The treatments prescribed for allergy control the symptoms and reactions; they do not cure the condition. However, using treatments as prescribed can show a huge change in a patient’s health, mood and development once the medication or treatment routine is working to control the symptoms.

Improvements are seen because the treatment prevents the allergy symptoms from starting, or reduces the severity of the symptoms. Stopping treatments without the help of your GP or specialist can cause a sudden escalation in symptoms.

Treatments for allergy are usually straightforward, safe and effective. Common treatments include:

**Antihistamines**

Antihistamines are probably the best known type of allergy medication, and most are readily available from a pharmacy without prescription. However, there are a number of different types of antihistamines; some have been used for many years, some are improvements on old drugs, and new antihistamines are being developed all the time.

While antihistamines used to have a reputation for making people drowsy, more modern antihistamines only occasionally have those side effects.

**How they work**

During an allergic reaction, the immune system releases a chemical called histamine which starts a cascade effect of allergy symptoms. The histamine itself can lead to narrowing of airways and widening of blood vessels causing swelling or oedema (where fluid leaks into the surrounding tissue) or a drop in blood pressure. The effect of histamine in the tissues is also responsible for the itching that is associated with many allergic reactions.

Antihistamines work by blocking the action of histamine. They work best when taken prior to exposure to the allergen. However, they can also be taken after an allergic reaction has started, and this is useful for blocking the release of further histamine, reducing new symptoms.

Antihistamines are very safe. Although usually taken as tablets, they may be prescribed as a liquid or syrup for young children, or in cream form, which is very popular in first aid kits in case of insect bites or stings. Nasal sprays and eye drops containing antihistamine properties are also available, and are very useful for soothing irritated noses and eyes.

**Emollients**

Emollient lotions and creams are prescribed for eczema and dry skin, and are, in their simplest form, mixtures of oil and water that act as moisturisers. Some emollients may also contain slight amounts of antibacterial chemicals (to avoid infection in broken skin), or steroids (to reduce inflammation).

Emollient products range from being runny lotions to thick creams, and while...
they can be a very cooling and soothing treatment for eczema, sometimes the stickiness of the thicker products can cause annoyance. It is important to find a product that you or your child can tolerate.

**How they work**

Dry skin is more susceptible to eczema, and once the skin barrier is broken it is open to infection and further irritation from allergens. Scratching also causes the body to release histamine which further aggravates the symptoms.

Emollients work to reduce eczema symptoms by creating a protective barrier on the top layer of the skin, moisturising it and reducing water loss. The oil also provides lubrication so that the dry skin, which is often itchy and rough, will not be as easily irritated.

Although emollients do not stop the underlying cause of eczema, they can calm and soothe the skin, and give it time to repair itself. For emollients to work effectively, they need to be used as part of a regular treatment regime. This means that they should be applied at set times of day, and should be used whether they appear to be needed or not.

Emollients should be continued for as long as possible, even when all traces of eczema have vanished. By keeping the skin moisturised, it will be better hydrated, and with less chance of the skin barrier being broken, the risk of allergens and other irritants causing eczema is reduced.

Water can have a drying effect on skin, and so emollients are also available as bath products, which help to hydrate and protect the skin while soaking in the water. In addition, soap can also make eczema worse because it dries the skin further. Soap substitute emollients can also be prescribed, which can be rubbed on and rinsed off skin just like liquid soap.

**Steroids**

Many people worry when steroids are mentioned as a treatment option because of stories they may have heard in the media, particularly related to anabolic steroid abuse in sports. These, however, are not the same steroids that are used as medical treatments and, when used as directed by a doctor, steroids have an important role to play in treating a range of ailments, including allergies.

The steroids used for the treatment of allergies are corticosteroids, and are almost identical to the natural hormone, cortisol, which is produced by the body's adrenal glands. As with any medication, it is important to follow the dosage, as prescribed by a health practitioner, as over-use of any medication can be harmful.

A patient using steroids should be monitored carefully and receive regular check-ups. However, low doses of steroids can be given very safely. Many lives have been saved through the use of steroids in allergy management, for instance, through their use in asthma inhalers.

**How they work**

Steroids reduce inflammation. In the case of asthma, when a patient uses an inhaler, steroids are taken directly to the lungs, thereby directly treating the area that is affected by the allergy. The steroids then reduce the swelling of the airways, which is the underlying problem in asthma.

Some allergic responses involve a second, late phase reaction hours after the initial allergic reaction. This second stage of allergic reaction is caused by the immune system calling further immune cells to defend the body. These cells release chemicals that further aggravate the part of the body that is already irritated from the initial allergic reaction, and can also cause additional symptoms in other parts of the body.
Steroids, unlike antihistamines, can reduce the symptoms of these late phase reactions, by limiting the activity of the cells responsible for releasing further chemicals in the body. In this way steroids not only reduce inflammation, but they can also stop an ongoing chronic allergic inflammation.

**Topical Application of Steroids**

When steroids are applied directly to the particular area of the body where the allergy symptoms are being noticed, it is called topical treatment. This targets the symptoms and minimises any possible side effects from the treatment, and can also mean that less of the drug is needed.

Inhaled steroids used today for control of allergic disease are used at the lowest doses possible to control symptoms. If the patient is prescribed inhaled steroids, they will be put on to a ‘step-wise management plan’. This means that the lowest dose will be found that controls symptoms, and will be reviewed regularly. Most GPs’ surgeries run frequent asthma clinics in order to do this.

Some steroids are given in creams, such as hydrocortisone, which can be put on the skin to reduce the effects of eczema flare-ups. They ease the symptoms by reducing the inflammation and irritation. This is important because if inflamed skin gets broken and weepy, infection can start.

It is thought that a better result can be achieved for eczema sufferers through early use of low dose steroid cream as soon as the skin appears to become inflamed, rather than waiting for symptoms to become severe before starting a higher dose of steroid treatment. In this way, less steroid is needed than if a patient had waited for treatment until the condition worsened.

Steroids can also be given as nasal sprays and eye drops. These can take several days to work but, once they do, they are effective at reducing the symptoms caused by airborne allergens and the effects of allergic conditions such as rhinitis and hay fever. They are particularly useful if they are started before the allergens appear, and this may be a few weeks before the pollen season. Sprays should be used every day to keep symptoms at bay, and it should be recognised that a lack of symptoms means that the treatment is working and should be continued.

Although adults can now buy these steroid sprays over the counter from pharmacists, a prescription must be obtained for children. This ensures that the correct dose is given to the child, and proper training is given so that they understand how to use the medication safely, and that the best results can be reached with the treatment. The steroid spray needs to reach, and stay, in a particular part of the nose to be effective.

**Systemic Treatments**

Sometimes, steroids are given in tablet form. This is called systemic treatment because the drug gets into all systems of the body. A short course of systemic steroid treatment may be used after a particularly severe asthma attack or allergic reaction. However, doctors do not prescribe systemic steroids unless absolutely necessary. If these are prescribed, you can be sure that it is part of vital treatment and should, for a short time, become part of your treatment regime.

You may be asked to see your doctor or practice nurse again to make sure the steroids have worked effectively and that the symptoms are well controlled.

**Side Effects**

Topical Steroids, when used in large doses over long periods of time in children, can lead to problems with growth and development. However, as mentioned above, only the lowest dose needed to control symp-
Syrup is prescribed for people with asthma.

Steroid creams, when used for a long time at a high dose, can cause skin to be damaged. However, active eczema causes much more damage, so using creams as soon as possible, rather than waiting for skin problems to get worse, means that the skin is protected from damage. Low dose creams for short periods of time are very safe.

Side effects from use of steroids in allergy management are these days rare, but well understood, and if you have any concerns about any effects that steroid treatment may be having, then do go back to the prescribing specialist or your GP.

If you or your child is on steroids for a continued period, you may be given a steroid card which notes the steroid dosage, when the treatment was started, and what condition you are being treated for. It is important that you mention if you or your child is on steroids to any healthcare professional that may look after you. This not only includes when you or your child is unwell, but also when healthy and receiving other treatments such as vaccinations.

**Adrenaline**

The use of adrenaline (epinephrine) as an emergency allergy treatment is well understood by doctors, and it has saved many lives. It is used to treat anaphylactic shock, where the sudden, high levels of histamine and other substances released during an allergic reaction cause the patient to have difficulty breathing, and can also cause loss of consciousness.

Anaphylactic shock can occur immediately after contact with an allergen, or up to a few hours later. Adrenaline is a hormone produced by the body that decreases swelling associated with an allergic reaction, relieves asthma symptoms, eases breathing, tightens blood vessels and stimulates the heart.

Research has shown that the sooner adrenaline is given once an anaphylactic reaction has started, the better the health outcome for the patient. This makes rapid treatment of anaphylaxis possible, rather than having to wait for ambulances carrying the medication to arrive.

For this reason, people who are at risk of anaphylaxis are often prescribed adrenaline auto injector devices (for example, Epipen, Jext or Anapen) for use by themselves or others in an emergency. It is essential that these are always carried with the allergic individual and are available for use.

Adrenaline auto-injectors look like pens and are prescribed according to the weight of the patient. Most children will be given a junior injector, but larger children and teenagers will be prescribed the adult version. Whichever style or type of device is prescribed, the doctor prescribing it should arrange training on using it. If the doctor does not offer this, ask for it.

Once a dose of adrenaline has been given, an ambulance needs to be called and the patient should go to hospital so that any further reaction can be treated. It may be that another dose of adrenaline is needed before they can get to the hospital, and allergy sufferers who are at danger of anaphylaxis often carry two injectors for this reason. By the time they reach hospital, the patient may have a late phase reaction, for which the hospital can provide further treatment.

**Other Allergy Treatments**

**Antibiotics**

The symptoms of some allergic conditions can increase the likelihood of localised infections. In particular, irritated skin caused by eczema can be vulnerable to infection, as can the nasal sinuses of people who suffer from hay fever or perennial rhinitis. For this reason it is important that infections are diagnosed and treated as soon as possible.
Cromoglicate works by blocking the responses of the cells that release the histamine during an allergic reaction, and can be a useful alternative to an antihistamine in preventing allergic reactions. However, this treatment only works if taken before contact with the allergen, and it can take a number of weeks for the effects of the treatment to be seen. Cromoglycate is mostly used in eye drops, and is most beneficial in this treatment since antihistamines do not always offer much relief from allergic eye symptoms.

Anti-leukotrienes Leukotrienes are chemicals released by the immune system that cause swelling and secretion, and can cause allergic symptoms to persist. Anti-leukotrienes reduce inflammation and mucus production and work in a similar way to steroids, but with fewer side effects. These drugs have often been used as add-on treatments alongside treatments for asthma and allergic rhinitis. However, they are now being used more often as a first choice in treating asthma, especially in children.

Anti-IgE drugs The IgE antibodies are the most common cause of the immune system reacting to an allergen and initiating an allergic response. New anti-IgE drugs are being developed, which aim to take the IgE antibodies out of circulation. A number of studies have been conducted using anti-IgE drugs as an add-on treatment for people with severe allergic asthma. They showed that the anti-IgE medication could allow some people to reduce, and even stop, their inhaled steroid treatments. Anti-IgE drugs are now licensed for the treatment of severe asthma in adults and children over 12 in the UK, but there is still a lot of work to be done to find their place in the treatment of allergic disease.

Calcineurin inhibitors Calcineurin inhibitors are a new treatment, currently available as two creams – Tacrolimus and Pimecrolimus (also known as Protopic and Elidel) – for use on children over the age of two. They work by reducing the sensitivity of the immune system when the skin comes into contact with an allergen. In this way they reduce inflammation, primarily in the case of atopic eczema, and can lessen itching and relieve rashes associated with allergic skin conditions.

These creams are suitable for use on almost every part of the body, and are often used when steroids have proved unsuccessful, or are not suitable, for example, on sensitive skin around the eyes. Emollients should continue to be used as well as these creams, but should not be applied within two hours of applying the cream.

Vaccinations should be avoided for a period before and after, and during, the course of this treatment.

A common side effect of these creams is a burning sensation on application, which generally settles down after a few days. These drugs are thought to be safe and extremely effective in the short-term, but their safety with long-term use has yet to be proven.