SAN DIEGO ALLERGY ASTHMA & IMMUNOLOGY CONSULTANTS, INC

BERNARD A. FEIGENBAUM, M.D. *FACP, FAAAAI*

CLINICAL ASSISTANT PROFESSOR OF MEDICINE & OTOLARYNGOLOGY, NYU
DIPLOMATE, AMERICAN BOARD OF ALLERGY & IMMUNOLOGY

9850 GENESEE AVE, SUITE 355
LA JOLLA, CA 92037
(858) 535-5352

RHINITIS-PATIENT EDUCATION

Rhinitis basically means inflammation of the nasal lining. Typical symptoms include runny nose, sneezing, nasal congestion, sinus headache, postnasal drip.

ARE THERE DIFFERENT TYPES OF RHINITIS?

Yes. There are several categories of rhinitis; *allergic* rhinitis*; non-allergic* rhinitis; "*local*" allergic rhinitis. Allergy testing can be very helpful in making this distinction.

WHAT IS ALLERGIC RHINITIS?

Approximately 20% of the US population has this condition. Allergic rhinitis is caused by antibodies called Immunoglobulin E (IgE) interacting with typical allergens/triggers including: tree, grass or weed pollens; cats, dogs or other animals, dust mites, cockroaches; molds. This interaction between IgE and allergens results in the release of histamine and other inflammatory chemicals from special white blood cells called mast cells. Histamine causes itching, sneezing, runny nose, nasal congestion, etc. (Antihistamines work by blocking these effects of histamine. Histamine is used as a "positive control" during skin testing, because it quickly causes visible redness and swelling.) Response to prescription medication is usually good with this condition.

WHAT IS NON-ALLERGIC RHINITIS?

Approximately 10% of the US population has this condition. Response to prescription medication is variable with this condition and it is harder to treat than allergic rhinitis. Non-allergic rhinitis is <u>not</u> caused by Immunoglobulin-E antibodies. The cause of the symptoms depends on the subtype:

Atrophic—Associated with elderly patients usually in frail health
Infectious—For example, from a viral upper respiratory infection (URI)
Hormonal—Pregnancy, birth control pills, thyroid disease
Systemic inflammatory—Uncommon diseases such as Wegeners or Sarcoidosis
Anatomic and foreign body --More common in young children
Medication—Blood pressure and cardiac medications or hormones may cause this
Occupational—Due to exposures with work or hobbies
Gustatory—Worse after eating
Rhinitis Medicamentosa—Due to prolonged use of nasal decongestants—Afrin, Vicks, cocaine
Idiopathic/Vasomotor—The most common subtype of non-allergic rhinitis and thought to be due to a malfunction of nerves in the nasal lining.

WHAT IS LOCAL ALLERGIC RHINITIS?

Less than 1% of the US population has this condition. "Local" allergic rhinitis can be a little confusing. Patients' symptoms *are* caused by the same allergic antibodies (IgE) but skin testing is negative because the antibodies are only present *locally* in the nose, not in the skin. In other words, skin testing is "false" negative. Response to prescription medication is usually good with this condition.

SKIN TEST INTERPRETATION

Testing involves being "pricked" with several Multitest devices. Each white Multitest device has 8 skin testing prongs. Each prong is dipped in a well and each well contains a different aero-allergen or food allergen. 15 minutes later, the results are written down and interpreted.

Your testing sheet will indicate the size of the wheal and the size of the flare, both of which are used in interpreting the reaction. The wheal is the raised area of skin. The flare is the red area of skin surrounding the wheal. For example, a result of 5/15 for alder tree doesn't mean 5 *out of* 25. Both numbers are measurements, so it indicates that there was a **5 mm wheal *and* a 15 mm flare**.

Usually (but not always), the larger the wheal and flare response, the worse the allergy. **There is no standard for grading severity, but here are some rough guidelines:**

Mild allergy—3/5 to 5/10

Moderate allergy—5/10 to 8/20

Strong allergy—Larger than 8/20

Also, with airborne allergen testing, 1st round reactions are more significant than 2nd or 3rd round reactions.

One of the testing site contains **histamine**, which is used as a positive control. An itchy, red, raised histamine site is normal and shows that your skin is reacting as expected to the testing. (It doesn't mean an allergy to histamine.)

No medical test is completely accurate. With skin testing, positive reactions may be "false positive", meaning that the test is positive but that patient *doesn't* react when exposed to the allergen, so the patient is not actually allergic. This is rare with aero allergen testing, but fairly common (up to 30%) with food testing.

"False negative" tests are the opposite, and mean the patient *is* allergic, but the test is falsely negative. This is thought to occur less than 5% of the time with these tests.

<u>What to look for after testing</u>

A small, red, itchy bump may arise within two days at the skin testing site. This is usually a "delayed local reaction," is not serious and does not change the results of the testing. Applying over-the-counter 1% hydrocortisone, twice a day to any such bumps will usually make them resolve within a few days.

You should call Dr. Feigenbaum immediately with any fever, red streaking up the arm, or other unusual symptoms associated with redness or pain at the skin test site.

TREATMENT OPTIONS FOR ALLERGIC RHINITIS

1. Allergen avoidance—(See separate PDF on trigger avoidance.)
2. Medications
3. Saline nasal/sinus rinse
4. Immunotherapy—allergy shots (We do NOT push allergy shots. We always start with avoidance and safe medications.)

TREATMENT OPTIONS FOR NON-ALLERGIC RHINITIS

There are fewer categories of treatment, and fewer medications which work for this condition. It's harder to treat.

1. Saline nasal/sinus rinse
2. Medications

MEDICATIONS

NASAL STEROIDS

Nasal steroids work very, very well for allergic rhinitis and "local" allergic rhinitis and are generally considered the most effective first line medication for allergic rhinitis. They don't generally cause sleepiness, headache or agitation, like antihistamines or decongestants do, and rarely cause any short-term adverse effect beyond nasal irritation. Nasal steroids help approximately 80-90% of patients with allergic rhinitis, in our experience.

Short-term, they are great medications to use as a therapeutic trial to see if the symptoms improve within a week. For many patients, they are also an excellent long term plan (see below.) Nasal steroids also work moderately well for non-allergic rhinitis, perhaps 50% of the time. Nasal steroids also help with bacterial sinusitis.

However, nasal steroids and other nasal sprays require proper technique. Sprayed incorrectly, they won't work, and could also cause minor bleeding and irritation. Also, the full effect of nasal steroids is not felt for up to a week, so a little patience is needed.

Nasal steroids are corticosteroids (which differ from anabolic/sports-related steroids), and corticosteroids used for long enough time at high enough doses can have long-term adverse effects. These include an increase in the risk of developing osteoporosis and cataracts, two very common conditions for which most people are already at risk. Nasal steroids at normal doses are not thought to cause these problems. Some are FDA approved for use in 2 year old children. One is FDA approved for use in pregnancy and none have an FDA limitation on long-term use. Two of them, Flonase and Nasacort AQ, are now even over-the-counter. Add that all up, and most allergists consider nasal steroids to be very low-risk.

Unfortunately, health plan coverage for nasal steroids has recently become a problem. Two of these medications, Nasacort AQ and Flonase are now available over-the-counter. (Flonase is around $21 for 30 day supply on Amazon.) Since they are available over-the-counter, some health plans now argue that *all* nasal steroids are no longer covered as a prescription benefit. (This same pattern occurred a few years ago when

Claritin, Zyrtec, and Allegra went over the counter.) One option is to use a combination nasal steroid and nasal antihistamine, (Dymista) described below, although this is not always covered by health plans, either.

NASAL ANTIHISTAMINES
These are not generally as effective as nasal steroids but are usually more effective than oral antihistamines. They can still cause systemic adverse effects including sedation.

Astelin or Patanase
1-2 whiffs twice a day
Strong but potentially sedating and very bitter to taste
Sometimes covered by insurance

NASAL STEROIDS + NASAL ANTIHISTAMINES
Dymista combines both of these categories into one spray. The problem is that many insurance plans don't like to cover it. Sometimes we have coupons. We can also split this into two generic medication sprays, if needed.

LEUKOTRIENE INHIBITORS
Leukotrienes are inflammatory chemicals, similar to histamine, and produced during allergic responses. Singulair blocks leukotrienes. 10 mg once a day seems to work in about 30-50% of patients, but sometimes works wonders when nothing else is working very well. Results are not as consistent as with nasal steroids. Some patients develop heartburn or mild abdominal pain.

The FDA has been investigating for years whether there is a link to depression or suicide. As far as we know they have found nothing conclusive. Singulair is commonly used for nasal polyps. FDA approved for use in young children. Available as a generic. Good insurance coverage.

ANTICHOLINERGICS
Atrovent (ipratropium) nasal is an anticholinergic spray that is indicated for non-allergic rhinitis. It's worth a try and sometimes works wonders but it has a strong drying effect on the nasal lining.

ORAL ANTIHISTAMINES are not generally as effective as nasal steroids and the results are very variable from patient to patient and between different antihistamines. In addition, they are more likely to cause systemic adverse effects including sleepiness, headache or agitation. However, they are essentially free from long-term adverse effects. Often, none of these are covered by health plans since most are available over-the-counter.

Claritin (loratadine)
10 mg once a day
Very safe and "clean", but not very strong
Rare sedation, headache, nightmares

Clarinex (desloratidine)
5 mg once a day
Very clean, and possibly a little stronger than Claritin
Rare sedation, headache, nightmares

Allegra (fexofenadine)
180 mg once a day
Pretty clean, and slightly stronger usually than Claritin
Rare sedation, headache

Zyrtec (cetirizine)
10 mg once a day
Stronger, but causes sedation in at least 30% of pts. Zyrtec is NOT non-sedating!

Xyzal (cetirizine)
5 mg once a day prescription only, single isomer (enantiomer) version of Zyrtec.
Very new, but probably a little less sedation than Zyrtec and probably just as strong.

Benadryl (diphenhydramine)
Strong and quick-acting, but very sedating.

DECONGESTANTS

Oral decongestants, such as Sudafed, are helpful for all types of rhinitis, especially non-allergic. However, adverse effects include: hypertension, tremor, shaking, anxiety, etc.

Nasal decongestants, such as Afrin, should not be used for more than 3 days at a time (except under MD advice), or one risks becoming dependent on the Afrin.

SAFETY AND DRUG INTERACTIONS

While we prefer to use as little medication as possible and hope that you improve on just one medication, you could safely use almost any combination from different categories of the above treatments, and this is done all the time by allergists. None of these medications interact with others listed above.

IMMUNOTHERAPY (ALLERGY SHOTS)

Immunotherapy works. Most studies say that around 80% of patients properly selected and treated with immunotherapy improve. However, immunotherapy is not as easy as taking a medication at home. .) The cost of the shots can add up, and allergy shots carry a risk of anaphylaxis, a severe systemic allergic reaction.

Shots require going to an allergist office weekly for the first 4-6 months, getting the allergy shots and waiting in the office 30 minutes after the shot (in case of a reaction.)

If you are interested in allergy shots, please ask for our separate information sheet regarding this.