Understanding the technician’s role in assisting the patient with allergic rhinitis

INTRODUCTION

According to the Asthma and Allergy Foundation of America, allergy is the fifth-leading chronic disease in the United States among all ages and the third most common chronic disease in children younger than 18 years of age.\(^1,2\) It is estimated that approximately 30 million to 60 million Americans are affected by allergic rhinitis. That equates to 10% to 30% of adults and up to 40% of children.\(^4\)

During childhood, boys are more likely to suffer from allergic rhinitis than girls, but the tendency reverses in puberty, leading to near equilibrium of incidence in adulthood.\(^3\) The incidence has been rapidly increasing in all ethnic groups over the past three decades and continues to rise quickly, limiting the ability to accurately report incidence statistics. Additionally, researchers advise that allergic rhinitis is often ignored, underreported and undiagnosed.\(^4\)

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Multiple patients affected by allergic rhinitis will present to the pharmacy in need of relief. As a technician in a community pharmacy, and thus a key point of entry into the pharmacy, it is important to understand the condition and assist in making the appropriate referrals to ensure that patients in this growing population are properly managed.

Risk factors

Allergic rhinitis was first reported by Sir John Bostock during a report to the Medical and Surgical Society of London in 1819. Bostock described the condition as a rare affliction of wealthy people.\(^5\) A great deal of research concerning the incidence of the disease worldwide has occurred since that first report, with continued challenges in identifying a direct cause. Researchers with the International Study of Asthma and Allergies in Childhood, or ISAAC, project found that approximately 80% of individuals with allergic rhinitis develop symptoms before 20 years of age.\(^3\) A German study that included 467 children showed a genetic link to the development of allergies. Other risk factors for allergic rhinitis as reported by the ISAAC project include ethnic origin other than white European, high socioeconomic status, environmental pollution, birth during a pollen season, no older siblings, late entry into preschool, heavy maternal smoking during the first year of life and exposure to indoor allergens.\(^3\)

A recent study published in the Pediatric Journal of the American Medical Association points to an increased incidence of childhood allergic diseases within the United States as compared with children living outside the United States, suggesting a link to increased incidence of allergy...
The classic symptoms of allergic rhinitis, also known as hay fever, begin with the nose — as the term rhinitis suggests — and often also include the eyes, throat and ears. The symptoms can cause interruption of sleep and can lead to general irritability as well.7 See Table 1 for a list of common symptoms of allergic rhinitis.

Patients often experience nasal symptoms that include watery discharge, blocked nasal passages, persistent sneezing, nasal itching, postnasal drip, loss of taste, increased facial pressure and possibly pain across the sinus area. The eyes can also be affected. Patients may complain of itchiness, redness, feelings of grittiness and swelling. Depending upon the severity of the effects in the eyes, patients may develop an intense swelling and blue tint of the skin below the eye. This condition around the eyes is known as allergic shiners. The patient also may experience symptoms in the throat and ears, such as general soreness, pressure, congestion and in the ears that can lead to popping or distortion of sound. General symptoms experienced during sleep include mouth-breathing, frequent awakening, daytime fatigue and difficulty performing work.6,8

When patients present at the pharmacy complaining of one or more of the symptoms above, it is important to understand that the symptoms described above may not be caused by allergic rhinitis. Allergic rhinitis is caused by an IgE immune response. Allergic rhinitis is either seasonal (i.e., usually in response to pollen, grass or other geographic location or climate driven environmental factors) or perennial (i.e., dust mites, molds, animal allergens or non-climate change related pollen exposure) in nature. Each of these conditions is linked to the immune response.6,8

Non-allergic rhinitis and other medical conditions also may cause symptoms that mimic the presentation of allergic rhinitis. Patients may be experiencing non-allergic rhinitis or symptoms that are not a result of IgE processes. Uncovering the potential causes behind the symptoms will guide the recommendation that is needed.

### Table 1

<table>
<thead>
<tr>
<th>AFFECTED AREA</th>
<th>SYMPTOM</th>
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<tbody>
<tr>
<td>Nose</td>
<td>Watery nasal discharge</td>
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<tr>
<td></td>
<td>Rapid sneezing</td>
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<tr>
<td></td>
<td>Post-nasal drip</td>
</tr>
<tr>
<td></td>
<td>Sinus pressure</td>
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<tr>
<td>Eyes</td>
<td>Itching</td>
</tr>
<tr>
<td></td>
<td>Gritty secretions</td>
</tr>
<tr>
<td></td>
<td>Blue tint — “Allergic shiners”</td>
</tr>
<tr>
<td>Throat</td>
<td>Soreness</td>
</tr>
<tr>
<td></td>
<td>Itching</td>
</tr>
<tr>
<td>Ears</td>
<td>Soreness</td>
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<tr>
<td></td>
<td>Congestions</td>
</tr>
<tr>
<td></td>
<td>Itching</td>
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<tr>
<td>Sleep cycle</td>
<td>Mouth breathing</td>
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<tr>
<td></td>
<td>Daytime fatigue</td>
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<table>
<thead>
<tr>
<th>SEASONAL TRIGGERS</th>
<th>PERENNIAL TRIGGERS</th>
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<tbody>
<tr>
<td>Pollen</td>
<td>Dust mites</td>
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<tr>
<td>Grasses</td>
<td>Insects</td>
</tr>
<tr>
<td>Weeds</td>
<td>Animal dander</td>
</tr>
<tr>
<td>Mold</td>
<td>Mold</td>
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<tr>
<td>Fungi</td>
<td>Fungi</td>
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</table>

As a pharmacy technician, it is important to get some additional information before making any referrals or product recommendations. Symptoms could be caused by foods or alcohol, viral or bacterial infections, occupational rhinitis (irritants from the worksite that do not cause an immune response), hormones, drugs, nasal polyps and other conditions. Gathering some background information to be shared with the pharmacist will enable better patient care and increased efficiency in the pharmacy. Learning if the patient has previously been diagnosed with allergic rhinitis might allow a streamlined conversation that simply informs the patient of the location of the product recommended by
the physician. If the patient has no previous diagnosis of allergic rhinitis, understanding the onset of the symptoms in relation to the presence or absence of seasonal changes or changes to the home environment is important information needed for the pharmacist’s recommendation. Additionally, learning if the patient has experienced recent changes or has other medical conditions will add to the quality of the pharmacist’s recommendation. Determining the presence or absence of triggers, as well as ruling out other medical conditions, is an important step in assisting the patient in finding the correct treatment options. In many cases, the pharmacist will need to refer the patient to a physician for evaluation and treatment.9

COMMON ALLERGENS: TRIGGERS AND TRIGGER CONTROL

Patients who are experiencing true allergic rhinitis have been exposed to an allergen that caused the immune response to initiate, leading to the cascade of processes that results in effects on the body described earlier. The allergens that cause the immune response to begin are referred to as triggers. As was discussed earlier, triggers are divided into two primary categories: seasonal triggers and perennial triggers. A list of common seasonal and perennial triggers is found in Table 2.

Literature has documented a number of negative effects on the patient’s quality of life that result from uncontrolled allergic rhinitis. During the discussion with the patient, it is important to understand the impacts that the symptoms can have on the patient, and work with him or her to help them understand the triggers and what can be done to lessen the exposure to the trigger. All patients affected by allergic rhinitis should begin any treatment plan with trigger control.

Seasonal triggers

Seasonal triggers include pollen from trees and blooming plants, grasses and weeds. These triggers typically increase in the spring or fall depending upon the area of the country. Additionally, spores from mold and fungi growth also are seasonally linked. With seasonal triggers, the patient generally has little control over the environment, though monitoring pollen and mold spore counts in the area can assist the patient in planning outdoor events. In fact, a study was conducted that monitored national pollen-count fluctuations and online allergy queries. It can be expected that pharmacies will experience greater demand for education and recommendations about allergic rhinitis during increased pollen-count seasons.10

Trigger-control tactics for seasonal triggers include avoiding prolonged periods outside during periods of high-contact risk triggers, wearing clothing that presents a barrier to the allergen when outside, keeping windows in the home and automobiles closed and using air conditioning instead of fans. Patients also can be advised to use clothes dryers rather than hanging clothing and bedding outside to dry. These tactics can help avoid transferring outdoor allergens to the indoor environment.

Because completely eliminating the transfer of the outdoor allergens to the indoor environment is often difficult, patients should also be advised to regularly clean floors and surfaces with HEPA equipped vacuums and using HEPA furnace filters. If symptom improvement isn’t seen after avoidance and thorough cleaning patients may also consider an in-room air purifier to be placed in the sleeping area. In cases of extreme allergic response, patients may choose to move to a dryer climate where the pollen, grass, mold or fungi isn’t as prevalent.

Perennial triggers

Common perennial triggers include dust mites, infestations of cockroaches and nesting beetles, animal dander, mold and fungi. In general, perennial triggers are more difficult to avoid.

Dust mites require heat and humidity to live and increase. Tactics to limit dust mites include reducing indoor humidity and temperature, encasing mattresses, pillows and other bedding in dust mite reducing covers, washing all bedding in hot water weekly, using vacuums with HEPA filters to thoroughly clean carpeting regularly or choosing tiled or hard wood flooring that is regularly cleaned and dusted.

While source-control and surface-cleaning are considered important first-line recommendations, ventilation filtration and air cleaners may provide additional benefits. It is important to advise patients that ventilation filtration and air purifiers are not intended to take the place of trigger control and removal that has already been described.

When the home has insect infestations, working to remove the infestation should be the first action taken. Because insects can be particularly difficult to eliminate, improving conditions that caused the infestation also is recommended. Sealing windows and other areas that beetles are using to enter the home is recommended, along with using chemical barriers. Removing live standing water, exposed food and trash can improve the possibility of stopping cockroaches. In either case, washing areas where insects have been can remove allergens and reduce the potential for the immune response.

Animal dander also can present a difficult issue due to the emotional attachment to the family pet that often exists. If the animal can be removed from the home, it is important to advise the patient that it will take time (often several months) for all of the animal dander to be completely cleared from the home and for symptom improvement to be seen. In cases where the animal cannot be removed from the home, limiting the pet’s access to the bedroom of the affected individual is advised. In addition, frequent cleaning of carpeting or other areas that attract hair and dander is advised.

There is some evidence that the use of an air cleaner may reduce airborne pet dander and may provide additional relief when added to thorough cleaning regimens.

With mold and fungi issues within the home, it is important to work to remove the offending allergen. In some cases, it may be necessary to enlist professional cleaning companies that specialize in mold and fungal removal. In addition, limiting the relative humidity of the home also can improve the internal environment and make mold and fungal growth less optimal.

Perennial trigger-control tactics focus on continuing efforts by the patient. Source control and surface cleaning are considered important first-line recommendations. Ventilation filtration and air cleaners may provide additional benefits as adjuncts and extensions to the primary methods of perennial trigger control that have been described.

TREATMENT OPTIONS

When trigger control is not possible or not effective in reducing the patient’s exposure, treatment is needed. Options available for the patient include symptom relief and intervention within the various steps of the immune process. The treatment options can be further divided into complementary or alternative medicine/treatment, non-drug treatment and over-the-counter or prescription medications. It is important for the technician to be familiar with the different types of treatments available and the evidence supporting the treatments. In addition, it is important to be aware of the special populations of patients who may require modifications to the treatment recommendations.11 In general, all patient populations will benefit from non-drug options that provide relief as the risk-to-benefit is positive. With all patients, a careful evaluation of benefits and risks should guide the therapies chosen.

Special populations

As is common with any medical treatment, individual factors will guide therapy recommendations that are made. As the pharmacist formulates a plan for the patient, some basic information will be needed. Age, the presence of other physical or medical conditions, and the use of other drugs or substances, including herbal products and recreational drugs, are all important pieces of information to gather.

It is well documented that safety and effectiveness data is lacking for many over-the-counter and prescription medications used for relief of the traditional symptoms related to allergic rhinitis in infants and children. Current recommendations suggest that most products be avoided in children younger than 6 years old.12 A few antihistamines have safety and effectiveness data in infants and children and have dosing data available. Additionally, intranasal corticosteroids are considered first line therapy options, although side effect must be
in the liver, kidneys, total body fat percentages, consistency of the nasal mucosa, mechanics of swallowing, and visual and general motor functioning all contribute to different responses to therapy. Dizziness and drowsiness caused by antihistamines can be enhanced in this population and lead to falls, potential of broken bones and other issues.13

Recommendations for proper treatment of allergic rhinitis also are affected by the presence of other medical conditions. The pharmacist must be aware of all conditions and treatments used in order to properly screen for drug interactions and potential for exacerbating other medical conditions. Hypertension, asthma, diabetes, heart conditions, enlarged prostate and other chronic illnesses will potentially modify treatment recommendations. Of special consideration is pregnancy or lactation, as many medications can have harmful effects on the baby, particularly during the first trimester as organ development occurs. The focus for relief for pregnant and lactating patients will be on trigger control, non-drug remedies and a balance of risks-to-benefit for medications that may be used. The pharmacist can recommend appropriate treatment focusing on medications that have acceptable pregnancy category ratings. In many cases these patients will be advised to visit the doctor if symptoms are severe and trigger control isn’t effective.12,14

Complementary alternative therapies
A number of complementary alternative medicine, or CAM, therapies have been introduced that include claims of condition improvement and symptom relief in patients suffering from allergic rhinitis. In order to investigate the claims made by the service and product providers, research was conducted to review and score these claims. Researchers investigated a large number of physical, phytotherapy, systemic medication, behavioral and other therapies and scored the available evidence. In general, the available studies did not provide enough evidence to recommend any of the complementary alternative medicines available.15 A few studies did show negative or harmful potential effects. If a patient arrives at the pharmacy with questions about an allergy alternative therapy, a referral to the pharmacist should be made to weigh the risks and benefits.

Non-drug therapies
Nasal irrigation and saline spray
Besides the CAM therapies, there is a non-drug therapy that has been proven effective in providing patients with relief. Nasal irrigation with sterile saline solutions or the use of a saline nasal spray can be of help to a number of patients. Nasal irrigation works to treat post-nasal drip, or drainage down the back of the throat; sneezing; nasal dryness; and congestion. Saline helps to rinse allergens and irritants from the nose and also can be used before the administration of other intranasal medications to remove excess mucous and allow the active medication better access to the nasal mucosa. When saline irrigation solutions are used, the patient should be advised to purchase commercially available sterile products or to use distilled or boiled water (not tap water) when mixing a homemade solution for nasal lavage.11

Several different types of products can be used for nasal irrigation. The basic process involves a bulb syringe, squeeze bottle or neti pot to allow the user to manually pour or spray a mixture of saline into one nostril. The fluid flows through the nasal cavity and into the other nostril, rinsing the allergens away. Kits are available that allow users to control the pressure of the flow and to conveniently prepare the solution with pre-measured saline packets.

Humidifiers
When allergic rhinitis symptoms are at the peak for a patient, a dry, itchy throat and nasal passages can be particularly bothersome. Humidifiers can offer needed relief by adding moisture back into the air. This often is more important in the wintertime and in dryer areas. The benefits of adding a humidifier are clear. However, special considerations are necessary for perennial allergy sufferers. As was discussed earlier, the majority of perennial allergies are caused by dust mites, mold and fungi. These allergens thrive in high-humidity and higher temperature areas. Methods to control dust mite proliferation include keeping the humidity levels below 50%.16 Thirty to forty percent

PATIENT SCENARIO 2

While the technician is in the OTC section, she notices a mother with a child in an infant carrier searching through the cough-cold products and comforting the obviously sick infant. Knowing that many OTC products are not available for children that young, the technician approaches the mother and asks if she can help her find anything. The frantic mother turns and explains that she does need help as her son is ill. The technician suggests that the mother come back to the pharmacy to speak with the pharmacist.

Discussion
The technician did the right thing in intervening with the patient wandering the OTC aisles. Many parents aren’t aware of the issues with dosing and safety. More importantly, if the infant is having a true allergy-related issue, it may be advisable to get the child in to see a physician to get adequate control medications to prevent any issues that may lead to asthma, since allergic rhinitis is linked to asthma. The pharmacist should gather more information from the patient and make a recommendation.

Table 3
Non-drug therapies11

<table>
<thead>
<tr>
<th>TYPE OF NON-DRUG THERAPY</th>
<th>KEY COUNSELING POINTS</th>
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</table>
| Nasal irrigation and saline spray | • Effective in providing relief with minimal side effects.  
• Can be used in multiple patient populations.  
• Advise patients to use commercially available products or to mix solutions using distilled water.  
• Multiple delivery devices are available for patient comfort/preferences. |
| Humidifiers | • Choose only cool mist to avoid formation of dust mites.  
• Purchase units that monitor humidity to allow maintenance below 50%.  
• Use distilled water to avoid mineral buildup.  
• Clean units thoroughly to avoid bacteria buildup. |
| Cool compresses | • May be used for symptom relief alone or prior to nasal sprays to allow better penetration of medication.  
• Monitor use in young children or the elderly carefully to avoid shifting and blocking of the nose or mouth. |
| Forced-air whole-house filters | • Recommend panel filters made of non-woven substances.  
• Recommend filters with MERV ratings of 11 or higher.  
• Change filters every three months. |
| Portable room air cleaners/purifiers | • Use after thorough surface cleaning and trigger control/reductions.  
• Review cost of unit and filters when assessing device.  
• Avoid ozone-producing units.  
• Choose HEPA models  
• Choose devices with CADR ratings appropriate to room size where the device will be placed and those that have been Energy Star® qualified |
humidity is optimal. When recommending a humidifier for symptom relief, be sure to advise the patient to use only cool-mist (not steam) devices and distilled water to avoid the build-up of minerals, to clean and filter the device regularly to avoid the development of mold, and to moderate the use to achieve a humidity level of 30% to 40%. The best humidifiers for this purpose will have a built in hygrometer to allow the desired humidity level to be programmed, monitored and maintained.16

Cool compresses
If patients are suffering from pain and irritation around the eyes and sinus cavity due to allergic rhinitis, reduction of swelling can provide some relief. Applying a cool compress or gel pack on the affected area can reduce blood flow and pressure. A cool compress applied across the bridge of the nose before the administration of a nasal spray may add to the effectiveness of the therapy by allowing the drug better access to the nasal passage. Advise parents to supervise young children when using cool compresses and to remove the compress if the child falls asleep to avoid any airway obstruction that could occur if the compress shifts.

Forced-air, whole-house filters
An often overlooked method of controlling perennial allergies is a forced-air, whole-house filter, also called a furnace filter or WHF. In homes with forced-air heating and air-conditioning systems, these filters provide a number of benefits, including odor removal, protection of the mechanical parts of the forced air system, reduction of fire hazards by trapping flammable materials, protection of decor and a reduction in circulating particulate matter. There are five primary types of furnace filters available on the market. Those are panel filters; high efficiency; particulate air, or HEPA, filters; washable/reusable filters; electronic air cleaner filters; and hybrid combinations.17 While the American Society of Heating, Refrigeration and Air-Conditioning Engineers, or ASHRAE, recommends that any system that supplies air to ductwork longer than 10 feet must have a minimum efficiency reporting value, or MERV, of six or more, the American Lung Association, or ALA, provides more specific recommendations. The ALA recommends a non-woven panel filter with 1-in. pleats. The guidance also recommends that consumers choose a filter with a MERV value of 11 or higher and that the filter is changed every three months.

Portable room air cleaners/purifiers
When patients have practiced thorough trigger control and cleaning without symptom relief, a portable room air cleaner/purifier may provide additional relief. Although researchers disagree about the clinical effectiveness of the use of air purifiers, reductions in some airborne allergens and irritants have been seen. Researchers stress that air cleaners/purifiers are not intended to replace trigger-control and surface cleaning efforts, as these devices only remove particles in the air and do not affect allergens that may have settled on surfaces.

While air cleaners are not able to remove triggers that have already settled on surfaces, studies are emerging demonstrating improvements in trigger exposure, particularly if the room air cleaner/purifier was placed in the sleeping areas. In general, more study still is needed as researchers are urged to focus on studies that are of longer duration and demonstrate links to medication use and other objective findings to demonstrate efficacy.

For patients who are ready to invest in portable room air cleaners or purifiers, careful consideration is needed. Experts recommend looking for units that balance cost — of the unit and filter replacements — with air cleaning and energy efficiency, unit maintenance needs and reporting, and noise. It is also recommended that users select units that do not generate ozone, as ozone may irritate allergies and asthma directly. Advise patients to choose only HEPA air purifiers and to reject units that have ionizers or ozone generators.

The Environmental Protection Agency (EPA) recommends a standard developed by the Association of Home Appliance Manufacturers (AHAM) to independently rate the effectiveness of portable air cleaner devices. That standard evaluates the Clean Air Delivery Rate (CADR) of an air cleaner to assign a numeric AHAM Verifide rating. The CADR rating indicates the device’s ability to deliver contaminant-free air within a standard test chamber. A CADR is determined for dust, tobacco smoke, and pollen separately. Higher CADR ratings are desirable. Because room settings vary, it is unlikely that the device will achieve the exact CADR value as published, however the independent system does allow consumers to compare devices consistently. A website is available to allow consumers to input room dimensions and desired CADR ratings. The website is www.CADR.org. Additionally, consumers should be advised to look for the Energy Star® insignia to choose energy efficient products. Additionally, patients should have a good understanding of the filter replacement or cleaning procedures and costs.17

To maximize the effectiveness of a portable air purifier, placement of the unit is critical. Use the unit in a closed room, keeping doors and windows shut as much as possible. Advise patients to place the unit in an unobstructed space with six or more, the American Lung Association, or ALA, provides more specific recommendations. The ALA recommends a non-woven panel filter with 1-in. pleats. The guidance also recommends that consumers choose a filter with a MERV value of 11 or higher and that the filter is changed every three months.

### Table 4

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>GENERATION</th>
<th>PRESCRIPTION STATUS</th>
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<tbody>
<tr>
<td>Brompheniramine</td>
<td>First</td>
<td>OTC</td>
</tr>
<tr>
<td>Chlorpheniramine</td>
<td>First</td>
<td>OTC</td>
</tr>
<tr>
<td>Cetirizine</td>
<td>Second</td>
<td>OTC</td>
</tr>
<tr>
<td>Clemastine</td>
<td>First</td>
<td>OTC</td>
</tr>
<tr>
<td>Desloratidine</td>
<td>Second</td>
<td>Rx</td>
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<tr>
<td>Diphenhydramine</td>
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<tr>
<td>Loratidine</td>
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ed area to allow free airflow into and out of the unit. When know allergens are present the air cleaner should be placed near the source. When a specific allergen source is unknown, position the unit so that the clean air flow is directed toward the center of the room.

Drug therapies

A number of medications are available to relieve symptoms of allergic rhinitis and to stop progression of the allergic response. All medications must be selected carefully, taking a number of factors into consideration. This section will review the categories of medication available and provide an overview of the actions of the medications. The pharmacist always is the best source for the patient in making therapy decisions, and the technician always must refer the patient to the pharmacist.

Nasal glucocorticoids

Nasal glucocorticoids, also known as steroid nasal sprays, often are considered first-line therapy in treating the symptoms of allergic rhinitis. These agents work by reducing inflammation caused by the inflammatory process. Drugs in this category have been highly studied and have been proven to be more effective than other treatments, including oral antihistamines. Safety and effectiveness have been established for children ages 2 years and older for most of the products. Glucocorticoids may provide some relief at the beginning of treatment, but maximum effectiveness usually is seen after a few days to weeks. When patients use the nasal spray, they first must clear the nose by blowing or wiping away mucus. In most cases, the head should be tilted downward to prevent the medication from dripping from the back of the nasal cavity. After administering the spray, rinsing the throat with water is recommended in case any medication is present. This also will help to remove any bad taste that may result. Because the nasal steroids are not taken by mouth, many of the common symptoms seen with oral steroid use are not reported. A recent study does indicate that the use of nasal steroids can decrease growth velocity in children with allergic rhinitis, and pediatric patients should be monitored closely.18

Drugs in this category include beclomethasone, budesonide, ciclesonide, flunisolide, fluticasone, fluticasone furoate, mometasone and triamcinolone. Drugs in this category are currently available by prescription. Triamcinolone received FDA approval in fall 2013 that allows triamcinolone acetonide (Nasacort AQ) to be sold over the counter. This product now is available without a prescription. This change in status presents a number of opportunities to educate patients about the proper use of the product. The pharmacy technician should be ready to screen and refer patients to the pharmacist proactively when the product is selected from the over-the-counter shelf.19

Oral antihistamines

Antihistamines have been available for a number of years and work within a step in the body’s allergic response to block the formation of histamine. This function works to relieve itching, sneezing, runny nose and watery eyes. Early antihistamines, also known as first generation, are linked to side effects that include sedation and the potential to cause excessive dryness that can lead to dry mouth, dry eyes, urinary retention and constipation. These medications should not be used before driving or operating heavy machinery. Newer, second generation antihistamines are available that selectively bind the H1 receptor and have fewer adverse side effects, especially related to sedation. These products can have a direct effect on the heart and are used with caution in cardiac patients. Newer antihistamines also have longer dosing intervals that can increase compliance and control.

Multiple oral antihistamine products are available, many in combination with decongestants and pain relievers, to provide multi-symptom relief for patients. Table 4 reviews the common oral antihistamine products.

Intranasal antihistamines

Two prescription nasal antihistamine sprays are available to allow topical application of the medication directly to the affected area. Since the medications are applied directly to the nasal mucosa, relief begins within minutes, and side effects seen from the oral formulations are minimized. Azelastine and olopatadine are the drugs currently available within this class. Azelastine also is available in combination with fluticasone with the resulting product showing better results than either drug when used alone.

Oral decongestants

There are two common oral decongestants available that have been marketed in multiple combinations. Those drugs are pseudoephedrine and phenylephrine. Oral decongestants work by constricting the blood vessels to relieve pressure and congestion in the nose. Because of the mechanism of action, a number of contraindications exist that require screening and evaluation by the pharmacist. Additionally, although pseudoephedrine is highly regulated due to the potential to convert the product into an illicit drug, the product is preferred in the management of allergic rhinitis in patients without contraindications.

Intranasal decongestants

Decongestant preparations also are available over the counter to be sprayed directly on the nasal passage. The two most common ingredients available in multiple formulations. The drugs are oxymetazoline and phenylephrine. These products are very potent and effective at providing immediate relief. Use of the product should be limited to two to three days, as prolonged use can cause rebound congestion that also is known as rhinitis medicamentosa. When interviewing a patient who is complaining of excessive nasal congestion, the pharmacist will need to assess for extended use of decongestant nasal sprays to avoid worsening the problem.

Mast cell stabilizers

Within the allergic response, mast cells contribute to the immune response. Cromolyn is available over the counter and is used in advance of the expected allergen to stabilize mast cells and prevent the ensuing reaction. The medication must be used four times daily for several weeks prior to the expected allergen. Side effects are mild. Many patients do not adhere to therapy for the recommended loading period and do not see the maximum effects of the drug. Providing encouragement and support for the patients can result in better outcomes.

Leukotriene receptor antagonists

Montelukast is a leukotriene receptor antagonist that works to reduce allergy symptoms and inflammation by blocking the leukotriene receptor in the allergic response cascade. This product is available by prescription only and has the possibility of causing headaches and upper respiratory tract infections.

Ipratropium

Ipratropium is an anticholinergic medication that is available as a nasal spray to treat allergic rhinitis. It is available by prescription and can cause nosebleeds and nasal and oral dryness. The medication can be absorbed systemically and can cause problems with patients who have glaucoma or prostate and/or bladder issues.

IMMUNOTHERAPY

As was discussed in the introduction of this lesson, allergic rhinitis is a condition that is increasing both in the numbers of patients suffering from the symptoms and in the severity of the body’s response. Allergic rhinitis has been linked to the development of asthma in patients who were previously not diagnosed. Uncontrolled allergic rhinitis also contributes to the worsening of asthma symptoms.

While additional research still is needed, a growing number of patients may be candidates for immunotherapy, also known as allergy shots. Allergy shots are administered by a specially trained allergist who identifies specific known allergens for the patient and administers gradually increasing amounts of the allergen over time. An allergist is a pediatrician or internist who completed at least two additional years of specialized training related to the diagnosis and treatment of allergies, asthma and other immunologic diseases. Immunotherapy usually is administered weekly for several weeks, then monthly for a minimum of three to five years. The therapy is costly and does have a number of risks that must be weighed with the trained allergist. However, a recent study
in the Journal of Allergy and Clinical Immunology demonstrated an overall cost savings when immunotherapy was used to prevent allergic rhinitis. Additionally, researchers also have published promising initial results in a study investigating the effectiveness of an oral dust mite immunotherapy. Continued work in the field will undoubtedly result in new and more available treatment options for patients.

CONCLUSION AND CALL TO ACTION

With the ever-increasing number of patients suffering from allergy-related symptoms, the community pharmacy technician is in a prime position to proactively advocate and refer patients into discussions with the pharmacist that will lead to better care. With the knowledge learned in this lesson, it is important for the technician to actively search out patients who need additional information and recommendations. As patients age and experience new health-related conditions, many may not realize the true harm that can come to them for continuing to use a tried-and-true over-the-counter remedy now that they are living with hypertension, glaucoma, diabetes or even a pregnancy. Being a primary point-of-contact for many patients, the pharmacy technician can act as a safety mechanism for the patient. Rather than just asking if the patient has any questions for the pharmacist, knowledgeable technicians can recommend and direct patients to the pharmacist with the information that is needed. Ideally the pharmacist/patient interaction will begin with a quick introduction and sharing of information already collected from the patient so that the patient and pharmacist can interact efficiently.

Another opportunity for the community pharmacy technician exists in intervening with non-pharmacy patients who may be self-treating and potentially not properly controlling their allergic rhinitis. Many living with allergic rhinitis have accepted the condition and simply endure the symptoms. As a member of the patient’s healthcare team, the technician can step up and let them know they have more options than simply enduring the symptoms. As more medications move to an over-the-counter status, it will be more important than ever for all community pharmacy technicians and pharmacists to be more involved in ensuring positive outcomes. Step up with the information learned to assist your patients in living better with allergic rhinitis.


Learning Assessment

Successful completion of “Understanding the technician’s role in assisting the patient with allergic rhinitis” (0401-0000-14-201-H01-T) is worth one contact hour of credit. To submit answers, visit our website at www.CEdrugstorenews.com.

1. Common symptoms of allergic rhinitis include:
   a. Stiffness in the joints, pain in the extremities and visual disturbances
   b. Runny nose, watery eyes, persistent sneezing and nasal congestion
   c. Nasal dryness, general malaise and dizziness upon standing
   d. Excitability, abdominal distress, constipation and urinary hesitancy

2. Patients with allergic rhinitis can suffer with sleep disturbances. Sleep disturbance symptoms include:
   a. Mouth-breathing
   b. Difficulty performing work
   c. Daytime awakening
   d. All of the above

3. Patients who arrive at the pharmacy with swelling and a blue tint in the skin below the eyes have a condition called:
   a. Azure halos
   b. Rhinitis medicamentosa
   c. Nasal polyps
   d. Allergic shiners

4. Researchers advise that allergic rhinitis:
   a. Is present in 10% to 30% of adults
   b. Affects up to 40% of children
   c. Is more common in male children than female children
   d. All of the above

5. Allergic rhinitis has been directly linked to which of the following conditions:
   a. Delayed progression to puberty
   b. Urinary retention
   c. Asthma
   d. Hypertension
6. Trigger control is important for patients suffering from allergies. For patients with seasonal allergies, which of the following actions are recommended to control triggers?
   a. Accessing pollen and mold reports before planning outdoor activities
   b. Avoiding prolonged periods outside when pollen counts are high
   c. Using air-conditioning
   d. All of the above

7. Which of the following triggers could need to be controlled by a person suffering from seasonal or perennial allergies?
   a. Mold
   b. Ragweed
   c. Dust mites
   d. Tree pollen

8. Nasal irrigation, humidifiers and room air purifiers are examples of non-drug therapies that could be recommended for:
   a. Young children
   b. Lactating mothers
   c. Elderly men
   d. All of the above

9. Which of the following special patient populations requires extra evaluation by the pharmacist due to changes in nasal mucosa and the mechanics of swallowing?
   a. Lactating mothers
   b. Children younger than 2 years of age
   c. The elderly
   d. Pregnant women

10. A patient picking up his regular refill of hypertension medication is exhibiting a number of classic allergic rhinitis symptoms (e.g., runny nose, sneezing, watery eyes and swollen nasal passages). Choose the best interaction that the technician can make from the list below:
    a. The technician should quickly ask if he has any questions for the pharmacist, quickly complete the transaction and send him on his way before he starts sneezing again.
    b. The technician should ask if he has any questions about his medication for the pharmacist and tell him where to find the cough and cold remedies in aisle 7.
    c. The technician should spend a few minutes learning about his symptoms and recommend that he speak with the pharmacist to get some treatment that will work with his blood pressure medicine.
    d. The technician should send him to the front cash register to pay in an effort to control infection at the pharmacy counter.