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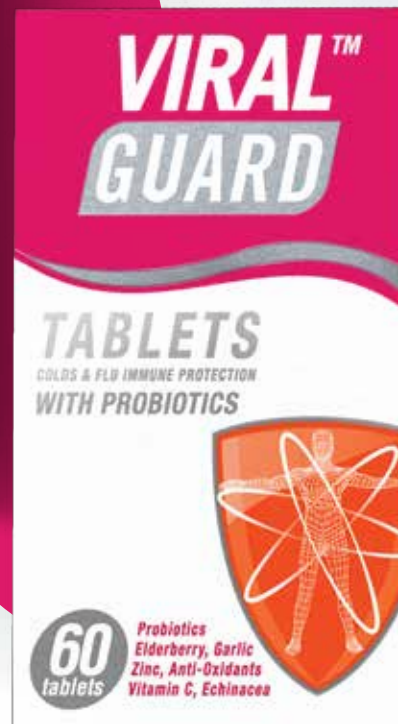
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Housekeeping in the pharmacy

Lorraine Osman

Housekeeping?

Yes, you read that correctly. But we're not talking about the housekeeping you do at home! We're going to have a look at the importance of housekeeping in the pharmacy. It's so important that the Good Pharmacy Practice (GPP) rules require the pharmacy to have a standard operating procedure on housekeeping, i.e. a document that clearly states who must do what, as well as how and when they must do it. Housekeeping is a critical part of the work of both pharmacists and pharmacy support personnel.

It's not just about making the pharmacy look good. There are two basic factors that influence housekeeping in the pharmacy – safety and productivity. There are many benefits to keeping your working environment both clean and orderly. Even the way you pack the medicines on the shelves will contribute to safety and productivity.

Efficient housekeeping in pharmacy may reduce or even prevent several incidents that can affect the health and safety of both the patient and the staff.

Cleanliness is non-negotiable

Everything from the floor upwards must be regularly cleaned. This includes countertops, storage shelves and bins, counting trays, cash registers, telephones, computers, fridges... the list is endless. And obvious.

It may even be necessary to do this more than once a day. For example, when counting trays are used to count uncoated tablets, there are times when the tray has traces of fine powder from the tablets. Clearly, the tray and the spatula that you use must be cleaned. It is particularly important when medicines contain an allergen, e.g. some antibiotics, or a toxic substance, such as a medicine to treat cancer. The patient who takes the contaminated medicine may experience undesirable effects from it. (And by the way, never ever count tablets in your hands! And don't forget to wash your hands thoroughly too!)

Avoid slip and trip risks

It occasionally happens that a bottle of liquid medicine falls on the floor. Either you drop it, or someone knocks it off a shelf. Unless it's wiped up at once, it's possible that someone may slip on it. (Wearing

the wrong shoes can also result in slips. Make sure that it doesn't happen to you.)

Tripping is most likely to happen if someone is sloppy about making sure that the aisles in the pharmacy are not an obstacle course. There should never be boxes lying unattended in areas where someone may trip over them.

A place for everything and everything in its place

When stock arrives in the pharmacy, it must be put in the correct place on the shelves. Obvious? Yes, but remember that sometimes you're busier than other times, or "someone else" may return a split pack of medicines to the wrong place.

When the time arrives for a particular product to be dispensed, it makes life so much easier if it's in the correct place. This is where our productivity comes in – it's so much easier to be more efficient when we don't waste time hunting for the product. And I'll be in a better mood and much nicer to work with!

It also reduces the possibility of taking the wrong product – if I know that product X is always the first product on the left-hand side of the third shelf from the top, I may not even notice that for today only, product Y is in its place. I know I'm obliged to check and then re-check, but what if I've had a difficult day? That's how dispensing errors happen.

Clear the clutter

I'm talking to myself here. You're probably super tidy and you wouldn't dream of cluttering the space in which you work. It is a reminder, however, that you are more likely to be efficient and effective if your working area isn't full of half empty boxes that should have been returned to the shelf immediately. Your working area should also not be a storage area.

Don't forget to clear the waste bin – if it's full of paper and packaging, it is a fire risk.

Administrative tasks

Housekeeping also includes various administrative procedures that ensure that the pharmacy is effective. For example, the temperature



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of both the pharmacy and the refrigerator must be monitored and recorded daily. This is obviously important to ensure that thermolabile (i.e. unstable when heated) medicines are correctly stored. It also includes regular servicing of the air conditioners and the fire extinguisher.

Regular checking of expiry dates, and return of short-dated products to the supplier, will also ensure that expired medicines are not dispensed.

It's a never-ending responsibility

Just as in your home, housekeeping activities cannot be done on a hit and miss basis. It must receive regular and dedicated attention. That's a difficult one at home – usually, you've just finished doing the dishes, then someone comes along and dirties them again. In a pharmacy, however, it is non-negotiable – housekeeping must be efficient and effective.



Managing mild symptoms of the common cold, influenza, and COVID-19

Sumari Davis
Amazeza Information Services, South Africa

Introduction

Whether your patient has a common cold, the flu or COVID-19, the symptoms are often overlapping and similar. Although there is no cure for these self-limiting influenza-like diseases, treatment may be offered to alleviate symptoms and ease discomfort.

Symptoms

The following symptoms are often seen in patients with the common cold:

- A sore or scratchy throat
- Cough
- Sneezing
- Blocked or stuffy nose
- Runny nose
- Headache
- Muscle aches
- Shivering or chills
- Watery eyes
- Low appetite
- Fatigue
- Earache
- Low-grade fever

Patients with seasonal influenza can also experience these symptoms, but they appear abruptly, and patients are usually more ill with substantial muscle and body aches, fever, nausea, chills, and extreme weakness.

Patients with COVID-19 may present with a high temperature, a new continuous cough, diarrhoea and a change or loss of taste or smell, in addition to the symptoms mentioned above.

Patients should be referred for immediate medical care if they experience any of the following symptoms:

- Shortness of breath
- Confusion
- Inability to stay awake
- Bluish lips or face

If patients experience any unusual or severe symptoms or if symptoms last longer than 10 days, they should also be referred to a doctor. Children younger than 3 months who are very sleepy or have a fever require referral to a doctor.

Managing symptoms at home

Patients can alleviate some of the above symptoms by ensuring sufficient rest and taking in plenty of fluids to prevent dehydration and keep mucus thin. Consuming warm liquids may promote nasal drainage and make breathing easier. Tea with lemon and honey or other hot drinks may also help relieve congestion and ease a sore throat, and although there is no scientific evidence to support this, it is not harmful. Gargling with water or salt water may also be helpful to relieve a sore throat. Patients should avoid taking alcohol and caffeine as these can contribute to dehydration.

Treatment will depend on what symptoms the patient is experiencing. Table 1 provides some medicines that can be provided over-the-counter (OTC) to relieve symptoms. It is important to always provide dosing instructions from the package insert provided by the relevant manufacturer.

Table I: Some OTC Treatment options available to alleviate flu-like symptoms

Symptom	Treatment options	Examples
Runny nose and sneezing	First-generation antihistamine tablets or syrups such as diphenhydramine, brompheniramine, chlorpheniramine or promethazine may be useful but can cause drowsiness. This may be helpful for patients who cannot sleep.	Allergex® Phenergan® Rhineton®
	Nasal sprays containing cromoglicic acid or antihistamines	Rhinolast® Sinumax® Vividrin®
Blocked or stuffy nose	Decongestants such as pseudoephedrine, phenylpropanolamine or phenylephrine may be offered but should not be used in patients with uncontrolled high blood pressure or in pregnancy. They are often combined with analgesics to relieve pain.	Nurofen® cold and flu Sinugesic®
	Normal saline nasal sprays can reduce runny nose and congestion. It can also be used to clean nasal passages before medicated products are applied. This may enhance the efficacy of intranasal medicated products.	Otrivin Sea Water® Sterimar®
	Nasal sprays containing oxymetazoline or xylometazoline may be used (maximum 2–3 consecutive days to prevent the risk of rebound congestion).	Dristan® Illiadin® Otrivin® Sinutab®
	Tablets containing decongestants are often available in combination with antihistamines*	Actifed® Coryx® Demazin® Dimetapp® Flusin®/Flusin S® Rinex® Sudafed®
Thick mucus	Carbocysteine, n-acetylcysteine, and bromhexine break down thick mucus. These make it easier to remove mucus from the airways.	Bisolvon® Bronkese® Flemex® Mucospect® Solmucol®
Sore throat and headache	Paracetamol, ibuprofen, or naproxen	Advil® Naprosyn® Nurofen® Panado®
Cough	Dextromethorphan and codeine can suppress cough but should only be used when a patient has a dry cough that keeps them awake.	Benylin® Dry Cough Dilinct® Dry Cough Pholtex® Forte
	Guaifenesin increases the production of a watery mucus and may be helpful in getting rid of mucus in patients with a wet cough. They should preferably not be used at the same time as antihistamines which work by drying up the mucus.	Benylin® Wet Cough Dilinct®

* Products may also include other ingredients such as analgesics and/or vitamin C

Cold and flu medications frequently contain combinations of active ingredients. Therefore, it is important to ensure that patients do not overdose by using more than one product that may contain the same or similar active ingredients. Always check with the patient to see what other medication they are using before recommending further treatment.

Prevention

To prevent the spread of viruses that cause respiratory diseases such as the common cold, flu, or COVID-19, it is wise to avoid large crowds of people, especially when in enclosed areas. Frequent hand washing or sanitising, and wearing masks also help reduce the spread of these diseases. Patients who are already sick should stay at home and be sure to cough or sneeze into a tissue or into a sleeve or the elbow and not into their hands.

Although there are no vaccines to prevent the common cold, vaccines are available to prevent seasonal influenza and COVID-19.

The seasonal flu vaccine contains four strains and may not always prevent the flu but can reduce the need to see a doctor with flu symptoms by up to 60%. In addition, vaccination further prevents

the spread of influenza to others, thus providing indirect protection for those who are not vaccinated.

The flu vaccine is recommended for all patients older than 6 months but especially for patients who are at high risk of getting severe disease or complications from the flu. That includes the following groups of people:

- Pregnant women
- Patients with chronic lung conditions (e.g. asthma, tuberculosis)
- Patients with chronic heart or kidney disease
- Patients with diabetes
- Patients with immunocompromising conditions such as HIV or those on cancer treatment
- Obese patients
- Children between 6 months and 18 years of age taking chronic aspirin treatment (they are at increased risk of Reye's syndrome if they get a viral infection)
- Patients older than 65 years
- People staying in nursing homes, chronic care centres or rehabilitation centres



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- Family contacts of high-risk patients
- Healthcare workers

Because the protection after a flu vaccine reduces over time and because the type of flu viruses circulating every year may differ, it is recommended to have the current flu vaccine every year. The flu vaccine takes up to two weeks before it becomes effective and should therefore be given at the beginning of the flu season as soon as the vaccine becomes available, to provide protection as soon as possible.

Although children younger than nine years of age need a second flu vaccine at least four weeks after their first-ever flu vaccine, previously vaccinated patients, and those nine years and older, need only one vaccine per season, and there is no benefit in giving another vaccine to these patients later in the same year.

COVID-19 vaccines are available, and vaccination was rolled out to include patients 12 years and older in October 2021 in South Africa. At the time of publication, booster doses are administered 3 months after completion of primary vaccination.

Conclusion

There is no cure for influenza-like illnesses, but patients with mild to moderate symptoms of the common cold, seasonal influenza, or COVID-19 can be treated at home. Management will depend on the symptoms and dosing of medications should always be according to the recommendations of the manufacturer based on the age of

the patient, as well as the presence of other concurrent illnesses. It is important to refer patients if they have severe symptoms or if recommended treatment does not improve symptoms within a few days. Prevention is always better than cure and in addition to washing hands regularly, wearing masks and maintaining physical distance, vaccines are available to prevent seasonal influenza and COVID-19.

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Immune boosters – do we need them?

Roslynn van Schoor

Introduction

The immune system is a collection of cells, tissues and molecules that work together to fight off infection. Our bodies are constantly exposed to potentially harmful viruses, bacteria, and other disease-causing organisms (pathogens). When the immune system is 'down' or not functioning well, we are more likely to develop illnesses from these pathogens. The best way to maintain a strong immune system is by following a nutrient-rich diet, exercising regularly, and reducing stress levels. Consuming certain vitamins, minerals and herbal substances may help to 'boost' a weakened immune system and supplements containing these ingredients have become increasingly popular, particularly during the COVID-19 pandemic.

A healthy lifestyle and immunity

Following good dietary habits, maintaining a healthy weight, and exercising regularly can promote better immunity. Underweight individuals tend to have poor immune function and are more susceptible to infection. Similarly, people who are obese demonstrate signs of chronic inflammation and are more likely to develop lifestyle diseases. Smoking, alcohol intake and poor sleep are also associated with decreased immunity. Consuming an energy-balanced, nutrient-rich diet is one of the best ways to optimise the immune system and avoid illness. A diet consisting of whole grains, fruits, vegetables, legumes, lean meat/meat alternatives, low-fat dairy, and healthy fats is recommended.

Micronutrients

Vitamins and minerals are needed by the body in relatively small amounts and are required for normal body function. Vitamins A, C, E, D, the B vitamins, iron, zinc, and selenium are some of the micronutrients required for immune health. Some of these

micronutrients also act as antioxidants which help to remove cell-damaging free radicals from the body. In cases of deficiency, micronutrient supplements may help to boost the immune system. It is important to note that consuming mega-doses of vitamins and minerals may be dangerous and could damage the immune system rather than support it.

Vitamin A

Vitamin A supports and maintains the protective layers of the skin, lungs and intestines, which helps keep pathogens from entering the body. The rapid division of immune cells also depends on vitamin A. Furthermore, carotenoids (precursors of vitamin A) are powerful antioxidants that help prevent cell damage and inflammation. An inadequate intake of vitamin A is associated with an increased risk of infection.

Vitamin C

Vitamin C is perhaps the most famous vitamin and is commonly found in immune-boosting supplements. Vitamin C is a powerful antioxidant and can reduce the number of 'sick days' experienced during illness. Furthermore, vitamin C is needed to make collagen, a fibrous tissue required for wound healing and skin health.

Vitamin E

Vitamin E is an antioxidant and anti-inflammatory agent. It is also required for immune cell production and the coordination of the immune system.

Vitamin D

Vitamin D is known to reduce inflammation. This nutrient is required for the synthesis of certain anti-microbial peptides, which provide a natural defence against infections. Vitamin D has also been shown to have a direct anti-viral effect against COVID-19.

The B vitamins

The B vitamins (sometimes referred to as B-complex vitamins) are involved in regulating the body's metabolism and immune system.

Most B vitamins have antioxidant and anti-inflammatory properties. Vitamin B6 is involved in immune responses while vitamin B12 and B9 (folate) are essential for immune cell production.

Iron

Iron forms a major part of red blood cells and is important for multiple body functions. Iron deficiency is common amongst children and pre-menopausal women and is linked to poor immune function.

Zinc

Zinc is a popular addition to immune-boosting supplements. It acts on both the immune responses and helps to maintain the immune cells in the intestine. Zinc deficiency is linked to increased risk of viral, bacterial, and fungal infections.

Selenium

Selenium deficiency is linked to an increased risk of respiratory infection. It is involved in immune responses and is a powerful anti-inflammatory and antioxidant.

The role of nutraceuticals

A nutraceutical is defined as a product obtained from food (e.g., herbs or plants) that is sold in a medical form (e.g., pills, powders). Since the emergence of the COVID-19 pandemic, significant research has gone into the use of such products for strengthening the immune system.

Echinacea

Echinacea purpurea is derived from a purple flower and has been shown to improve immunity by strengthening the immune response. Echinacea may help to reduce the symptoms and duration of viral infections in those with impaired immune systems.

Ginger

Ginger is a powerful antioxidant and anti-inflammatory. It may help to treat illness and boost immunity in immune-compromised individuals.

L-lysine

L-lysine is an essential amino acid (building block for protein synthesis). It is essential because it cannot be synthesised by the body and needs to be taken in through dietary sources (e.g., meat and dairy). L-lysine is needed for immune cell synthesis and assists with the rapid response of the immune system when a pathogen invades the body. It may also help to support zinc in strengthening the immune response.

L-glutamine

L-glutamine is a conditionally essential amino acid, which means that it only becomes essential when the body is under stress (e.g., illness). L-glutamine supplementation may help to boost the immune system and strengthen the immune cells of the gut.

Rooibos

Rooibos is a herb used for centuries and is a favourite tea amongst South Africans. Rooibos has displayed anti-inflammatory and

antioxidant properties and may help to relieve symptoms of infection.

Flavonoids

Flavonoids are compounds mostly found in plants which we naturally obtain by eating fruits and vegetables. There are around 6 000 varieties of flavonoids, and they are found in foods such as onions, apples, berries, kale, red wine, legumes, citrus, cocoa, and tea. Flavonoids are well-known for their antioxidant properties that may protect against illness.

Bromelain

Bromelain is a complex enzyme naturally found in pineapple. It has been used for centuries in medicines and has well-recognised anti-inflammatory properties. It also helps prevent blood clots and assists with wound healing.

Products on the shelf

Ingredient	Products containing ingredient
Vitamin A	Most multivitamins – Boost, Linctagon, LungShield, Nativa Immune Complex, Viral Guard
Vitamin C	Most multivitamins – Boost, Efferflu C, Linctagon, LungShield, Nativa Immune Complex, Viral Guard, Zinplex
Vitamin E	Most multivitamins – Boost, Nativa Immune Complex, Viral Guard
Vitamin D	Most multivitamins – Boost, Efferflu C, LungShield, Viral Guard, Zinplex
B-complex vitamins	Most multivitamins – Boost, LungShield, Viral Guard
Iron	Most multivitamins – Boost, Efferflu C, Viral Guard
Zinc	Most multivitamins – Efferflu C, Linctagon, LungShield, Nativa Immune Complex, Zinplex
Selenium	Most multivitamins – Nativa Immune Complex, Viral Guard, Zinplex
Echinacea	Echinaforce, Efferflu C, LungShield, Viral Guard
Ginger	LungShield
L-lysine	Nativa Immune Complex
L-glutamine	Vitapro Immune Complete
Rooibos	Nativa Immune Complex
Flavonoids	LungShield
Bromelain	Linctagon

Conclusion

A strong immune system is needed to fight off infection and illness. Following a nutritious diet, exercising regularly, and avoiding unhealthy habits are key to maintaining optimal immune function. Immune-boosting substances can help protect and regulate the immune system and may reduce the inflammation and cell-damage that occurs during illness.

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Gout

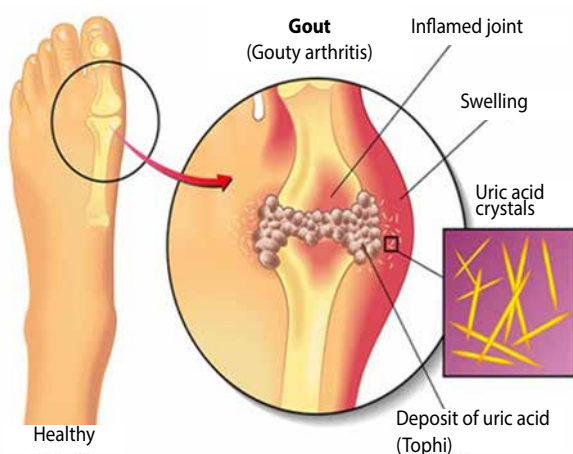
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Introduction

When we consume food and drinks, the body must extract what it needs and send the rest away as waste. When the body breaks down purines, which are found in some foods, it forms uric acid. Most of the uric acid dissolves in the blood, passes through the kidneys and leaves the body in urine. When there is too much uric acid in the blood, a condition called hyperuricaemia occurs.

This can happen when the body either makes too much uric acid or is unable to excrete enough of it. It usually happens because the kidneys are not eliminating it quickly enough. The excess uric acid can then lead to the formation of crystals anywhere in the body, but they tend to mostly form in and around joints and in the kidneys.

Hyperuricaemia does not always cause gout, and hyperuricaemia without gout symptoms does not need to be treated. Although hyperuricaemia is not a disease, over time, if uric acid levels remain high, it can lead to several diseases such as gout, tophaceous gout and kidney stones.



Signs and symptoms of gout

Symptoms of gout include severe pain, redness and swelling in joints, often the big toe, but can occur in any joint. Other commonly affected joints include the fingers, wrists, elbows, ankles, and knees. Pain and inflammation occur when uric acid crystallises, forming sharp, needle-like urate crystals and deposits in the joints and surrounding tissues. Attacks of gout present as severe pain, redness and swelling in the affected joints. Attacks can come on suddenly, often at night and the pain is likely to be the most severe within the first 4 to 12 hours. Thereafter, some joint discomfort may last from a few days to a few weeks. Red, shiny skin and limited range of motion in the affected joint is also usual.

What causes these symptoms?

When the kidneys do not eliminate uric acid efficiently, the uric acid levels rise.

Factors that may cause high uric acid levels include:

- Being male
- Obesity
- Having certain health conditions, including
 - Diabetes
 - High blood pressure
 - Poor kidney function
 - High cholesterol
 - Congestive heart failure
 - Hypothyroidism (underactive thyroid)
 - Psoriasis
- Using diuretics
- Genetics – gout often runs in families
- Drinking alcohol – risk of gout increases as alcohol intake increases
- Having a diet high in purines

Foods with high purine content

- All organ meats such as liver, kidneys, sweetbreads, and brain
- Game meats such as pheasant and venison

- Fish such as herring, trout, mackerel, tuna, sardines, anchovies, and haddock
- Other seafood such as scallops, crab, and shrimp
- Sugary beverages, especially fruit juices and sugary sodas
- Yeast supplements like brewer's yeast
- High-fat foods such as bacon and dairy products

How alcohol affects gout

Drinking any alcohol affects the risk of gout in two ways.

1. Some alcohol, particularly beer, is high in purines, which are then broken down into uric acid and, in that way, increase uric acid levels.
2. Alcohol decreases the excretion of uric acid by the kidneys, which increases the uric acid levels in the blood.

How often do gout attacks happen?

Some people have gout attacks frequently, while others go years between episodes. If gout is not treated, attacks may become more frequent and last longer. Gout attacks can happen repeatedly in the same joint or affect different joints each time.

How to treat gout

Non-pharmaceutical treatments

- Drink plenty of water – increasing fluid consumption, with, mainly, water but also other clear fluids, such as herbal teas, will get the kidneys to release excess fluid. It is best to avoid alcohol and sugary sodas as they can increase the uric acid levels.
- Apply ice to and elevate the affected joints – this can help reduce inflammation and swelling.
- Limit purine-rich foods – eat more fruits, vegetables, whole grains, lean protein, and low-fat dairy products.
- Drink coffee – some research suggests that drinking coffee in moderation, especially regular caffeinated coffee, may be associated with a reduced risk of gout. Studies suggest that uric acid levels may decrease with increasing coffee intake.
- Maintain a healthy body weight – losing weight lowers the risk of gout and lessens the overall stress on joints.
- Vitamin C supplements – moderate amounts of vitamin C have been linked to lower uric acid levels. Large doses, however, can raise uric acid levels.
- Eat cherries – studies have shown that cherries may have the ability to reduce both acute and chronic inflammation that plays a role in recurrent gout attacks.

Over-the-counter treatments

- Nonsteroidal anti-inflammatory drugs (NSAIDs) – There are several NSAIDs that are effective in relieving pain and inflammation and are available OTC (Table I). Care should be taken to make sure the patient knows how to take the NSAID in relation to food intake.
- Colchicine – An anti-inflammatory drug that effectively reduces the inflammation and pain associated with gout. It does not affect the elimination of uric acid by the kidneys but can lessen

the build-up of uric acid crystals in the affected joints. It may be used in combination with NSAIDs. Taking more than the recommended dose may not increase the effectiveness but may increase the risk for side effects.

Table I: Nonsteroidal anti-inflammatory drugs

Active ingredient	Adult dosage for gout
Diclofenac e.g. Diclo-Flam, Panamor Voltaren, Cataflam, K-Fenak	50 mg 3 times daily for a max of 5 days Max total dose 150 mg per day
Indometacin e.g. Arthrexin	Initially 50–100 mg, then 50 mg 3 or 4 times daily
Ibuprofen e.g. Nurofen, Lenafen, Brufen	600–1 200 mg/day in divided doses for a max of 5 days Max total dose 2 400 mg per day
Naproxen e.g. Aleve, Adco-Naproxen, Napflam	Initially 750 mg, then 250 mg every 8 hours
Colchicine	
<ul style="list-style-type: none"> • For acute gout: 0.5–1 mg followed by 0.5 mg 6 hourly until the pain is relieved or GI distress develops • Max 2.5 mg in the first 24 hours • Max total dose 6 mg over 4 days 	
<ul style="list-style-type: none"> • For the elderly: lower doses to be used with max 3 mg over 4 days 	
<ul style="list-style-type: none"> • For prophylaxis: 0.5 mg once daily 	

In summary

Gout is a painful medical condition that often occurs alongside other serious conditions. While a healthy lifestyle may lower the risk of subsequent attacks, it may not be enough to prevent symptoms or manage the disease.

Medication can help reduce pain and may prevent the risk of future gout attacks. For those with frequent gout attacks, it is advised to talk to a doctor about starting prescription medication to lower uric acid levels and prevent future attacks.

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Allergic conjunctivitis

Yolanda Moroney

Introduction

Acute allergic conjunctivitis is a sudden-onset reaction that occurs when one encounters a known allergen for that person, such as cat dander. An allergen is a substance that can potentially cause an allergic reaction.

In some people, the immune system recognises allergens as foreign or dangerous, and reacts by making antibodies to defend itself against the perceived threat. This will cause histamine to be released, and the eyes may become itchy, red and teary. Allergic conjunctivitis does not usually cause serious complications. A number of eye drop formulations are available over-the-counter (OTC), which may help relieve the symptoms of allergic conjunctivitis.

Understanding conjunctivitis

There are three types of allergic conjunctivitis.

Acute allergic conjunctivitis is a sudden-onset reaction that occurs when the allergic person encounters a known allergen, such as cat dander. Symptoms such as itching, tearing, redness and swelling of the eyelid can be severe, although they usually resolve within twenty-four hours of removal of the allergen.

Seasonal allergic conjunctivitis causes milder but more persistent symptoms during the pollen season. Seasonal allergens include pollen from trees, grass and weeds.

Perennial allergic conjunctivitis is a mild, chronic form of allergic conjunctivitis related to year-round environmental allergens, such as dust mites, animal dander and moulds. These allergens typically occur indoors.

Other causes of allergic conjunctivitis include:

- Scents from household chemicals and perfumes

- Medications or substances used in the eyes, such as medicated eye drops or contact lens solutions.

Symptoms

These include:

- Redness, watery discharge, itching
- Burning
- Puffy eyes, particularly in the mornings
- Sensitivity to light

Both eyes are usually affected and rubbing the eyes can make symptoms worse.

Management

The following measures may help alleviate the symptoms of allergic conjunctivitis:

- Avoid exposure to allergens as much as possible. Common triggers include animal dander, dust, pollen, and mould.
- Do not smoke and avoid second-hand smoke.
- Apply cool compresses to the eyes to help reduce inflammation and itching.
- The use of lubricating eye drops dilute the allergen and may help remove it.
- Avoid rubbing the eyes.

Taking **oral antihistamines** may be helpful. These include agents such as loratadine, cetirizine and fexofenadine. They are most useful when taken as a preventative measure before exposure to the allergen.

Over-the-counter eye drops

There are a number of OTC eye drop formulations available that may be considered to provide relief from the symptoms of eye allergies.

Antihistamines

These agents provide rapid relief from allergic symptoms by blocking histamine in the eye. They are useful for treating symptoms of seasonal allergic conjunctivitis.

Examples include emedastine, levocabastine and antazoline.

Mast cell stabilisers

Histamine is released through mast cells. Mast cell stabilisers act by slowing down this release. They are slower to relieve symptoms than antihistamines, but the effects are longer lasting.

Mast cell stabilisers are used to best effect for long-term prophylaxis in seasonal conjunctivitis, and treatment should be started before exposure to allergens.

Examples include lodoxamide and sodium cromoglycate.

Decongestants

These relieve redness of the eye. Prolonged use should be avoided since rebound redness may occur. If irritation and redness last longer than 48 hours, medical attention should be sought.

Examples include naphazoline, phenylephrine, oxymetazoline and tetrahydrozoline.

Combination preparations

Antihistamine with mast cell stabiliser: The antihistamine component provides relief from allergic symptoms before the mast cell stabiliser starts to take effect. These agents are useful for temporary prevention of itching, and to treat seasonal or perennial allergic rhinitis.

Examples include olopatadine and ketotifen.

Antihistamine with decongestant: These relieve itching of the eye and are useful for sudden-onset allergic conjunctivitis. They should not be used for a prolonged period of time.

An example is antazoline with tetrahydrozoline.

Antihistamine with astringent: The astringent reduces excess tearing in the eye.

An example is naphazoline with zinc sulphate.

Lubricating eye drops

These relieve symptoms of allergic conjunctivitis by washing allergens from the eyes. Unit dose agents without preservatives are preferred for frequent use, e.g. two hourly.

Examples include hydroxypropyl methylcellulose, polyvinyl alcohol and carboxymethyl cellulose.

Remember: All OTC eye drops should be used according to the manufacturer's instruction and patients who wear contact lenses may need to check the prescribing information before using eye drops.

Prevention

Limit exposure to common triggers.

- Keep **pets** out of the bedroom. When visiting a house where there is a pet, consider taking an oral antihistamine medication one hour beforehand.
- Keep windows closed when the **pollen** count is high.
- Protect the eyes from pollens by wearing wrap-around sunglasses
- Reduce exposure to **house dust mites** by vacuuming often using a machine with a HEPA filter. **Dust** with a clean, damp cloth.
- Avoid exposure to harsh chemicals, dyes, and perfumes.

Table 1: Category, action, and examples of OTC eyedrops suitable for treating allergic conjunctivitis

Therapy	Action	Examples	To note
Antihistamines	Block the effects of histamine	Emedastine Levocabastine Antazoline	Symptoms of seasonal allergic conjunctivitis are relieved rapidly
Mast cell stabilisers	Slow down the release of histamine and take longer to relieve allergic symptoms, but the effects last longer	Lodoxamide Sodium cromoglycate	Used to best effect in long-term prophylaxis of seasonal allergic conjunctivitis Start treatment before exposure to allergens
Decongestants	Relieve redness of the eye	Naphazoline Phenylephrine Oxymetazoline Tetrahydrozoline	Avoid prolonged use since rebound redness may occur
Lubricating eye drops	Wash allergens from the eyes	Hydroxypropyl methylcellulose Polyvinyl alcohol Carboxymethyl-cellulose	Formulations without preservatives are preferred for frequent use
Combinations			
Decongestant with antihistamine	Relieve itching in the eye	Antazoline with tetrahydrozoline	Useful for sudden onset allergic conjunctivitis Not for prolonged use
Decongestant with astringent agent	Reduce excessive tearing in allergic conjunctivitis	Naphazoline with zinc sulphate	
Combination of antihistamine and mast cell stabilisers	Antihistamine component provides quick relief of symptoms before mast cell stabiliser starts working	Olopatadine Ketotifen	Useful for seasonal or perennial allergic conjunctivitis

Begin eye drops for prophylaxis of allergic conjunctivitis before the allergy season starts.

Call the doctor if

- Headache develops in addition to other symptoms
- Severe pain develops in the eye
- There are problems with vision, or sensitivity to light
- The eyes are very red
- Eyelids, or the skin around the eyes, becomes red or swollen
- Symptoms of allergic conjunctivitis do not respond to self-care measures and OTC treatment

Conclusion

Allergic conjunctivitis may be managed with conservative measures and OTC eye preparations. The pharmacist's assistant is well placed to give appropriate advice in this regard. A doctor should be

consulted if symptoms are severe or if there is no improvement after a reasonable length of time.

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Fighting fungal infections

Haley Smith

Introduction

Fungal infections may be caused by many different types of fungi that live in the environment. They may be spread by direct contact with animals or humans and indirectly from the soil or from contaminated surfaces and in the air.

Common fungal infections

These conditions are often localised to specific parts of the body and are caused by various fungal species. Common fungal conditions include superficial infections of the nails, skin and hair.

Fungal nail infections

A fungal nail infection may develop in people at any age, but it is more common in older adults. As the nail ages, it may become dry and brittle. The resulting cracks in the nails allow fungi to enter. A fungal nail infection is a common condition that begins as a yellow or white spot under the tip of the toenail or fingernail. As the fungal infection spreads deeper, the fungus may cause the nail to become thick, discoloured, break and crumble at the edge. The nail may loosen and separate from the nail bed. The fungus can also spread to the skin around the nail. Several nails may be affected, and infections are generally more common in toenails.

Fungal scalp infections

Ringworm that affects the scalp is a fungal infection that causes a ring-shaped mark on the skin. This rash occurs more commonly in children than in adults. The infection may begin as a small pimple that spreads outwards across the scalp, producing many separate red, scaly, hairless or bald patches. Infected hairs become brittle and break off easily. A person can contract the infection from direct

contact with an animal, another person or a damp environment, such as a public pool.

Fungal skin infections

Yeasts, candida or dermatophytes usually cause fungal infections of the skin. Fungal skin infections may occur anywhere on the body. The dermatophytes are responsible for common fungal skin infections such as tinea (ringworm) of the face, body, groin (jock itch) and feet (athlete's foot).

Table 1: Prevention of common fungal infections

Condition	Prevention
Nail infection	<ul style="list-style-type: none"> • Keep feet/hands dry and clean • Avoid walking barefoot in public showers or locker rooms • Recommend nail salons sterilise equipment after each visit • Keep nails clean and short • Avoid sharing nail clippers • Disinfect nail clippers after each use • Change socks regularly or wear sweat-absorbing socks
Scalp infection	<ul style="list-style-type: none"> • Do not share towels or other personal items • Wash hands after contact with pets or other animals • If a pet has ringworm, take it to the vet for treatment
Skin infection	<ul style="list-style-type: none"> • Keep skin dry and clean • It is important to pay attention to hygiene and skincare • Absorbent cotton clothing is essential • To avoid micro-organism growth, avoid occlusive clothing such as tight-fitting plastic pants • Wear dry, clean clothes, socks and shoes • Wear shower sandals in public showering areas • Wash and dry area with a clean towel and do not share towels or personal items
Dandruff	<ul style="list-style-type: none"> • Wash hair every day to reduce excess oil on the scalp • Limit hair styling products • Eat a healthy diet • Manage stress

Table II: Treatment of common fungal infections

Condition	Treatment
Nail infection	<p>A nail paint may be useful for limited infections</p> <p>Amorolfine is indicated for nail infections caused by dermatophytes, yeasts and moulds</p> <p><i>Directions for use</i></p> <p>File away as much of the nail plate as possible</p> <p>Clean and degrease the filed nail surface</p> <p>Spread the applied lacquer over the affected nails and allow to dry</p> <p>Repeat process 1–2 times per week without interruption until the nails have regrown normally</p>
Scalp infection	<p>Cream, lotions or powders usually don't work for ringworm on the scalp</p> <p>Best treated with prescription antifungal medication for complete eradication</p>
Skin infection	<p>The choice of treatment will depend on the organism being treated</p> <p>Topical preparations such as creams, ointments and lotions are available</p> <p>Cutaneous candidiasis</p> <ul style="list-style-type: none"> • May be treated topically with terbinafine or nystatin <p>Tinea infections</p> <ul style="list-style-type: none"> • Mild superficial tinea infections may respond well to tolnaftate or zinc undecenoate • Antifungal powders (e.g. zinc undecenoate) may be a useful adjunctive agent for moist areas • For moderate skin infections, topical imidazole (clotrimazole, miconazole, ketoconazole) or terbinafine may be applied to affected areas
Dandruff	<p>Mild dandruff may be treated with a gentle daily shampoo</p> <p>If gentle daily shampoo is not effective, then a medicated shampoo may help</p> <p>Anti-dandruff shampoos may contain:</p> <ul style="list-style-type: none"> • Coal tar • Ketoconazole • Selenium sulphide • Zinc pyrithione

Signs of fungal skin infections vary from person to person and may differ depending on which area is affected. Symptoms of local fungal skin infections may include a red, ring-shaped rash, irritation, blisters, itching and swelling. A burning sensation, peeling, cracking and scaling may manifest in athlete's foot.

Fungi grow best in moist, warm places such as swimming pools, public showers, locker rooms, shoes and socks. Fungal skin infections, therefore, occur more often in the summer and in hot, humid climates.

Dandruff

Dandruff is a common condition that causes the skin on the scalp to itch and flake. Dandruff signs and symptoms may include skin flakes on the hair, moustache or beard and eyebrows. Since dandruff is a chronic relapsing condition, there will usually be a previous history of fluctuating symptoms.

Treatment

The treatment for fungal infections depends on the location on the body and how serious the infection is. Certain fungal infections may be treated with over-the-counter (OTC) medications. It is advised to use the OTC preparation as long as directed. Even if the rash is no longer visible, the fungal infection may still be present.

Conclusion

Most mild to moderate fungal infections are usually treatable with OTC preparations. If the condition does not improve with treatment

or worsens, it is recommended to refer the patient to a doctor. If the patient tends to suffer from repeated fungal infections, it is advised that they discuss the matter further with a healthcare provider about how to prevent the fungal infection from returning.

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Over-the-counter management of gastro-oesophageal reflux disease

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Introduction

There is a high prevalence of heartburn and acid regurgitation (reflux) in the general population, and the severity and frequency of symptoms vary between patients. Some patients may only experience infrequent/occasional reflux, while others may experience severe or frequent episodes which disrupt daily life.

Understanding gastro-oesophageal reflux disease

After swallowing, the food is carried from the mouth via the oesophagus to the stomach. The stomach produces gastric acid that aids in the digestion of food.

When functioning normally, the circular ring of muscles between the stomach and the oesophagus, known as the lower oesophageal sphincter (LOS):

- Opens or relaxes to allow food or liquid in the oesophagus to pass into the stomach.
- Then closes to prevent contents from the stomach (including acid and bile) backing up into the oesophagus.

Reflux occurs when the LOS becomes weakened or relaxes inappropriately thus allowing acidic contents from the stomach to flow back into the oesophagus and/or mouth.

Healthy people of all ages may experience occasional acid regurgitation (reflux), usually after eating a meal. In most cases, it is short-lived, and does not cause troublesome symptoms or complications.

Compared to the stomach lining that is resistant to the irritant effects of acid, the oesophagus is readily irritated by acid (since it does not have a protective lining). Constant reflux of stomach contents from the stomach into the oesophagus can irritate and damage the sensitive lining of the oesophagus causing troublesome symptoms. When this happens, it is referred to as gastro-oesophageal reflux disease (GORD).

Typical symptoms of GORD include:

- Acid reflux (regurgitation) causes an unpleasant sensation of acid at the back of the mouth or throat (sour taste).
- Heartburn is a burning sensation in the centre of the chest (behind the breastbone but can sometimes spread to the throat).

Other symptoms may include:

- Stomach pain (pain in the upper abdomen)
- Chest pain
- Difficulty swallowing (dysphagia)
- Pain on swallowing (odynophagia)
- Hoarseness
- Persistent sore throat or laryngitis
- Chronic cough
- Sensation of a lump in the throat
- Nausea and/or vomiting
- Sleep disturbances

When to refer

Before OTC treatment is considered, it is important to ask the patients about the presence of alarm or "red flag" symptoms. Patients experiencing signs and/or symptoms of a more serious nature should be referred to a doctor (Table I).

Table I: Patients who require referral to the doctor

Red flag symptoms that require referral:

- Difficult or painful swallowing
- Involuntary (unexplained) loss of weight
- Chest pain (to rule out heart disease)
- Recent cough or hoarseness
- Choking attacks, particularly at night
- Persistent vomiting
- Signs of bleeding in the gastrointestinal tract, such as blood in stools, black stools, blood in vomit

Referral is also required for:

- Pregnant women
- Patients with:
 - New symptoms/stomach pain in those aged 50 years or older
 - Severe symptoms
 - Persistent symptoms

Treatment

Treatment depends on the severity and frequency of symptoms. Intermittent treatment and lifestyle and/or dietary modifications (Table II) may be sufficient for patients with infrequent episodes of heartburn (less than two episodes per week).

However, patients experiencing more frequent episodes (e.g. on two or more days per week) may require over-the-counter (OTC) medicine such as a proton pump inhibitor (PPI) or a histamine-2 receptor antagonist (H₂RA).

Table II: Lifestyle modification

Patients should be advised to:

- Maintain a healthy weight; losing weight may help to reduce reflux in those who are overweight
- Stop smoking
- Avoid wearing tight or restrictive clothing
- Raise the head of the bed by about 15–20 cm (especially for those experiencing night-time heartburn). Doing this would allow the head and shoulders to be higher than the stomach, thus allowing gravity to prevent acid from flowing back into the oesophagus and mouth
- Try to relax and reduce stress

Reflux is more likely to occur soon after a large meal. To minimise the risk of reflux, patients should be advised to:

- Consume smaller and more frequent meals
- Avoid late meals and lying down soon after eating
- Limit food or drinks that may trigger symptoms (such as excessive caffeine, alcohol, chocolates and fatty foods)

Antacids

Antacids contain ingredients such as aluminium hydroxide, magnesium trisilicate and/or calcium carbonate. They work by neutralising the stomach acid. However, they do not prevent GORD.

Antacids typically start working quickly (within five minutes), but they only provide short-term relief of heartburn symptoms. Antacids should preferably be taken an hour after meals and again at bedtime.

Antacid combined with other agents

- Antacid-alginates

Alginates form a viscous gel that floats on the surface of the stomach contents that protects the stomach and oesophagus from stomach

acid. Compared to antacids alone, antacid-alginates may provide longer symptom relief. Antacid-alginates are effective in controlling meal-induced symptoms.

- Antacids combined with other agents

Antacids are sometimes combined with a local anaesthetic (e.g., oxethazaine), an antifoaming agent (e.g., dimethicone or simethicone) or an antispasmodic (e.g., dicyclomine). However, the addition of an antifoaming agent or a local anaesthetic does not add to the efficacy of the antacid.

Points to consider

- Aluminium-based antacids tend to cause constipation.
- Magnesium-based antacids tend to have a laxative effect.
- Aluminium-magnesium combination may cause fewer bowel disturbances compared to single agents.
- Sodium containing antacids should be avoided in pregnant women and in patients on a restricted sodium diet, for example, patient with high blood pressure.

H₂RAs

H₂RAs reduce the secretion of acid in the stomach by blocking the action of histamine on the histamine-2 receptors on the parietal cells in the stomach.

OTC H₂RAs (for example, cimetidine) are available for short-term (limited to 14 days) relief of heartburn, dyspepsia and hyperacidity. Although they take longer to start working than antacids, they are more effective in relieving heartburn and their effect lasts longer than that of antacids.

PPIs

PPIs reduce the amount of acid made by the stomach. They work by blocking the final step of acid production by inactivating the enzyme responsible for acid production (hydrogen-potassium ATPase pump) in the parietal cells in the stomach wall.

PPIs are the most potent inhibitors of gastric acid and are typically recognised as being the most effective medicine in reducing stomach acid. Compared to H₂RAs, PPIs have been found to be more effective in relieving heartburn and reflux. PPIs also provide faster symptom relief.

OTC PPIs (such as lansoprazole, omeprazole and pantoprazole) are approved for short-term (maximum duration of 14 days) relief of heartburn and hyperacidity. The different PPIs have comparable clinical efficacy and choice of product depends on cost, personal preference, the potential for interactions and side effects.

Better symptom control is achieved with continuous dosing (taking PPI daily for 14 days) compared to on-demand use. Patients who do not respond to two weeks of PPI treatment should be referred to a doctor.

Table III: OTC antacids, H₂RAs and PPIs

		OTC examples (include, but are not limited to)
OTC antacids	Aluminium hydroxide	Amphogel®
	Magnesium hydroxide	Phipp's Milk of Magnesia®
	Aluminium/magnesium combination	Adco-Mayogel®
	Calcium/magnesium combination	Digestif Rennie®
	Calcium carbonate	Eno chewable tablets®
	Antacid-alginate combination	Gelacid®, Gaviscon double action liquid®, Gaviscon peppermint tablets®
	Antacid with antiflatulents	Gelusil-S®
	Antacid with antispasmodics	Alumag D®
	Antacid with local anaesthetic	Mucaine®
H ₂ RA	Cimetidine	Lenamet OTC®
PPIs	Lansoprazole	Lansoloc OTC®, Roznal OTC®, Lancap OTC®
	Omeprazole	Rapacid®
	Pantoprazole	Pentoz OTC®, Peploc OTC®, Prazoloc OTC®, Topzole OTC®

In a nutshell

- Remember "safety first" – Identify and refer patients with "red flag" symptoms.
- Consider the frequency and severity (intensity) of symptoms as well as the degree to which they impact the quality of life and daily function before selecting treatment.
- Consider possible interactions if the patient is already using medication for other medical conditions, for example:
 - Antacids may alter the absorption of several other medications (such as antibiotics). To reduce the possibility of interference with other medication, antacids should be taken at least two hours before or after other oral medication.
 - Cimetidine has a high potential for drug interactions.
- Antacids or alginate-antacid may be used for occasional heartburn (occurring less than once a week). They may also be used for rapid symptom relief in patients experiencing breakthrough symptoms while taking an acid inhibitor.
- H₂RAs or PPIs may be considered for patients experiencing more frequent symptoms.
- OTC treatment with H₂RAs or PPIs is limited to 14 days to ensure that patient do not continue to self-medicate. If symptoms do not improve after 14 days of treatment or recur, the patient should be referred to the doctor.

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Pain medication and immunisation – yes or no?

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Introduction

Vaccines are amongst the most effective ways to prevent infectious diseases. They are designed to trigger an immune response so that the body can fight off and 'remember' specific germs. When those germs confront the immune system at a later stage, it can then react strongly and effectively prevent the disease.

Vaccinations not only protect the person that receives them, but they also keep other people safe by eliminating or significantly decreasing infectious diseases that used to easily spread from person to person.

Parents often want to prevent some of the possible side effects of vaccines, such as pain and fever, by giving their child a dose of a painkiller before taking them for vaccination. Even adults take painkillers prophylactically before going for vaccination and specifically when they get the COVID-19 vaccination. There have, however, been some studies done on how this may affect the immune system's response.

Two studies done in 2009 raised concerns about alleviating infants' symptoms by giving them painkillers before vaccinations. These studies found that because the medications lowered the immune system response to vaccines, those who got the painkiller also had a diminished immune system response to the vaccine itself. Centers for Disease Control and Prevention (CDC) physicians wrote that the 2009 studies made a compelling case against routine use of pain-reducing medication before vaccination.

More studies have been done more recently, most of which found that prophylactic use of pain and fever medication affect the immune responses to vaccines. However, the effects vary depending on the vaccine, the medication, and the time of administration.

Researchers acknowledge that the evidence is incomplete, but it is currently considered best to err on the side of caution and not give the medications unless they are truly needed.

For most people, it is not recommended to avoid, discontinue, or delay medications that they are routinely taking for prevention or treatment of other medical conditions around the time of vaccination. If the patient is taking medication that suppresses the immune system, like high doses of cortisone, they should talk to their doctor first before getting vaccinated.

There are other proven ways of reducing pain during vaccination that can be employed.

- Apply topical anaesthetics to numb the skin on the area that will be injected.
- Encourage mothers to breastfeed their infant before, during and after vaccination. Bottle feeding and using pacifiers also soothe infants after vaccination.
- When parents hold the child on their lap during vaccination, or hug them, they will often stay still and feel more secure.
- Relax and take slow deep breaths. Look away from the needle, and it will be over in no time at all.

What can be done after vaccination

Fevers can develop as soon as 1–2 days after vaccination with some inactivated vaccines, but may take as long as 2–4 weeks to develop after some live vaccines, for example, the chickenpox vaccine. For mild soreness and fevers, it is recommended not to give any painkillers. If, however, it becomes necessary, some paracetamol can be given; the dosage will depend on the patient's age and, in the case of children, their weight. (Table I).

It is important to remember that fevers are a normal part of the immune response. Unless the fever that develops is high, or is causing substantial discomfort, the best thing to do is to make sure the patient stays hydrated and drinks plenty of fluids. Another important point to remember is not to give children any aspirin-containing medication, as this has been associated with Reye's syndrome.

Table I: Dosage of paracetamol according to age

	3–12 months	1–5 years	6–12 years	Adults
Oral Given 4–6 hourly Max 4 doses in 24 hours	60–120 mg	120–240 mg	250–500 mg	500–1 000 mg max 4 g/24 hours
Rectal Given 4–6 hourly Max 4 doses in 24 hours	60–125 mg	125–250 mg	250–500 mg	
Dose from 1–3 months (oral or rectal)	20 mg/kg/dose Given 6 hourly Max 90 mg/kg/24 hours			

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What is in your first-aid medicine cupboard?

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Introduction

Having the right medications and medical supplies available can make a world of difference when you are in need. Someone will need that pain and fever or nausea medication in the middle of the night, over a long weekend, when even the emergency pharmacy is closed.

When a customer comes into the pharmacy requesting assistance with stocking their medicine cupboard, it is an excellent opportunity to make sure they know how to use all their medication and that they check the medicines' expiry dates every couple of months. Remind them that bringing all their expired or old medications to the pharmacy is the best way to dispose of them.

The most useful items in a medicine cupboard should include something for pain and fever, cuts, grazes and burns, something for all the stomach ailments that can occur, and something for colds and flu.

Pain and fever

Dos and don'ts for treating pain and fever

- Stay hydrated and drink lots of clear fluids.
- Remove excess clothing during a fever.
- Know how to take medication correctly – how and when.
- Do not change the dose or dosage frequency of the medicines.
- Do not take pain medication with alcohol or recreational drugs.
- Check that pain medicines can be taken with the prescription medication that the patient is already taking.

- Do not give aspirin to a child under the age of 16 years.
- Remember that nonsteroidal anti-inflammatory drugs (NSAIDs) should usually be taken with food.

Refer to a doctor

- If the fever or pain is accompanied by a stiff neck, confusion, irritability, or a rash
- A fever remaining above 39.5 °C for longer than two hours after home treatment
- A fever lasting longer than two days
- Photophobia or light sensitivity that develops
- Dehydration presenting as less urine, sunken eyes, and no tears
- Seizures that occur
- Sudden or severe pain of unknown origin
- Pain that spreads down one or both legs, especially if it goes past the knees
- Pain with weakness, numbness, or tingling in one or both legs

Treating pain and fever at home

Paracetamol and many NSAIDs are available over-the-counter (OTC), on their own or in combination, to treat pain and fever. Make sure to include paediatric formulations when there are children in the family.

Stomach ailments

These include nausea and vomiting, diarrhoea, indigestion, bloating, stomach cramps and constipation. While many of the dos and don'ts apply to all these ailments, some are more specific.

Dos and don'ts for treating nausea, vomiting and diarrhoea

- Make sure to stay well hydrated by drinking plenty of clear liquids, water and sports drinks, which replace lost electrolytes. Recommend small sips of fluids regularly, as large amounts of

fluid may make the symptoms worse. Sucking on ice chips is also helpful.

- Avoid dairy and citrus juices.
- Do not resume a normal diet until a bland diet is well tolerated.
- Retake medication if vomiting occurs within 30 minutes of taking oral medications and take extra precautions if vomiting occurs after taking oral contraceptives.

Refer to a doctor

- If signs of dehydration occur, for example, lightheadedness, decreased urination (no urination at least every eight hours) or severe fatigue
- Fever accompanied by abdominal pain
- If the patient cannot keep any food or liquids down for more than 24 hours
- Diarrhoea for more than three days or without gradual improvement over five days
- Bloody diarrhoea
- If the patient is unable to take usual prescription medications
- Any ailment that persists

Treating stomach ailments

Some home remedies are available, such as taking mint and/or ginger. A cool compress behind the neck for nausea or a heating pad on the stomach for cramping can help alleviate discomfort.

Cuts, grazes and burns

Minor cuts, grazes and burns frequently occur at home or on holiday and are easily treated with OTC medication and ointments. Infection and worsening of the injury can occur if the wound is not adequately cleaned and treated.

Dos and don'ts for cuts, grazes and burns

- Firstly, the wound should be staunched, cleaned, and then assessed. Clean a minor injury under drinking-quality running water or using sterile wipes. Then pat dry with a clean towel or sterile gauze. Clean around the wound with soap and water, taking care to wipe away from the wound.
- For cuts, elevate the injured part above heart level where possible. Apply a sterile dressing or plaster.
- Ice is not recommended as an initial treatment for burns, but soaking in cool water is fine.
- Do not use any food-based products like butter on the burn as this could cause infection or make it more difficult to clean.
- Use antibiotic ointments and keep burn wounds covered as burns heal better in moist, covered environments.

Refer to a doctor

- If a wound will not stop bleeding
- If a foreign object is embedded in the wound
- If it looks like the wound has become infected
- If the wound is from a human or animal bite

- Any burn wound that has more than just superficial damage
- If the burn is over a large part of the body or goes all the way around a limb

Treating minor wounds

It is essential to advise the patient to make sure their tetanus vaccination is up to date as some wounds may be caused by objects that are contaminated with dirt, faeces, or saliva. Pain medication can help relieve discomfort, and some antibiotic ointments are available OTC.

Other medications that are useful to include in the first-aid cupboard

- Antihistamine tablets to relieve allergies and a topical antihistamine cream for insect bites and stings.
- Saline eye drops for dry or itchy eyes. Saline to rinse out the eye in cases where something gets into an eye.
- Oral rehydration sachets containing electrolytes.
- Sore throat soothers that can be used in conjunction with pain medication.
- Decongestant for a stuffy nose in spray form.
- Decongestant/analgesic combination for symptomatic relief of colds and flu.
- Antacids for indigestion.
- Sterile gauze, bandages, and plasters.

Conclusion

Remember, always check, and follow dosage instructions as indicated on the package insert. Be especially careful when administering medicine to children. Check the medicine in the cupboard every six months to ensure that all the essentials are in place and have not expired. It is also advised that the medicine be kept in a cool and dry place (not in the bathroom or kitchen) and out of reach of children.

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Volunteers proactively support holistic rural healthcare through outreach programmes

Busisiwe is 9 years old. She lives in rural Acornhoek in Mpumalanga, and she attends her local school. Unfortunately, she struggles to see what her teacher writes on the blackboard and her writing, spelling and reading skills are suffering. By the time she's 12 years old, she will be a few years behind her peers. By the time she's 17, it will be a challenge to pass matric.

Busisiwe's situation is far from unique. If she lived in an urban area her eyesight would be tested during routine eye exams at her school. She would already have glasses and her school career would be taking a completely different direction. Unfortunately, there are many healthcare challenges that rural areas face, from local healthcare capacity to the distances that parents must travel to access healthcare. The result is that proactive healthcare is often not an option.

For Busisiwe, this means not receiving the glasses she needs. For some of her classmates, it means not receiving TB medication or having a treatable illness diagnosed. Busisiwe and her friends face another challenge as well. For many of them, one meal per day is normal, and they are growing up and trying to concentrate at school without sufficient nutrition, even though many of their parents work long hours and some even hold more than one job.

"Across South Africa there are dedicated school nurses, hospitals and community health workers who focus on outreach programmes that go into rural communities to provide proactive healthcare," says Dr Inez Allin, Clinics Coordinator at Tshemba Foundation. "These programmes screen for TB, HIV and Covid, and perform routine healthcare checks. The challenge is capacity – South Africa's rural areas are vast and populous and seeing everyone regularly is difficult."

The COVID-19 pandemic has diverted already-scarce resources as well, with the necessity for screenings and vaccinations overburdening already stretched school outreach programmes.

To support the existing infrastructure as much as possible, the Tshemba Foundation, a medical volunteer programme that attracts healthcare professionals from around the world to share their knowledge, skills and experience, is now focusing on an outreach programme over and above the volunteers who routinely spend time at Tintswalo Hospital, the district hospital in Acornhoek.

Rural communities have broad healthcare needs

"When the Tshemba Foundation was launched, our focus was bringing general doctors and specialists to Tintswalo to support diagnostics and surgeries in the hospital. Over the years, this has grown into a far more holistic and long-term vision for the region," says Godfrey Phillips, co-founder and director at the Tshemba Foundation and the founder of the Foundation's outreach programme.

"We no longer want to only support the medical side of healthcare. Our goal has grown to have a more holistic, long-term impact on the community by laying the foundations for happier, healthier and better educated children. This first step is currently in progress. Tshemba and our volunteers are going into local communities,

visiting schools and working with local support structures to deliver proactive health screenings. Long-term however, our goal is to establish permaculture programmes that feed more children at schools, giving these communities the foundations to nutritionally feed themselves.

"We also want to bring learning development specialists and psychologists into these areas to help teachers identify and support children with learning and behavioural difficulties. Right now, many classrooms hold up to 100 students. The burden teachers are under is extreme and children are slipping through the cracks. The beauty, however, is that there are so many volunteers who can add value if we can connect them and build long-term programmes and training initiatives. We can change these communities from the ground up and provide thousands of children with a better future."

Building communities from the inside out

"Outreach programmes are an important element in primary healthcare," explains Dr Allin. "Rural communities face many barriers to accessing healthcare. Children cannot take themselves to clinics and most caregivers struggle to take the time off work to travel long distances to their local clinic or hospital. Transport can also be prohibitively expensive, and this is even if someone wants to go to a clinic or hospital. Many residents will only go to a healthcare facility once they are extremely ill – often too ill to receive care. This has led to distrust of hospitals, which creates even more barriers."

The result is that treatable illnesses go undiagnosed without outreach programmes that go into communities, taking healthcare to the people instead of waiting for the people to come to the healthcare.

"Every volunteer adds immeasurable value," says Phillips. "For example, a generalist doctor who spends two days at Tintswalo hospital will also spend two days in the outreach programme and they will not only diagnose patients, but can help educate the community and motivate healthcare workers who benefit from fresh, motivated faces as well."

"Things that are taken for granted in urban areas, such as having dental work done or being able to see an ophthalmologist, gynecologist or a host of generalists, can change a life in a rural setting. We've seen older family members have their sight restored through routine cataract surgery that is anything but routine in these areas, children who are healthier after simple dental work – and whose pain is removed – and young women receiving their first gynecological exams."

It's a deeply rewarding experience, for Phillips and Dr Allin, but most especially for the volunteers who frequently return to Tshemba after their first volunteering experience.

"The graciousness and gratitude of communities who deeply appreciate the support, assistance and care that our volunteers show them is both humbling and a real joy," says Phillips. "We often forget that the healthcare profession is a calling in the day-to-day 'busyness' of working. Spending time in areas that are so deeply in need of these interventions reminds us of what that purpose is and how fulfilling it can be."



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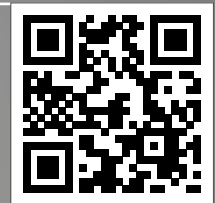


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