of Health Malaysia. Unfortunately for many, lifestyle modification alone does not result in weight loss; even if it does, weight regain is common. This is where pharmacotherapy plays a role to support long term weight loss.

Pharmacotherapy of obesity

Currently, there are many brands of over-the-counter (OTC) anti-obesity products available in the market. Although they are made freely available to the public, these products are not necessarily supported by vital clinical information on efficacy and safety. The growing disease burden of obesity coupled with the numbers of OTC anti-obesity products can only mean either of these – that there is STILL a need for an effective and tolerable drug i.e. orlistat (Xenical in the treatment armamentarium to combat this huge burden or that these OTC products are not effective at all.

In general, pharmacotherapeutic agents used in the management of obesity can be broadly classified into two major classes - drugs that act centrally to suppress appetite and drugs that act on the gastrointestinal (GI) system.

Centrally acting drugs

In this class, only phentermine is currently available and indicated for the management of obesity. It acts as an appetite suppressant via noradrenergic pathways in the central nervous system (CNS). There appears to be no strong evidence of serious adverse events associated with phentermine alone, although mild-to-moderate CNS side effects such as insomnia, nervousness and increased blood pressure have been reported. It is also contraindicated in people with a history of CV disease, psychiatric illnesses including anorexia nervosa and depression, hyperthyroidism, glaucoma and those with a history of alcohol abuse or dependence. Because of its stimulant effect on the CNS, phentermine should only be used on a short-term basis i.e. ≤ 3 months.

Drugs acting on the GI system

With over 40 million patients and more than 10 years of clinical experience, Xenical® is the only non-systemic drug indicated for the management of obesity that acts primarily at weight loss, weight loss maintenance and risk reduction of comorbidities. Xenical® is a potent and selective lipase inhibitor. It is not absorbed: it acts entirely in the lumen of the small intestine and reduces fat absorption by about 30%.

Xenical® is also currently the only available anti-obesity agent indicated for long-term weight loss management.

A recent meta-analysis published in the British Medical Journal showed that Xenical® demonstrated a subtracted weight loss of up to 2.9 kg over 12 months period. This was maintained up to as long as four years in some clinical trials.

Active Ingredient: Orlistat

Orlistat is an inhibitor of pancreatic and gastric lipases, which are enzymes responsible for the digestion of dietary fat. Orlistat mainly acts by reducing food absorption of lipid and, hence, results in weight loss. Orlistat does not produce a purgative effect when taken excessively. Reports by anorexics or teenagers are that xenical® is associated with rapid weight loss as early as three months.

Reduction of CV risk factors

Early pivotal studies also demonstrated that Xenical® significantly reduced blood pressure, decreased mean waist circumference, improved lipid profiles and decreased fasting serum glucose and insulin levels compared to placebo. The antihypertensive efficacy of Xenical® is noted again in the XPP and XENDOS studies after one year of treatment, with long-term antihypertensive effects demonstrated with the XENDOS study.

In the XENDOS study, Xenical-treated patients had significant (p<0.01) improvements in LDL-cholesterol (LDL-C) concentrations after one and four years of treatment, compared with placebo: -11.4% vs. -1.6% at Year 1, and -12.8% vs. -5.1% at Year 4. Xenical® therapy also resulted in significant (p<0.01) improvements in the XPL-CHL-C ratio -0.5 vs. -0.3 at Year 1, and -0.6 vs. -0.4 at Year 4. Meanwhile, during the last two large post-marketing studies, Xenical® consistently increased HDL-C levels after seven months (XLP) and 12 months (XPF) of treatment.

The XENDOS study which looked at T2DM prevention noted that xenical® significantly reduced the incidence of T2DM in the overall study population i.e. 6.2% vs. 9.0% in placebo (p=0.0032). The reduction in T2DM incidence corresponded to a 37.3% reduction in T2DM for Xenical® treated patients over a period of four years. In patients with impaired glucose tolerance at baseline, treatment with xenical® for four years resulted in a 45% decreased risk of progression to T2DM.

Treatment effects of orlistat prevented by natural fibers

Xenical® is generally well-tolerated and its treatment effects are mainly GI in nature, such as fecal incontinence, oily spotting and flatulence with discharge. In the study by Cavaliere et al, adjunctive therapy with psyllium mucilloid significantly reduced the treatment effects of xenical®. Overall, 71% of patient on Xenical® plus placebo experienced GI events compared to 29% on Xenical® plus psyllium mucilloid. The use of psyllium mucilloid prevented oily spotting, which was six-fold less frequent in the group who received psyllium mucilloid with xenical®.

Safety

Additionally, Xenical® has been studied in dosages above the recommended dosages (up to 800 mg daily for 15 days). Xenical® was found to have either no adverse events or adverse events that are similar to those reported with recommended doses. This is largely due to xenical® being a non-systemic drug and is completely excrated through the GI tract. Both clinical and preclinical studies have shown that any systemic effects attributable to the lipid-inhibiting properties of Xenical® should be rapidly reversible.

The risk of abuse with xenical® is also low in view that there is no added benefit seen when taken in excess, with no published reports by anorexics or teenagers. This is because xenical® does not produce a purgative effect when taken excessively. Steatorrhoea depends solely on the fat content of the food, not on the dose of xenical®. Hence it is extremely unlikely that bulimics will use xenical® inappropriately.

Generic orlistat: Are they the same?

The pharmaceutical quality of various generic orlistat formulations has been compared against xenical® in a study by Taylor et al. A total of nine generic products from India, Malaysia, Argentina, Philippines, Uruguay, and Taiwan were evaluated. Using standard physical and chemical laboratory tests developed by Roche for xenical®, all nine of these generic products failed the xenical® specifications in four or more tests, while two generic products failed in seven tests. A common failure noted in these generic products is the presence of impurities where most were due to different by-products including side-chain homologues that are not found in xenical®. Some of the impurities were even unidentified.

Additionally, two of the generic products tested failed dissolution tests and one product formed a capsule-shaped agglomerate on storage which resulted in poor dissolution (≤ 15%). Six of these products were in powdered form compared to the pelleted or granular formulation of xenical®. The authors of this study concluded that all the generic orlistat formulations tested were pharmacodynamically inferior to xenical® and the high levels of impurities detected in these generics are a major safety and tolerability concern.

In conclusion

The clinical implications of obesity-associated risk of CV events cannot be overemphasized, making pharmacotherapy in adjunct to lifestyle modifications an important component in any successful weight loss and maintenance programs. Xenical® is the only non-systemic anti-obesity agent that is recommended by local and international guidelines as suitable for long-term weight loss management. While cost considerations may drive prescripions towards cheaper generic formulations, the pharmaceutical quality of currently available generic brands is a major safety and tolerability concern and should be considered when prescribing.
Anaphylaxis requires prompt action

Breathing difficulties, swelling of the tongue, tightness of the throat, loss of speech, dizziness – the symptoms of anaphylaxis can be terrifying.

It’s not surprising that some sufferers also list a feeling of ‘impending doom’ among their symptoms. Yes, anaphylaxis can be fatal.

Anaphylaxis is the most severe form of allergic reaction, often affecting the skin, as well as the respiratory, gastrointestinal and cardiovascular systems.

“Reactions usually happen within minutes of exposure to the allergen or trigger,” Allergy New Zealand advisor Penny Jorgensen explained.

The most common triggers are food, insects and medicines. Food allergies are more common in children, and medicines allergies, such as antibiotics, in adults.

Milk, eggs, peanuts, tree nuts, sesame seed, fish, shellfish, wheat and soy are the most common food triggers, and even very small
amounts of these foods can cause a life-threatening reaction, according to healthcare website everybody.co.nz.

Some extremely sensitive individuals can react to just the smell of particular foods being cooked or even kissing someone who has eaten the food they’re allergic to.

**Quick pharmacy response saves anaphylaxis victims**

New Zealand pharmacist Kim Wilkinson has seen how dangerous anaphylaxis can be. He has witnessed many cases of allergic reactions, but two extreme cases stand out.

“We’ve had two cases over the last 10 years where we have had to use an EpiPen [adrenaline auto-injector] for anaphylactic shock,” Mr Wilkinson said. “One was an allergic reaction to nuts where a young man had eaten a pizza without realising there were nuts in it. He came into the pharmacy in the evening with a friend, who explained what was happening as the patient couldn’t communicate at that stage.

“On another occasion, early in the morning, a young woman got a bee sting walking to work and came into the pharmacy suffering severely. On both occasions we had to use an EpiPen and called an ambulance.”

“We also see skin reactions where people have come into physical contact with a substance that causes an allergic response and these can be treated in the same way

The prevalence of anaphylaxis in New Zealand is not known, Ms Jorgensen said.

“However it is not rare, and there is evidence the rate is increasing, particularly in relation to the increase in food allergy in young children.”

Treatments for anaphylaxis include the auto-injectors Anapen or EpiPen. It is also important for patients to have an action plan, including what symptoms to look for, the emergency response and how to administer the auto-injector.

“In New Zealand, because auto-injectors are not funded by Pharmac [Pharmaceutical Management Agency] they are a pharmacy-only medicine,” Ms Jorgensen said. “Therefore doctors might only recommend patients get one, and patients don’t need to go back to their doctor annually to get their prescription reviewed and possibly their action plan updated.” She advises pharmacists dealing with patients who may be susceptible to anaphylaxis to check if they have an action plan which matches the auto-injector they are buying.

The Australasian Society of Clinical Immunology and Allergy (ASCIA) recommends the 150mcg version be prescribed for children weighing 10 to 20kg, and the 300mcg for adults and children over 20kg.

Free anaphylaxis training is available for pharmacists on the ASCIA website http://etrainingpharm.ascia.org.au/

**Pharmacists offer frontline anaphylaxis treatment**

Pharmacist Kim Wilkinson said allergic reactions are common in Queenstown, New Zealand.

“Many reactions occur in the evening from people eating in restaurants and suffering from food allergies. Often, it is a matter of giving antihistamines to settle things down. We also see during the day many allergic reactions to bee stings and sand-fly bites, which
are treatable with non-sedating and sedating antihistamines, topical antihistamines or hydrocortisone creams.

“We also see skin reactions where people have come into physical contact with a substance that causes an allergic response and these can be treated in the same way.”

Maree Jensen, academic director at Auckland University’s School of Pharmacy, has also encountered anaphylaxis during her pharmacy career.

“We teach it and all first aiders – which is every pharmacist with a full practising certificate – are taught about this as part of that training, so it’s reinforced every two years,” Ms Jensen said.

“The use of an EpiPen or Ana-kit [epinephrine/chlorpheniramine] is also pretty common knowledge. I’ve just finished my first-aid course renewal and role-played the use of one of these, as well as the signs and symptoms to look out for.”

Pharmacist David Postlewaight said that because his pharmacy is located next to a medical center, if someone comes in with a serious anaphylactic reaction he would immediately take the person to the GP.

The Malaysian Society of Allergy and Immunology (MSAI) lists several symptoms to help identify anaphylaxis:

- Swelling of the throat and mouth
- Difficulty swallowing and speaking
- Difficulty breathing due to asthma or swelling of the throat
- Hives anywhere on the body, particularly large hives
- Flushing of the skin
- Abdominal cramps, nausea, vomiting
- Sudden feeling of weakness (drop in blood pressure)
- Sense of impending doom, followed by collapse and unconsciousness

www.allergymsai.org
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Managing seasonal allergic rhinitis

Spring often ushers in trips to the beach and the great outdoors, but for hay fever sufferers it can also herald months of sneezing and irritated eyes.

To provide patients with the most effective hay fever treatments, pharmacists need to ascertain what the trigger is and eliminate any formerly ineffective medications.

Hay fever is a seasonal allergy which is mostly triggered by grass or tree pollens.

Symptoms include an itchy nose, roof of the mouth or eyes, a blocked or runny nose, a sore or tickly throat, and red or watery eyes.

Business manager of a pharmacy in New Zealand, Malinda Ouk, said people start coming in to the pharmacy for treatments from late August to early September, but an unseasonably warm winter this year has meant people came in throughout August.

Pharmacies stock two main types of hay fever treatments – those which treat or, in some cases, prevent the allergic reaction, such as corticosteroid nasal sprays and antihistamines, and medicines and decongestants which relieve hay fever symptoms.

There are also some products on the market which combine antihistamine with a decongestant and sometimes a pain reliever as well.

Ms Ouk is most likely to recommend a tablet-form treatment because it is the most convenient option, but said she will always check with people what treatments they previously tried and whether they were effective.

It is also important to check if people have experienced any side effects to treatments. For
example, nose sprays can cause nose bleeds in some people, particularly if they do not stick to the dosage instructions on the label.

Nasal corticosteroid sprays work by suppressing the body’s response to allergens or triggers. The sprays are most effective for severe or persistent hay fever and people should use them every day throughout the hay fever season to prevent hay fever, according to health information website everybody.co.nz.

Saline nose sprays help thin the nasal mucous and moisturize the dry nasal passages. This allows mucous to be broken down faster and gets rid of pollen and dust.

It is important to ensure people are not exceeding the recommended dose. Many people don’t realize that if the sprays are overused they can thin out the nasal mucosa layer, Ms Ouk said.

Pharmacists can also recommend a hay fever gel, which is applied around the nostrils, for people who are prone to nose bleeds, she said.

Avoid using decongestants long term
Hay fever sufferers can also try decongestants which unblock the nose to make breathing easier.

However, they should not use them for longer than three days because they can become ineffective and they are likely to get a blocked nose from rebound congestion, the website states.

Saline nose sprays are a form of decongestant.

Keep eye drops for short-term use
Anti-allergy eye drops can help to relieve hay fever symptoms such as itching, sneezing and watery eyes.

Some eye drops need to be applied as often as four to six times daily.

They can also be used as a preventative measure.

Eye drops which also contain a decongestant can help to reduce redness, but are intended for short-term use only.

People should throw drops away a month after using them. Marking the bottle with the opening date is a good way to keep track of this.

People should also keep in mind that eye drops can cause temporary stinging.

Natural hay fever treatments as an alternative
There are also some complementary treatments for people who would like an alternative. Products containing horse radish, garlic, vitamin C and fenugreek can help relieve hay fever symptoms, Ms Ouk said.

People can also try to avoid triggers, such as avoiding grassy areas and staying indoors, but this is not always a practical solution, she said.

It is important that pharmacists find out when and how often people are experiencing their symptoms to assess whether they need to be referred to an allergy specialist, Ms Ouk said.

Ask them whether they have experienced these symptoms before and if it is year-round.

If the symptoms are not isolated to the warmer months, the person could instead be experiencing an allergy to something else they are exposed to, such as food. In this case, it is a good idea to refer them to a specialist.
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Beat Diseases, Stay Fit

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Urinary tract infections (UTI) are reported to be the most common reason for women to visit their healthcare professionals. The urinary tract, the body’s system that produces, stores and eliminates urine, is made up of the kidneys, ureters, bladder and urethra.

Infection can occur in any part of the urinary tract, including the kidney (pyelonephritis) or the bladder (cystitis). In serious cases,
bacteria from the lower part of the tract, such as urethra and bladder, can travel up to the kidneys and cause pyelonephritis. UTI is associated with significant morbidity and even mortality. The bothersome urinary symptoms may cause patients to be absent from work and decrease their ability to engage in activities of daily living. In complicated UTI, the disease may lead to urosepsis and death.

Symptoms of UTI usually depend on the part of the urinary tract involved, the infection-causing organism(s), the severity of infection and the ability of the immune system to eliminate the infection.1

Common clinical manifestations of cystitis are pain or burning during urination (dysuria), frequent urge to urinate and suprapubic discomfort.2 In more serious infections, such as pyelonephritis, patients may present with fever, flank pain and/or costovertebral angle tenderness.2 In severe pyelonephritis or in the presence of renal flow obstruction, patients may also experience nausea and vomiting. Although patients with UTI usually present with symptoms, not all patients with UTI are symptomatic.

Prevalence and risk factors
UTI is a common diagnosis in women and its treatment incurs a substantial cost. It was estimated that more than US$218 million was spent in 1995 for prescription medications to treat UTIs in the US. Although UTIs occur in both females and males of all ages, women have higher prevalence than men. Approximately 50% of all women will experience at least one episode of symptomatic UTI during their lifetime4 with many having episodes of recurrent infection.5 Females have higher chances of getting UTI than males due to several factors, such as anatomic differences i.e. women have short and straight anatomy of the urethra, and hormonal effects. The difference in anatomy causes retrograde ascent of bacteria from the perineum, and this is the common cause of cystitis in females.1 Changes in hormone levels, for example lack of estrogen in post-menopausal women, also increase their risk for UTI.1 Genetic factors, including expression of HLA-A3 and Lewis blood group Le(a-b-) or Le(a+b-), may also put women at higher risk for recurrent UTI (diagnosed when patients have more than three UTI episodes in a year).1

The risk for UTI also increases in women who are sexually active.1 In addition, the use of certain types of spermicides for birth control may increase the risk for UTI.1 A person may also be predisposed to the disease by the presence of foreign bodies such as renal calculi and in-dwelling catheters which act as nidus for infection.1 Greater prevalence of UTI is also observed in women aged below 65 years and with diabetes.

Classification
Although there are many ways to categorize UTI, the commonly used classification is uncomplicated and complicated UTI. Uncomplicated UTI is UTI that occurs in patients with no known susceptible risk factors that make them more prone to UTI such as the presence of foreign bodies or anatomic abnormalities. The term is also used to describe simple urinary tract infections, for example, in cases where the infection occurs only in the bladder (cystitis). Complicated UTI includes more serious infections that are associated with the presence of foreign bodies or anatomic abnormalities.

Diagnosis
UTI can be diagnosed on the basis of clini-
cal signs and symptoms, in combination with urinalysis. UTI is described where there is presence of bacteria in the urine or ‘bacteriuria’. A urinalysis that reveals both bacteriuria and pyuria (occurrence of ≥10⁴ white blood cells (WBC)/ml in a freshly voided specimen of urine) is considered a clinical diagnosis of UTI. Traditionally, confirmatory cultures have been obtained to verify the infection and identify the specific organism(s) involved, however this practice is evolving.

There is no absolute gold-standard bacterial count for diagnosis of UTI. If a culture is obtained, the presence of at least 10⁵ colony-forming-units (cfu)/ml in freshly-voided urine is used as a threshold for culture-based definition of UTI. However for women who are experiencing symptoms of UTI, a lower number of cfu may also reflect significant bacteria. The criterion of ≥10² cfu/ml can be used as a guide in the diagnosis of UTI in women with UTI symptoms. The lower cutoff point is reported to have 95% sensitivity and 85% specificity.

At the point of consultation, the following non-laboratory tests can also be done to support the diagnosis of UTI and help in the decision to start empirical treatment:
- Visual examination of the appearance of the urine sample
- Microscopy
- Testing with a dipstick

Urine turbidity is reported to have a low specificity (66.4%), but high sensitivity (90.4%) for predicting symptomatic bacteriuria. A turbid sample can be positive for bacteriuria and a clear sample can be negative for bacteriuria. The visual appearance test, however, is prone to observer error and may not be a useful discriminator. Although urine microscopy can predict significant bacteriuria, there are concerns about health and safety at work, maintenance of equipment and training of staff that does not justify its use at point of consultation.

The dipstick test (reagent strip test) is usually used to guide treatment in women with mild or less than two UTI symptoms, whose prior probability of UTI is in the intermediate range (50%). There are at least four categories of dipstick tests: testing for nitrite only; testing for leucocyte esterase (LE) only; disjunctive pairing (dipstick positive if either nitrite or LE or both are positive); and conjunctive pairing (dipstick positive only if both nitrite and LE are positive). Of all the categories, the disjunctive pair test is significantly more accurate than the LE test alone (p=0.0001). A combination of symptoms such as dysuria and frequency is reported to be more likely to predict bacteriuria than positive dipstick test for LE or nitrite. Since the quality of evidence from the dipstick test is poor, a negative test does not exclude bacteriuria.

The probability of bacteriuria becomes lower if patients present with vaginal discharge. Pelvic examination is usually indicated in such cases to exclude alternative diagnoses such as sexually transmitted diseases (STDs) and vulvovaginitis.

UTI in men is usually complicated as they commonly result from an anatomic or functional anomaly or instrumentation of the genitourinary tract. Appropriate diagnostic tests should be considered to exclude other common conditions associated with dysuria and increased frequency such as prostatitis, chlamydial infection and epididymitis. In men with symptoms of UTI, urine culture should be performed. A possibility of upper UTI, e.g., pyelonephritis, should be considered if patients have a history of fever and back pain. UTI in symptomatic men
can be diagnosed if the colony count shows ≥10^3 cfu/ml, with 80% of the growth being of one organism.

**Pathogens**
The common cause of infection in the urinary tract is bacteria. The organism that is frequently reported as the cause of UTI in women is Escherichia coli. Approximately 85% of community-acquired and 50% of hospital-acquired UTI is associated with this organism. Other organisms include Enterococcus faecalis, Klebsiella pneumoniae and Staphylococcus saprophyticus. Hospital-acquired infection and those associated with foreign bodies may involve more aggressive organisms such as Pseudomonas aeruginosa, Serratia, Enterobacter and Citrobacter species. In recurrent UTI, the infections may be caused by the same or different organisms e.g. a re-infection by an organism from a source outside the urinary tract or from bacteria that is persistent within it.

Although UTI can also be caused by fungi and viruses, infections by these organisms are less common. Non-bacterial infections in UTI tend to occur more commonly in immunosuppressed individuals or those with diabetes mellitus. The most common non-bacterial organism that causes UTI is Candida sp. Other less common pathogens for UTI include Mycobacterium tuberculosis and a variety of anaerobic organisms.

**Treatment of UTI**
Antimicrobial therapy remains the mainstay

### Table 1: Antibiotic treatment guideline for urinary tract infection (adapted from the National Antibiotic Guideline 2008, Ministry of Health Malaysia).

<table>
<thead>
<tr>
<th>Infection/Condition &amp; Likely Organism</th>
<th>Suggested Treatment</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute Uncomplicated Cystitis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E. coli</td>
<td>Trimethoprim 300 mg PO q24h for 7 days</td>
<td>Cefuroxime 250 mg PO q12h for 7 days</td>
</tr>
<tr>
<td>Enterobacteriaceae:</td>
<td>OR Nitrofurantoin 50 mg PO q6h for 7 days</td>
<td>*Avoid sulfonamides in pregnancy</td>
</tr>
<tr>
<td>Klebsiella</td>
<td>OR *Trimethoprim/ Sulphamethoxazole 160/800 mg PO q12h for 3 days</td>
<td></td>
</tr>
<tr>
<td>Proteus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterobacter species</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staphylococcus saprophyticus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterococcus</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute Cystitis in Pregnancy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cefuroxime 250 mg PO q12h for 7 days</td>
<td>Nitrofurantoin 50 mg PO q6h for 7 days</td>
</tr>
<tr>
<td></td>
<td>OR Cefalexin 500 mg PO q12h for 7 days</td>
<td>OR Cephalaxin 500 mg PO q12h for 7 days</td>
</tr>
<tr>
<td></td>
<td>OR β-lactam/β-lactamase inhibitors e.g. Amoxycillin/Clavulanate 625 mg PO q12h for 7 days</td>
<td></td>
</tr>
<tr>
<td><strong>Recurrent Urinary Tract Infections: &gt;3 episodes/year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trimethoprim/ Sulphamethoxazole 80/400 mg PO ON for 3-12 months</td>
<td>Nitrofurantoin 50 mg PO ON for 3-12 months</td>
</tr>
<tr>
<td></td>
<td>OR Cefalexin 250 mg PO ON for 3-12 months</td>
<td>OR Cefalexin 250 mg PO ON for 3-12 months</td>
</tr>
<tr>
<td></td>
<td>OR Trimethoprim 100 mg PO ON for 3-12 months</td>
<td>As Prophylaxis</td>
</tr>
</tbody>
</table>
of treatment for symptomatic UTI. Other general measures that could help in reducing the symptoms of UTI include drinking more fluids, taking oral agents to alkalinize urine e.g. potassium citrate solution (this does not have an effect on bacteriuria) or drinking cranberry juice (inconclusive evidence for this).

Empirical treatment with antibiotics can be considered in healthy women aged below 65 years who are experiencing severe or three or more symptoms of UTI. The first-line treatment of uncomplicated lower UTI e.g. cystitis in both men and women, includes the use of narrow spectrum anti-infectives such as trimethoprim 300 mg once a day for seven days. Although a seven-day course is recommended, a three-day course of trimethoprim has been shown to be as effective as the longer course. The longer course has been reported to have additional side effects.

However, in men with uncomplicated lower UTI, a seven-day course of oral antibiotic is preferred. In uncomplicated lower UTI, the use of trimethoprim alone has been considered as effective as treatment with co-trimoxazole (trimethoprim/sulphamethoxazole).

Alternatively, other antibiotics such as cefuroxime or nitrofurantoin or co-trimoxazole can be used to treat acute uncomplicated cystitis (see Table 1). The use of broad-spectrum antibiotics such as cephalosporins, quinolones and co-amoxiclav as first-line treatment in uncomplicated cystitis should be avoided as they may increase the risk of Clostridium difficile infection, MRSA and resistant UTIs. In cases where first-line treatment fails, a urine culture should be performed and it is recommended that prescribing be based on the urine culture results.

Pregnant women with cystitis should be treated with cefuroxime for seven days. Alternatively, a seven-day course of oral nitrofurantoin 50 mg q6H or cephalexin 500 mg q12H or amoxicillin/clavulanate 625 mg q12H can be used. Although a three-day course of nitrofurantoin has been shown to be effective in non-pregnant women with uncomplicated cystitis, there is no direct evidence comparing the use of the short course of antibiotics with a longer course e.g. seven days. The Infectious Disease Society of America (IDSA) recommends the use of a seven-day course of nitrofurantoin in such cases.

Care should be taken when prescribing nitrofurantoin in the elderly as they may be at increased risk of toxicity. The drug is also contraindicated in patients with significant renal impairment. The British National Formulary advises against its use in patients with a glomerular filtration rate of below 60 ml/min. Nitrofurantoin activity can also be affected by urine pH. Increase in urine pH (more alkaline) increases the minimum inhibitory concentration (MIC) of nitrofurantoin. Therefore, when taking nitrofurantoin, patients should be advised not to take alkalinizing agents such as potassium citrate.

For patients with recurrent UTIs who have more than three episodes of UTI in a year, a prophylactic antibiotic should be given to prevent future infection. In this case, patients may require a six- to nine-month course of prophylactic antibiotic. The Malaysia antibiotic guidelines suggest trimethoprim/sulphamethoxazole 80/400 mg ON for three to 12 months as the first-line treatment for recurrent UTIs. Alternatively, a daily dose of nitrofurantoin, cephalexin or trimethoprim can be prescribed. Re-infection due to sexual intercourse may require a pericoital prophylaxis (taking a prophylactic dose of antibiotic prior to sexual intercourse) or self-medica-
tion when infection occurs.³

Treatment with non-antibiotics e.g., lifestyle changes such as alternative treatment, should also be considered to prevent the long-term use of antibiotics, which have the potential to cause antimicrobial resistance. Lifestyle changes may allow patients to self-manage the prevention of recurrent UTIs, thereby improving their quality of life. These include practicing double micturition by those with residual urine after voiding.³ Others include taking cranberry products and avoiding the use of spermicidal cream.³ When UTI is associated with sexual intercourse, emptying the bladder after intercourse or taking a prophylactic dose of antibiotic may also reduce the risk of UTI.³ In post-menopausal women whose UTI is associated with lack of estrogen, the use of vaginal estrogen cream may reduce the risk of UTI.³

Acute pyelonephritis, or infection in the upper urinary tract, can be associated with bacteremia that could be life-threatening. Hospitalization is usually required, especially when patients do not respond to antibiotics within 24 hours. For acute pyelonephritis, the first-line treatment includes the use of antibiotics with broader spectrum such as IV cefuroxime, or alternatively IV ceftriaxone, co-amoxiclav or ciprofloxacin. This is to cover the broad-spectrum organisms that usually cause acute pyelonephritis. In addition, these agents also have excellent kidney penetration.

**Counseling points**

Patients with UTI should be advised to drink plenty of water. Drinking a lot of fluids can help flush the bacteria from the genitourinary system. Most people require about six to eight glasses a day. This, however, does not apply to patients with kidney failure. Patients with kidney failure should consult their healthcare provider about the amount of fluids that is safe to be taken. Patients should also be advised to urinate when the need arises and avoid resisting the urge to urinate. Bacteria can grow if urine stays in the bladder too long. It is advisable for women and men to urinate after sexual intercourse. This habit could flush away the bacteria that might have entered the urethra during sex. In addition, women should always wipe from front to back after using the toilet to avoid the movement of bacteria to the urethra. Women who experience UTI due to the use of diaphragms or spermicides should try switching to other forms of birth control. Unlubricated condoms or spermicidal condoms can increase irritation that may promote bacterial growth.

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CONTRAINDICATIONS: Patients with known hypersensitivity to benzylamine or cetypyridinium chloride or any of the components of the vehicle.

ADVERSE REACTIONS/SIDE EFFECTS: MINOR OCCASIONS: Oral numbness, occasional burning or stinging sensation, dryness or thirst, tingling, warm feeling in mouth and altered sense of taste.

* For medical professionals only

References:
1) Mader T and Youk Lindberg T: Benzylamine reduces prostaglandin production in human gingival fibroblasts challenge with IL-1 beta or TNF alpha. Gambalt Scand 1999, 57(1): 40-45

Full prescribing information is available on request.

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