

How to be Free of Sinus Disease Permanently

A no-nonsense guide to taking charge of your health, minimizing your use of expensive drugs, and keeping to natural and holistic treatment as much as possible. Written by a leading author, medical innovator, and practicing ear, nose and throat specialist.

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How to Be Free of Sinus Disease –Permanently!

By

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Introduction

Are you one of the unlucky ones who had to take weeks of antibiotics last year? Despite the miraculous antibiotics we have today, the number of persons with sinus disease is increasing. The number of serious sinus surgeries is also on the rise. What can you and I do about this? I am here to tell you what has worked for my patients and will help you too. More important, I will explain why it will work for you, because taking charge of your own health always works best.

I am a medical doctor who has specialized in Ear, Nose, and Throat (ENT) disorders for over 30 years. The fancy name for this specialty is Otolaryngology. For most of my practice I have specialized in sinus problems because many of my patients have been pilots, flight attendants, and scuba divers.

Many patients come to my office already diagnosed as having sinusitis, which means an infection in the sinus cavity. Perhaps one of the following statements from my patients sounds like it fits you:

I have pains over my upper teeth.

My dentist says it's a sinus infection.

My nose is stuffy most of the time.

My dermatologist says I've got sinus condition.

I blow yellow or green thick stuff out of my nose.

My internist says I've got sinus disease.

People move away from me because I have so much mucus and I cough so much.

My coworker says I have sinus condition.

I use a ton of tissues every day.

My wife says it's my sinuses.

My breath is bad from thick nasal and throat mucus.

My husband blames my sinuses.

I wheeze when I exhale.

My pulmonologist says it's caused by sinus disease.

My voice is raspy and hoarse, so I can't pursue my singing career.

My voice teacher says it's due to my sinuses.

There are many variations on this diagnosis of sinus sickness. Maybe you'll enjoy a few more, and maybe relate to one of the following:

Starting when the trees are in bloom, I sneeze and drip all day.

My pharmacist says its sinus.

I see this thick ugly ball of white material hanging out of my nose.

My allergist says I really do have sinus disease.
 I can't smell anything anymore and things taste blah.
 My family doctor says I am suffering from a sinus condition.
 I actually have pus coming up from my nose and out of the tear duct of my eye.
 My eye doctor says it's coming from my sinuses.
 I get nosebleeds all the time.
 The emergency room doctor says it's due to my sinuses.
 When I try to ski, my nose hurts and bleeds.
 My ski instructor blames my sinuses.
 I have pains above my eyes.
 My optician says it is my sinus condition.
 I get blinding headaches that wake me up at night.
 My internist says I have a sinus problem.

No wonder the Academy of Otolaryngology - (Ear Nose and Throat) reports 37 million people in the United States have sinus disease. No wonder sinus surgery is the fifth most common surgery performed today. No wonder billions are spent on sinus medications and surgery.

If any of the above statements about symptoms and diagnoses sounds like you, please read on. Yes, many of these symptoms fit into the definition of sinus disease, but there are other conditions to consider that may be making you sick.

Sick or not, there is hope for you. Most important is making the right diagnosis and then finding out how to treat the condition. I think I can help you because my approach to Sinus Disease is different for several reasons.

The Author's Background Relevant to Treating Sinus Disease

In addition to being a Board-certified ENT doctor I have a degree as an advanced scuba diver. I write in Scuba magazines and specialize in treating divers with ear nose and throat problems. The Diver's Alert Network program refers special problems to me from all over the world. Commercial divers earn \$300/hour, and they can't take time off to be sick. They need treatment that will work, where the sickness doesn't return soon after treatment.

My offices have always been near the Los Angeles Airport (LAX) and I've treated lots of pilots and flight attendants who have these problems. My goal is to keep them flying by using effective approaches that resolve their sinus problems and prevent recurrence.

In my medical school training our patients were too poor to buy drugs, so we were taught about natural healing. We were also taught to avoid the complications that drugs can cause. The majority of patients I see in consultation have already had 2 or 3 months of the latest "best" antibiotics. They come because they are no better than they were before the medications. Just giving another antibiotic was not my approach, so I had to come up with a better approach, less toxic, less expensive, and more effective.

I have investigated ancient practices that worked for healing for thousands of years. When you understand why these methods worked, you can apply these practices to modern sinus problems.

How my approach to Sinus Treatment Came About.

Airline pilots and scuba divers cannot take medications the way other people can. A pilot can't fly a 450 passenger 747 and fall asleep from taking an antihistamine for his stuffy nose. A diver can't work at four times normal atmospheric pressure after taking a drug whose side effect may be four times as severe as at normal atmospheric pressure. In rethinking about sinus issues such as why ears get blocked when you are 30,000 feet above the ground, or 100 feet below the ocean's surface, I've come up with ideas that work for these conditions. These same ideas work for my other patients who didn't get well after taking prescribed drugs.

For most of my practice I have stressed less medication, more healing by the body. It is known that excess antibiotic is really bad for you—there is more breast cancer, more severe urinary infections, more asthma—all associated with excess antibiotic use. If you don't use an antibiotic, you won't suffer the side effects of the antibiotic, some of which can be more severe than the original infection. Even worse is the aspect that the antibiotic will not work because bacteria have developed strong resistance to the antibiotic! In this book you will learn the simple logic of washing away bacteria so the body can self—heal. You will learn how pulsatile irrigation can overcome the various films, covers, and other defenses that bacteria have developed against antibiotics.

Surgery for Sinus Disease?

At my practice, Tower Ear Nose and Throat, many patients are referred to us for the special sinus surgery we do. Patients ask, "Should I have sinus surgery?" That is the wrong question. The correct question is, "What can be done to heal me?" In many instances, I am proud to say, we can heal these patients without surgery. In this book I will explain how.

First, let's examine exactly what sinus disease is and how to get you well.

I. Do You Have Sinus Sickness?

Primarily we **MUST** make the correct diagnosis as to whether or not you have sinus sickness. This book will help you with this matter.

Examples of NOT Sinus Disease

Neck problems. One patient had frontal sinus pain and was in for a second opinion prior to sinus surgery. He was driving a low-slung sports car and cramming his neck, and getting referred pain to his sinuses! Instead of surgery, he got a \$2.98 seat cushion and was cured.

Problems with a view. My friend called me with a real problem. Most of his office staff had developed sinus problems when they moved into their new office. He wanted me to cure them right away, and was willing to pay for the surgery.

It turns out he had moved into an office overlooking the harbor. All the office workers turned their desks so they could see the river, the boats, and other interesting sights. They were getting glare and squinting and this was causing their headaches. The cure? Turn the desks around. It worked!

Migraine. When Mary's sister started taking birth control pills, she developed headaches. When Mary has started birth control pills she got headaches, too, throbbing, usually on one side of her head. This was migraine, not sinusitis and Mary responded to migraine medication.

Deviated septum. A patient came with authorization to have surgery to fix her deviated septum. Turns out she was allergic to cats. I explained that even after we fix her septum, she would still be allergic to cats. She was cured without surgery - her cat had run away.

Your nose may be blocked, dripping, blowing yellow gunk and you have pain. This may be sinus sickness. If it is sinus sickness, it is treatable, hopefully without many drugs or surgery. Doctors use many methods to diagnose sinus disease.

CAT scan. Many doctors, correctly, order a CAT scan of the sinuses in order to make this diagnosis. That's a computerized X Ray that can give extreme detail of the sinus cavities, the sinus openings and their contents. But even though the CAT scan gives a diagnosis of sinusitis, that doesn't mean it isn't treatable by drainage and other means to clear the condition..

MRI. MRI stands for Magnetic Resonance Imaging. Its like taking an X-Ray but it works on different physical principles. Some doctors pick up sinus disease when they take an MRI for other reasons. We see a lot of patients diagnosed as having sinusitis that way. But it's important to know that the MRI is very sensitive to soft tissue changes. Even a few drops of mucus can show up as advanced disease, so the MRI diagnosis is not very helpful because it is too sensitive.

Why Do We Have Sinuses?

The most common question a patient in pain will ask me is , "Why do we have sinuses?" No, they weren't put there just to give business to the doctors. Sinuses are hollow spaces roughly below and above and in between the eyes. One theory is that they are located in this manner because the eyes have to be spaced a certain distance apart in order to get binocular vision. The ears have to be spaced in a certain position to get the best information about the direction and interpretation of sounds.

After positioning these organs in the best possible location, allowing for the size of the brain, and allowing for some strong support for the jaws in order to bite and fight, we pretty much come up with approximately the size and shape of our head. The sinuses are the hollowed spaces in the facial bones, which, if they were filled with bone, would cause the head to be three times as heavy as it is. We'd need a totally different type of neck and support muscles for such a heavy head therefore the facial bones are left with hollow spaces to lighten the weight of the head, and those hollow spaces are our sinuses.

Actually, sinuses don't just sit there. They provide moisture and warmth for air as it goes through the nose to the lungs. If air going to the lungs isn't moisturized, then the minute hair cells of the lung passages are left dry and weak. That affects an important healthful activity of such cells, activity by minute hair cells called cilia that defend the body.

Why Do People Get Sinus Diseases?

A common cause of sinus disease is the act of blowing the nose too hard. Excessive blowing irritates the nose exactly like rubbing the eyes too hard when they are irritated. That eye rubbing damages the delicate eye membranes. In the same way blowing hard can damage nasal membranes. Often, the bigger the man, the harder he blows.

By simply teaching a person not to blow, or to blow very, very gently, the sinus problem is often prevented. What is the correct way of blowing the nose? GENTLY! Indeed, the less blowing, the better. With heavy blowing, pus is forced from the nose into otherwise healthy sinuses, and into the ear. If you must blow, do it with both sides of the nose open, very gently, into a tissue. A good parent teaches their child to blow GENTLY or not at all.

Sinus disease can be caused by exposure to various chemicals, such as sulphur dioxide, paint sprays, solvents, etc. There is a list of such chemicals in the discussion of mucociliary clearance later. If you have frequent exposure to any of these chemicals, or have had a few intensive exposures and you have nasal and other difficulties, the cause of your problem may be such chemical exposure. Sometimes rinsing these chemicals out of the nose is all you need!

In my practice I see two classes of sinus disease. One group has Acute Sinusitis where the patients do get over their sickness fully, usually by no more than

one month of treatment. The other group has Chronic Sinusitis. These patients have had sinus symptoms for many weeks, months or even years! Let's discuss each separately.

Acute Sinusitis

We'll take a patient example:

R.J. age 27. in January, after a snowball fight, he went hiking while wet. That night his nose clogged. Next morning his nose was blocked, he had pain in the area above his teeth. He had a fever. He had acute sinusitis.

In acute sinusitis there is sinus pain, nasal congestion, fever, and the patient feels sick. Symptoms may resemble the flu or a bad cold with weakness and aching. The doctor sees red inflamed nasal tissue.

If the correct treatment is used, a patient may get over this infection rather quickly. At the end of the infection there is a great deal of yellow or green material that can be removed by irrigation.

Essentially, in acute sinusitis you get over the attack fully but it might take a month and then you are clear. If we take an X ray at the start of the associated blockage, fever and pain, we generally see fluid in the sinus cavity, the sinus membranes are swollen, and there is severe swelling at the opening of the sinus cavities. If we take a repeat X ray later, the sinuses are now free of fluid, the swollen membranes are back to normal and the openings are no longer swollen and blocked,

Chronic Sinusitis

Consider this patient:

L.B., age 42 who developed an acute sinus infection 16 months ago. She continues to have painful nasal passages, sinus pain, nasal stuffiness and gets discharge of pus. She improves with antibiotics, but these are now making her sick with a stomach upset and a vaginal infection. She has seen the family doctor three times for this and the ENT specialist twice. He took a CT scan and said that the openings to the sinuses were narrow and need to be enlarged. She has chronic sinusitis with the same infection returning every two months.

In Chronic Sinusitis, the symptoms have been present for 12 weeks or is the same infection that started months ago but was never fully recovered from. Even after the patient is feeling well, you can still see some membrane thickening and blockage of the openings. They may have symptoms secondary to the bacteria - asthma, cough, fever, and fatigue.

The concerns today about chronic sinusitis are the associated illnesses. These include increased frequency and severity of urinary tract infections and elevated blood factors that are associated with circulatory risks such as blood clots. Asthmatics are especially at risk. The more infection, the more inflammation, the more severe the asthma. The need for continued antibiotics is also a risk to the sinus patient. These patients may develop a bacteria so resistant to antibiotics that nothing works to heal them.

The official definition for Chronic Sinusitis of the Sinus and Allergy Health Partnership states:

Symptoms include nasal obstruction, discolored nasal drainage, loss of smell, or facial pressure or pain should be present for at least 12 weeks. A large number of patients may present with associated diagnoses such as allergy or asthma. Causes include inflammatory conditions of bacteria and fungi.

II. What this Book Offers

-Knowledge about your body.

What this book offers is useful facts to help you deal with sinus problems. In your body is a wonderful mechanism called Mucociliary Clearance. Let's just call it MCL, which is a process involving cilia that, like tiny oars move bacteria and toxins out of your body. Like oars of a boat they work in a liquid medium called mucus. As long as this system works, you are able to maintain proper respiratory health in your nose, sinuses and lungs.

Normally bacteria enter your nose. The bacteria get trapped in the mucus of your nose. Before they have a chance to multiply and make you sick, the bacteria are swept along by the millions of tiny oars—the cilia—to the back of the throat where they are swallowed and killed by stomach acid. When you are healthy, bacteria and viruses are swept away by this cilia system.

There are other defenses too. There are enzymes such as lysozyme in the mucus as well as good white cells that also attack the bacteria.

In Allergy there are cells that produce antibodies to dilute and neutralize the offending pollens so that they won't harm the body. So why do 37 million persons have sinus disease?

Smog is one cause. Smoking is another. Reduced resistance to colds is a factor. Later in the book is a list of products that slow the cilia. Note that getting stuck behind a diesel bus, or getting chilled are important causes. With the common cold, the infection may be so severe that the cilia function doesn't return and then a bacterial infection starts. This happens if you don't get enough rest or sleep. If your cilia don't sweep away the bacteria, then they remain in the nose, get married and raise families.

You have an immune system. There are special proteins floating in your blood stream called Antibodies. In a good childhood, you build up these resistances with antibodies. But if you grow up in an isolated island with no diseases, when you come to my town, you may lack the antibodies to ward off common illnesses and stay sick until your body builds the antibody system.

Jean S. age 24 grew up in Bermuda, a fairly isolated island. She was never sick. Then she moved to New York. For two years she was sick almost constantly until her body built up antibodies. Read on to learn what she might have done to remain well.

In one sense, an allergy is also a defense, but it is too much of a good thing. You are supposed to sneeze to get loads of dust out of your nose. But when

you sneeze non—stop when there is just a tiny bit of dust, that’s an allergy and it isn’t healthy.

Unfortunately it gets more complicated. You are allergic to roses and sneeze or wheeze when you enter the florist shop. You wheeze when someone puts roses in your bedroom. But you also sneeze when someone puts fake silk roses in the bedroom. We’ll talk more about this phenomenon later.

What this book offers is Knowledge about techniques to keep your cilia moving at the best rate of speed to wash away the offending bacteria. It presents a way to increase the ability of your natural defense system—including lysozyme, good white cells, and antibodies—to get to the bacteria and get them out. It also offers a way to protect your own “openings” to prevent the bacteria and viruses from entering.

This book also offers advice I learned from listening to my patients. For years I heard my patients insist that as long as they used pulsatile irrigation every day they never caught a cold. Instead of investigating this, I dismissed it as a “bubamycin” the Yiddish term for tales told by your Jewish grandmothers. (the correct term is *bubba meintzes*) . Then a scientist came along and showed that in order for the common cold virus to enter the body, it must enter by a protein normally present in the nose called ICAM-1. By washing out the ICAM- 1 from the nose, they removed the entry way and now the cold virus couldn’t get in. Now I listen to my patients.

Sinus Health Based on a 3000—Year Old Treatment

When I met Indra Devi, a famous Yoga teacher, she explained that for 3,000 years, yoga masters avoided sinus infections by rapidly and rhythmically sniffing saline in and out the nose. When she demonstrated the rhythm, I immediately realized that what she and the yogis before her were doing was stimulating the nasal cilia and using pulsation to remove stale mucus containing bacteria, pollen and dust.

If you can rhythmically sniff saline in and out your nose at the correct pulses/second at a low pressure—about 5 pounds per square inch—then you don’t need to read any further. However I found that most of my patients didn’t have months to spend on learning this technique and so I developed the Hydro Pulse Nasal/ Sinus pulsatile irrigator to do this for you.

Will this book cure your allergy? No, it will not. You can irrigate away the pollen, the IgE product your nose and body contains that makes the allergy, and you can even lower the IgE level in your blood by pulsatile irrigation. In some persons this might be enough to stop all medications, but often it means fewer symptoms and less medication. If you use pulsatile irrigation to remove the Jasmine pollen, for example, that lands in your nose you are still allergic to the pollen, but your body can handle the reduced amount of the pollen in your system with less symptoms.

Will this help your asthma? Most certainly. Clearing the sinus drainage lowers the inflammatory response of the chest. When you stop the pus from dripping into your chest, the asthma or other chest problem is improved. Most of the

recommendations for the sinuses will also help the asthma. When you increase cilia action of the nose, you generally also do this in the chest as well. (*Rachelefsky*).

Will this book stop you from having one sinus infection after another as soon as you stop the antibiotic? Probably. Persons who get the infection back within six weeks of stopping the antibiotic generally do so because the cilia have not returned to normal, so essentially, without cilia defense, they are going to have another infection as soon as the antibiotic wears off. Restoring cilia function is the key to this person's health, unless there are some permanent anatomical changes that we will describe later.

Earlier I mentioned how some people sneeze when exposed to fake roses. How much does the mind have to do with healing? In this book I give you the results of my investigations into the practices of the ancient "temples of healing." It turns out, they did work! But for a scientific reason. In those temples, the patient was put to rest, both physical and mental rest. This allowed his own natural cortisone levels to be restored so that his asthma was "healed". Also, he was given visualization to "SEE" himself healed. He was "shown" a way to restore his health, to take charge of his healing. Because this method of healing has worked for 3,000 years, I have included the means to do visualization healing in this book. Fortunately you won't have to travel to a far away temple, since it all takes place in your mind.

Did you know that some people have ruined their eyes by rubbing them too hard? Yet millions of persons blow their noses with enough force to cause DAMAGE. I spend time urging my patient to only blow gently, or not at all. Finally, I learned to demonstrate how gentle the Hydro Pulse irrigator is and show them what is considered gentle. One of best uses of the Hydro Pulse has been in demonstrating to children just how gently they should blow the nose by using the Hydro Pulse instead of nose blowing.

You've read a little about symptoms and signs that indicate whether or not you have a sinus sickness. If you do have this sickness—the medical term is sinusitis—there are a variety of treatments that will usually help and even cure sinusitis. When you know how and why these treatments work, you can be a more effective self-healer. Let's start with understanding how your healthy sinuses work, followed by what happens when your sinuses get sick.

The Healthy Sinuses—and Healthy Cilia

In your sinuses you have a wonderful arrangement called the Mucociliary system. "Muco" refers to the mucus, simply that liquid stuff that comes out when your nose runs, and when you blow your nose. "Ciliary" refers to tiny hairs like oars that work to push the toxic materials and bacteria out of your nasal passages. The healthy action of the cilia to clear your nasal passages is called Mucociliary Clearance. As long as the system works you have sinus health. The exact same process of cilia defense is in your chest. (Poor movement of chest cilia is found in severe asthma.)

Let's follow the action. Normally some bacteria will enter your nose on a dust particle, in a liquid spray from someone's sneeze, or when the winds stir up bacteria-laden particles. These bacteria get trapped in the mucus of your nose.

Before they have a chance to multiply, the bacteria are swept along by millions of these tiny cilia, these oars that stay in place along the nasal passages. These cilia sweep the mucus and bacteria to the back of your throat where the mucus is swallowed. Your stomach does the job of killing the bacteria with stomach acid. You have an identical system that sweeps materials up and out of your chest as well. There are other defenses too. There are enzymes that your body produces in the mucus, as well as good white cells that attack the bacteria. There are antibodies especially designed for certain unwanted bacteria and viruses. There is an extremely complicated inflammatory system that dilutes the bacteria, that brings white cells to the bacteria, that “melts” the bacteria.

In the body’s allergy defense mechanisms, antibodies are produced to dilute and neutralize offending materials that enter your nose, so that these materials won’t harm your body.

Nasty bacteria enter your body every day. Fortunately, when you are healthy, bacteria, viruses, pollens and other offending materials are swept away by your mucociliary clearance system—like brooms sweeping away dirt.

When the system fails:

Robert S age 30, grew up on an isolated farm, and had home schooling. Never sick. Moved to Chicago. For one year he was sick and had to drop out of school. He volunteered to help in a pre-school, got all the kid’s illnesses. But he got help from an immunologist, gave up smoking, avoided chilling, and finally was able to return to college.

Allergy. In one sense, allergy is a defense, but it can be too much of a good thing. Sneezing in the morning gets the dust out that accumulated last night. But when you sneeze non-stop over just a tiny bit of dust, that’s an allergy and it’s not healthy.

Antibiotic abuse. Too many antibiotics given, especially if they are given haphazardly, affect the way your body reacts to a new infection. Today many bugs have become resistant to ordinary antibiotics and have developed other defenses, like an umbrella to shield themselves from your attack.

Chemicals and industrial products. Further on, you’ll find a list of products whose fumes or chemicals can slow your nasal cilia defense.

Other causes. There are certain medical conditions that can cause sinus sickness too such as Cystic Fibrosis, and dryness due to medications.

So you see, 37 millions people have sinus sickness for many reasons.

Help Your Sinuses Work Normally

Aid your mucociliary system. This book will show you a way to keep your cilia moving at the best rate of speed to wash away offending bacteria and other toxic material, including the excess eosinophile proteins your body can make against a

fungus. Proper moisture to the nose is a way to increase the ability of your natural defense system— lysozyme, good white cells, and antibodies—to get the uninvited guests, the bacteria, out. We'll show you a way to protect your sinus openings to prevent bacteria and viruses from entering. We know that the chest and sinus systems are closely connected, so the same therapies can help most chest conditions.

Rhythmically irrigate your nasal passages. If you can rhythmically sniff saline in one nostril and out the other of your nose at 16 pulses per second, as the yoga masters do, you may not need further help. Instead of learning this rhythmic sniffing technique at the proper rate and pressure, you can use a simple device, the Hydro Pulse Nasal/Sinus Irrigator that will do this for you.

Reduce allergy symptoms. This book will not cure your systemic allergy, but for many people it might give you enough help to stop or reduce symptoms and the need for medications. Your body will be in better condition to handle the substances that provoke your allergy. I have listed a few of the dozens of medical studies that recommend this way to reduce allergy symptoms in the appendix. (*Meltzer*)

Caution on nose blowing. I will repeatedly emphasize proper nose blowing so that you don't cause the damage that millions of people suffer because they blow the nose too hard. Ear infections, spread of a cold into a sinus condition, plugged nose at night, all may come from this single dastardly act. With these patients I use the Hydro Pulse irrigator to demonstrate to children and grownups, just how gently they should blow their noses.

What Else Does This Book Offer?

In daily practice of ENT medicine or Otolaryngology I see so many patients with other symptoms and signs that may or may not be sinus related, that I must give you advice on these subjects, too, including:

- Head Pains and Headaches
- Nasal Polyps
- Snoring
- Rhinits and Vasomotor Rhinitis
- Geriatric Sinus Diseases
- Bad Breath Control
- Throat and Ear Problems

The Common Cold

Voice problems

These problems that may or may not be related to sinus sickness will be covered in PART Six and Seven. *Remember, whatever helps the sinus also helps asthma and most chest conditions.* Part Seven is important: how the sinuses can effect voice and what you can do about it.

In the latest ENT journal (*see reference Brook, I*) the author of the study tells of patients who were completely cured of one sinus infection and yet got a sinus infection again within four weeks! He wonders why; but to me the answer is obvious. These patients were not instructed about using the natural healing of irrigation and rejuvenating the body's cilia defense against infection. This book offers a way to avoid being re-infected over and over again. Most of our rave testimonial letters are from persons who no longer get sick like that. But now, we turn to the next pages the star of our drama, Sinus Sickness.

III. Sinus Sickness: Causes and Immediate Relief

Let's say you think you have sinus disease or you've been diagnosed as having sinus sickness. We want to discuss your treatment in different circumstances. There are some immediate treatments you can give yourself right now. If you're already under a doctor's care, I will discuss long-term treatments.

This part of the book is strictly for specific sinus disease or sickness. In Parts 4 and 5 we'll cover the other related sicknesses, or where the ailment is not caused by a single problem, which can be complicated.

A Sinus Attack Right Now or On-going

When you feel a sinus infection coming on you should do the following:

- Rest
- Drink hot chicken soup and tea (preferably without caffeine)
- Use hot compresses applied to the sinus area. Put those compresses
 - above the eyes for the frontal sinuses
 - between the eyes for the ethmoid sinuses
 - below the eyes for the maxillary sinuses

"Stop!" you yell, "I don't know a frontal or ethmoid or maxillary sinus from a tadpole!" Okay, let's give you a basic description. (*also see illustrations in the appendix.*) Remember, the sinuses are the hollow areas of your facial bones.

The frontal sinuses are those above the eyes. The roof of the orbit or eye socket is the floor of the frontal sinus

The maxillary sinuses are the largest of the sinuses and these cavities are located inside each cheekbone above your upper teeth and below the eye. They are present at birth.

The ethmoid sinuses are between our eyes and are the floor of the brain case.

There are sphenoid sinuses deep in your skull behind the ethmoids, above the top of your throat.

Besides self-treatment suggestions outlined so far as temporary measures, here is a list of products that can help Mucociliary Clearance, meaning the cleaning out of your sinuses by your tiny hair—like cilia. It is useful to know what is good for you.

Products that Increase Mucociliary Clearance (besides chicken soup and tea.)

- Iodides
- Guaifenasen (Humibid)
- Fluids enough to lighten the urine
- Reducing bacterial load
- Terbutaline used for asthma
- Inhaled corticosteroids
- Various enzymes: e.g. bromelain or papain lozenges dissolved in the mouth (Proteolytic Enzyme lozenges such as Clear-ease®)
- Pseudoephedrine (Sudafed)
- Breathing and cough exercises
- Flutter inhalation device
- Yoga vibration: “ooooooooommmmmm”
- Tones of low vibration delivered through the nose.
- Nasal saline sprays with enhanced electrolytes such as Breathe-ease XL
- Pulsatile irrigation at a rate that “tunes” the cilia
- Warm/hot chicken soup and tea

Your Sinuses

Let’s have more discussion about these sinuses and what infection or other sickness can do to them. (see pictures in illustrations.).

Maxillary Sinuses

The maxillary sinuses are below the eye, above the teeth, and are the ones most commonly affected in the most serious sinus infection. That’s also the

name of the bone in which they are located, the maxillary bone. They are the largest of the sinuses. Nerves to the teeth travel through the maxillary sinus and it is hard to know if the pain is from tooth or sinus or both. Often a toothache feels just like the pain from a sinus infection. An X-ray may be the only way to tell the source of the pain.

Nerves that give sensation to the cheek also travel through the upper part of the maxillary sinus and numbness of the cheek can be from a sinus condition for an orbital fracture.

If you have a maxillary sinus infection, you feel better lying down. Often a mild pain medication will give pain relief. The cheek may be swollen. There is a greater amount of pus in your nose than with other sinus conditions. There is more drainage of pus to the chest, with cough and voice effects. The maxillary sinus openings may be blocked from nasal polyps or swollen nasal tissue. Blockage of these drainage openings results in purulent infection.

In this book you will learn the simple logic of washing away bacteria so the body can self- heal. You will learn how pulsatile irrigation can overcome the various films, covers and other defenses that bacteria have developed against antibiotics.

The Frontal Sinus

Is there a constant pain above your eyes, especially in the morning that improves as the day wears on? Is the pain constant, stabbing? If you press on the bone that is the top of your eye, is that painful? It could be frontal sinusitis.

Infection in the frontals sinuses (above your eyes) is easier to diagnose but harder to treat. This is because the natural drainage channel of the frontal sinus is quite long and badly curved. The pain is more of a headache above the eye than a local sinus pain. There is pain at the bony roof of the eye, There is less pain on sitting up, but more on lying down. Pressing on the roof of the orbit—which is the floor of the frontal sinus—is painful. Movement of the eyes is painful. Because the drainage channel is so long and twisted, it can be more easily blocked by polyps, enlarged turbinates, or other anatomic problems. Surgery consists of opening drainage channels. Most importantly, watch for severe pain or change in pain in the frontal area. An abscess may weaken or open the posterior or back wall into the skull cavity with serious effect. In such cases, immediate surgical correction is needed.

Chronic frontal area pain: When the frontal sinus is infected over a long period of time it is described as well localized and the pain is relieved by simple aspirin. Fever may not be present. Other signs are sore eyes and a partial numbness above the eye.

Often, patients may report pain in the frontal sinus area without fever or colored nasal discharge for weeks. This pain usually is of cervical (*the neck*) origin, characterized by painful cervical muscle areas posteriorly (back of the neck; anterior is in front) that refers pain to the frontal area.

Palpating the cervical area is helpful; look for trigger points and areas of referral to the frontal area. This happens often because the root of the first division of the trigeminal nerve, *the fifth cranial nerve is called the Trigeminal*, goes far

down toward the spinal cord and lies next to nerve roots of the cervical nerves, so they "jump" and refer to this area that includes frontal area. Less commonly, cervical pain can refer to the maxillary area where the second division of the fifth nerve goes.

Patient EJ, age 34 was a macho dive instructor. He came in about every 4 weeks complaining of headache. Each time he saw a different doctor however, so no one really appreciated that he normally wouldn't complain about pain. Finally, he saw the same doctor twice in a row, she took an X ray of his sinuses, and rushed him for immediate surgery to drain a bad frontal sinus that could have ruptured into his brain. (Many persons complain of headache and pain, it takes skill for the doctor to make a correct evaluation.)

Ethmoid Sinuses

Is the pain between your eyes? Is the pain worse on deep breathing? Pain in cold weather? A constant plugged nose and colored drainage signifies an ethmoid sinus condition. Pain on wearing your glasses? Unable to wear sunglasses? It could be your ethmoid sinuses, which are located between your eyes. Symptoms include nasal congestion and discharge, pain between the eyes or at the corner of the eyes or pain in and around the nose. There is pressure on lying down, and it feels better sitting up with cold compresses. There is usually an elevated white count and fever. Wearing glasses is uncomfortable.

Ethmoid sinuses are a honeycomb or labyrinth of spaces bounded by the globe of the eye on the outside wall, the skull above and the roof of the maxillary sinus below. They are paper thin. The ethmoid bone includes the Cribriform plate through which the nerves of smell project from the Olfactory Bulb, the nerve of smell. This area is more in the midline. The ethmoid bone is the roof of the nose. Part of it makes up the nasal septum.

Ethmoid sinuses open primarily into the middle meatus, the wall on the side of the nose with the middle turbinate above and the inferior turbinate below. The same factors that can block other sinuses are involved (polyps, turbinate hypertrophy, mucosal hypertrophy, septal deviation). With the ethmoid sinuses, removing all diseased tissue, as well as obstructive conditions, is important. The ethmoid sinuses may cause infection into the globe of the eye. If the eye is swollen, consider obstruction of the ethmoid sinuses. Patients with ethmoid sinus conditions often have puffy eyes, black eyes, and obstruction to breathing.

L.M. age 18 came to the emergency room with both eyes swollen shut, and nasal congestion. She had a slight fever, X rays were only suggestive of a sinus infection, and her white count suggested elevated lymphocytes, often seen with a viral infection. The ENT residents suggested surgery to clear the sinuses. On careful history I learned that she had caught a simple cold, then rubbed Vick's over

the outside of her nose and eyes, then slept all night with a heating pad. She had a simple cold, and the swelling was due to the heat applied to the menthol of the Vick's. No reason to do surgery.

Sphenoid Sinuses

Sphenoid sinuses lie behind and above the nasal cavity. There are two sphenoid sinuses, but they are divided very irregularly from each other. The patient describes vague head pains and fever. The patient feels like there's a pressure inside the head, which bothers the eyes. Symptoms of sphenoid sinus sickness are less definite and may appear only as a

headache and continued fever. The doctor needs a CT scan to evaluate this condition.

Since we've spent a little time describing the sinuses (maxillary, ethmoid, frontal, and sphenoid), let's talk a little about your nasal septum, a really important part of your nose you can actually see and touch.

The Nasal Septum

The nasal septum divides your nasal passages into two parts, right and left. When the septum is perfectly in the middle, both sides of the nose work equally well. When the septum is crooked, or "deviated," the septum can block sinus drainage and lead to chronic sinusitis, as if a piece of cotton were shoved up into one side of your nose, and you'd have difficulty breathing well through that side.

When a deviated nasal septum is straightened, the nose is generally able to return to normal functioning. Sometimes it's well to have surgical straightening of a deviated septum in order to avoid chronic sinus disease. One great reward of straightening a deviated septum is to be able to get a good night's rest, since a deviated septum interferes with the sleep pattern. A most important function of the septum is that of turning you when you sleep. Normally, the person sleeps, say, on his right side. By gravity the turbinates fill and the left turbinate now presses on the septum. This signals the body to turn over to the left side, until the right turbinate fills and signals the body to turn. This is how you avoid bed-sores. If the septum is deviated, this essential mechanism is disabled and the patient doesn't get restful sleep.

If the deviated septum crowds into a nerve area, or causes cold air to strike a nerve, it can result in a chronic headache condition. But not every deviated septum needs correction. It's a matter of whether or not the deviation is causing symptoms.

A perforated Septum means there's a hole in the septum. Instead of air going through nicely on both sides of the septum, the air-flow is effected by the perforation. A perforated septum can be caused by overuse of "recreational" drugs, by too much cautery to stop nose bleeds, or as a complication of nasal-septal surgery. The way some persons pick their nose, you would expect more of them to have this!

Nasal Turbinates

The turbinates are boney shelves lining the air passages of the nose. They normally both enlarge and shrink. They especially enlarge with an infection or a cold, because blood is coming to the mucosal linings of the air passages to help fight disease, or warm the air going to the lungs. The turbinates enlarge with allergy, becoming pale and swollen.

When you visit a doctor you may complain that your nasal breathing feels blocked. Your turbinates may be swollen, and it makes sense to reduce their size with treatment.

Turbinates warm and humidify your inhaled air before it enters the lungs. They are covered by millions of cilia, which defend the body against dirt and irritants in the inhaled air. Without turbinates you'd have dryness, crusting, and sensations of burning pain. I will discuss treatment of turbinate disease by means of surgery, cortisone injections, or application of radio frequencies (a doctor's office procedure) at a later time in this book.

How to Immediately Treat a Likely Sinus Disease

Recall that we started right away with how to treat a possible sinus sickness for some quick relief:

- Rest
- Drink hot chicken soup and tea
- Use hot compresses applied to the sinus area. Put those compresses:
 - above the eyes for the frontal sinuses
 - between the eyes for ethmoid sinuses
 - below the eyes for maxillary sinuses

These procedures are likely just temporary measures to relieve, but not cure your condition. Later we are going to discuss pulsatile irrigation at just the right pressure, as one of your best permanent-type treatments. But first let's cover the conditions around you that can cause sinus sickness. If you are exposed to such conditions, and you have symptoms of sinus sickness, you might then know the causative agents.

You should be aware of products and matters that decrease the healthy cilia movement. Avoid materials or situations that are included in the following list. They can create a sinus disease or aggravate an existing sinus problem.

Products and Situations That Might Cause Sinus Sickness

The following are known to decrease Mucociliary Clearance that can result in acute or chronic sinus disease.

- Codeine
- Cocaine
- Antihistamines
- Dehydration
- Sulfur Dioxide
- Smog, ozone
- Chromium dusts
- Copper compounds
- Benzalkonium preservatives
- Nickel dusts
- Chimney dusts
- Formaldehyde
- Skydrol - a solvent used in airplane maintenance
- Hyperbaric oxygen
- Ionized particles
-

Situations that may Decrease Cilia Action

- Inhaling air or steam above 100 degrees Fahrenheit (40 degrees Celsius)

- Large amounts of iced drinks
- Chilling, drafts
- Smoking
- Nasal dryness
- Dust Exposure.

Exposure to excessive dirt, dust, or chemical vapors can cause sinus sickness. If you suspect a vapor or dust at work, you can contact your OSHA Office to ensure that proper ventilation and masking is being used. Do this before your nose and chest are severely affected.

Chromium and Chromates. Certain areas of Saudi Arabia have chromium in the sand. Continued exposure to this sand has been associated with a high incident of sinus disease and chest disease. Workers in plating and sanding industries should wear protective inhalers and use pulsating saline irrigation (covered below) to remove these chemicals and help restore nasal ciliary action.

Smoking. Smoking or quitting smoking does not give consistent results when it comes to the matter of determining cause of sinus sickness. Some patients get swollen nasal membranes after they stop smoking; these patients may return to smoking to overcome their nasal congestion and blockage of nasal passages. When cessation of smoking leads to nasal blockage, the treatment is pulsatile nasal irrigation. Cessation of smoking is important for a healthy sinus. There are nicotine support groups such as Smoke Enders, Nicotine Anonymous, Fresh Start, and they all do a great job. There are patches that provide nicotine to help you quit.

Multiple Chemical Sensitivity Syndrome. After a single powerful exposure to an Industrial chemical, the individual may become sensitive to products not previously offensive. For example, insecticides may be sprayed inside a woman's office. The insecticide may act as a strong toxic substance

for nasal cilia. Now the woman coughs at slight exposure to perfumes, soap powders, or small amounts of dust that never bothered her before. The cilia no longer removal agents like dust, which eventually create symptoms.

Emerging Offenders causing Sinus Problems.

A big problem comes from the marketing of new products every day : cleaning products, paint products, house, and home enhancement products, sports products, deodorizing products, and so forth. If you feel the slightest reaction to any such product, avoid it. If you inhale a product that you are allergic to, the more of it you inhale, the more severe your allergy will become.

E. G. A female age 26, was cleaning a shower stall with bleach spray. That didn't work so she used a tile cleaner. The combination produced chlorine gas (mixing hypochlorite with acid) and she developed serious sinus and chest problems.

L. S., A female age 42 developed sinusitis and after corrective surgery became worse! She worked as a manicurist and was using very strong chemicals in a poorly ventilated room. These strong chemicals (toluene) resulted in poor cilia function and secondary sinus disease. With the ventilation improved, and wearing a suitable mask, and nasal irrigation after each work session, then her symptoms improved.

The doctor must be aware of the chemicals that can cause sinus disease. More important, just as you wash your hands, you should rinse your nose after exposure to irritating chemicals, dust and dirt.

Medical Conditions That Might Cause Sinus Sickness

The following conditions are known to decrease the Mucociliary Clearance:

- Late stages of allergy
- Nasal polyps
- Severe bacterial infections, e.g., Hemophilus influenza, Pseudomonas
- Any sickness or physical affliction that reduces breath airways

- Nasal obstructions
- Cystic Fibrosis

Proper medical attention to these conditions will usually lead to improvement of sinus sickness.

Products and Situations That Might Help Keep Sinuses Healthy

Not all news is bad. There are some products and situations that can help your sinuses, that can help mucociliary clearance, meaning the cleaning out of your sinuses by your tiny hair like cilia.

Products that increase Mucociliary Clearance, besides chicken soup, tea)

- Iodides
- Guaiafenasen (Humibid)
- Fluids enough to lighten the urine (drinking lots of water)
- Terbutaline (asthma inhaler)
- Inhaled corticosteroids
- Enzymes, e.g., bromelain or o papain lozenges dissolved in the mouth (Proteolytic enzyme lozenges such as Clear-ease.)
- Pseudoephedrine (Sudafed)
- Nasal saline type sprays with enhanced electrolytes (Breahte.ease XL)
- Saline (without preservatives) given as pulsatile irrigation at a rate that "tunes" the cilia.

Techniques that help Mucociliary Clearance

- Breathing and cough exercises
- Yoga Vibration: "ooooooooooooommmmmmmmmmm"
- Tones of low vibration delivered through the nose
- An optimistic outlook-try SMILING!
- Pulsatile irrigation

Pulsatile irrigation. The treatment called pulsatile irrigation, with a saline solution, by means of a device that controls the pressure of the spray is the treatment that we'll cover with greatest detail. It appears to be the most consistently effective way of treating sinus disease. Pulsatile irrigation, usually at a pulse rate 16–20 / second has been shown to be most effective in removing thick mucus and crusts. Because it is so effective at a VERY LOW pressure it can be used so that no bacteria are forced into healthy areas or into the ear. Pulsing the nasal cilia back and forth has been shown to be effective in restoring impaired cilia movement.

Sicknesses That Can Be Related to Sinus Sickness,... But Not Necessarily

Nasal allergy. Early stages of nasal allergy do not cause sinusitis. It's only in the late, exhaustion state of allergy- like sneezing for 6 weeks- when your nasal cilia slow or stop, that a sinus infection can come about. We'll cover more of this in PART Six, Details on Related Problems.

Common cold. A common cold may be prevented by the use of pulsatile irrigation, details to be covered shortly. I covered this briefly in "I Didn't Listen to My Patients," where the patients told me that if they irrigated their nasal passages with saline they had no colds, or reduced the effects of colds. More later, in Part Four.

Postnasal drip. Postnasal drip is not sinusitis. The cilia are moving too slowly so the mucus thickens. Pulsatile Irrigation is therapeutic, it will help this condition by restoring normal cilia movement.

Deviated nasal septum. The septum, the divider in the middle, can block breathing and this blockage can prevent sleeping at night. There may be a headache because the deviation directs cold air to towards a nerve bundle.

Here medications and sprays don't help the condition. Caution: not every deviated septum requires correction.

Summary

- Rest
- Drink hot chicken soup and Tea
- Use Hot Compresses applied to the sinus areas

If this is not effective, Pulsatile Irrigation of nose and sinuses can be used to restore nasal cilia, remove nasal pus, and thin the secretions. With a proper pulsatile irrigation device, the irrigation pressure is adjusted to just the right value of 5 PSI - the water stream is about an inch high. The saline, or better yet, *enhanced* moisturizing solution, goes in one side of the nose and out the other. This is a natural way of healing the sinus condition. Even children as young as 5 years find this a pleasant treatment. 5 PSI - when the stream is almost one inch high is about 1/6 as much pressure as blowing your nose - gently.

Some people get symptoms after exposure to downtown Smog or dust at work. I advise them to use this irrigator much like washing the hands to remove dirt. By irrigating in this manner, the nose doesn't have to do the work. I find it especially useful for Firefighters to use after the smoke of a fire. After 9/11, pulsatile irrigators were rushed to New York.

A Sinus Type Sickness, What the Sinuses and Related Body Structures Are, and How to Immediately Treat a Likely Sinus Sickness

These are the topics we've just covered, although we started right away with how to treat a possible sinus sickness for some quick relief. Do you remember?

These procedures are likely just temporary measures to relieve but not cure your sinus condition. We are going to propose pulsatile irrigation at just the right pressure in a moment as one of your best permanent type treatments. But first let's cover the conditions around you that can cause sinus sickness.

If you are exposed to such conditions and you have symptoms of sinus sickness, then you might know the causative agents. This knowledge is a big help for avoidance and treatment.

You should be aware of products and materials that decrease cilia movement. Avoid materials or situations that are included on this list. They can create a sinus disease or aggravate a bad sinus condition that already exists.

It's time we moved to the best long-term treatment for most sinus sicknesses. We try to avoid surgery whenever possible. Let's see the details in part Four.

IV. Sinus Disease - Full Treatment and Cure

Are you ready to take action to prevent, treat, and cure sinus disease? There are a lot of actions you can take, fairly easily, before you need surgery or strong antibiotic treatment. You may need surgery. You may need an antibiotic. But first, you might have a chance to take some relatively simple measures to prevent sinus sickness, or treat it and help it and maybe even cure it—at home.

EL, male age 42. Sent to our office to have sinus surgery because 3 courses of antibiotics had not cleared his sinus pain and his CT indicated purulent material in his sinuses. After 2 weeks off antibiotic, his nose showed pus. He received pulsatile irrigation, and a cupful of thick yellow pus was washed out which cultured nasty bacteria. He was placed on pulsatile irrigation at home, hot tea—eight—8 ounce glasses /day—and drink fluids until the urine turned light. He was also placed on lactobacillus tablets to replace the good bacteria wiped out by the antibiotics. In two weeks of twice-a-day irrigation he no longer had pus on irrigation, he then continued once a day irrigation for two weeks and subsequent CT scan showed minimal disease in his sinuses. By restoring his cilia, and removing the pus, he made a full recovery without further antibiotics or surgery.

General Recommendations

Gentle nose blowing. Why is this stressed again here? Because for 30+ years of practice I repeatedly have seen patients whose ONLY problem was blowing the nose too hard! Please, be very gentle when blowing your nose especially when you have a cold or allergy.

Rest when you have a cold. Rest allows your natural healing mechanisms to work well. If you are fatigued, or excessively tired, less good enzymes are available.

Don't get chilled. Avoid getting chilled when you have a cold. If your body is fighting to get warm, there is less good circulation to handle the virus. Ice drinks slow the nasal and chest cilia.

Drink Lots of Hot Tea, Lemon and Honey. Now there's a difficult remedy, right? Does it work? Professor E. G. Bang of Johns Hopkins Medical School studied 120 patients with sinus sickness and had them drink lots of hot tea with lemon and honey. It made them feel better, and their cilia worked better. He actually

measured cilia function before and after using radioactive products. (*Appendix: measure nasal cilia.*)

I advise eight glasses of hot tea with lemon and honey, when you have a mild sinus or nasal condition, including post–nasal drip. And I also tell my patients to stop using the expensive medications they are already on. They are delighted when, one week later, their nasal conditions are improved and they cough less, their chests feel much better, and the sinus conditions are better. Green tea is best. You can avoid the bitter taste by adding water just as its steaming to the tea, let it steep for only three minutes, and use lemon and honey.

Irrigate the nose and sinuses. There are a dozen articles that recommend irrigation of nose and sinuses. What method is best? What solution should you use? The most common solution is isotonic saline. But, because the prepared solutions are not fresh, may have been sitting on the shelf for a very long time, and contain preservatives, (many of which are known to harm the nose), preparing your own solution fresh is best. Methods of irrigation are described later in this section.

Preparation of Isotonic Saline Solution

You can make an approximately isotonic saline solution with the following recipes:

Add 1/2 teaspoon of salt stirred into 8 oz. of warm water.
 Or one level teaspoon of salt stirred into 500 ml of water
 500 ml means 1/2 of a liter, or approximately one pint or 16 ounces.
 You want to use Kosher salt or Pickling salt as this doesn't have any silica, iodine or anti-caking chemicals. (*See Appendix for lists of preservatives used in prepared saline solutions and a list of chemicals used in commercial salts to prevent sticking or caking.*)
 For many persons adding 1/2 as much baking soda (sodium bicarbonate) to the solution feels more comfortable. For example, for the 500 cc add one teaspoon salt and 1/2 teaspoon of baking soda.

The isotonic salt solution can be applied liberally to a nose for dryness, crusting, or burning. The solution can be used to wash away dust and irritating materials.

Studies have show that nasal solutions that contain the body's salts, such as calcium chloride and potassium chloride, are more "nature's way," and are more effective in aiding nasal cilia. (*Boek, Merkus*) Breath ease XL is one such product. This is available as a spray or for use with the Hydro Pulse Nasal/Sinus irrigator which is described later in this Part Four.

Currently there are nasal sprays on the market that are isotonic or hypertonic saline. Isotonic means the solution has the same ratio of salt as the body. Hypertonic means extra salt, more salt than the body. In *theory*, if nasal membranes are swollen and holding fluid, the hypertonic saline should draw fluid out

of the tissue, and relieve symptoms. In *real life practice*, however, my own patients, and patients of my four medical associates, usually prefer the isotonic strength of products that we use.

When the nose is very swollen, you may find the hypertonic works best for you. But you can always start with isotonic and move slowly into hypertonic. Some persons find that hypertonic solutions are too strong, and these persons must cut back to isotonic. That is one advantage of using the Breathe-ease XL. It comes as a powder and you can prepare an isotonic solution or try a hypertonic to determine which is best for you. No single concentration fits everyone all the time.

What is important is that you do not use prepared solutions that contain preservatives that may irritate an already sore nose. These preservatives that are known to be irritating include Benzalkonium and Merthiolate (Mercury). When you make your own or use Breathe-ease XL, it is fresh and you avoid these preservatives. In any case you don't want to be dumping mercury products into your kid's nose.

Our Drug Free Approach using Irrigation

There are at least 200 over-the-counter pills or liquids sold for sinus symptoms. While some of them are quite good, for some patients, their effects vary tremendously from one patient to another.

If you find a preparation that works for you, that doesn't dry you out too much, or make you sleepy, there is no particular reason not to use this preparation when you do have a cold. But, because many patients are already taking prescribed medicines, I prefer the drug free approach if possible so as not to interact with those medications. Today, many of my patients are taking cholesterol lowering drugs, anti-hypertensives, diabetic medications, nerve pills, etc. and adding another drug to the pot is not desirable.

In large doses, certain antihistamines can cause slowing of nasal and chest cilia. When this happens, thick crusts can occur in the tubes that lead to the lungs and this is extremely dangerous for asthmatics. Consider that hot tea with lemon liquefies these thick, heavy crusts. This simple procedure can often reduce the patient's symptoms by as much as 50%. Anyone who has morning nasal congestion should drink hot tea before getting out of bed. A simple thermos or electric percolator at the bedside may be all that's needed. (*Yes, you heard right, breakfast in bed*)

When you have morning sneezing and hacking, the body is trying to warm up from the drop in temperature during sleep. It is also trying to sneeze/cough out the dust accumulated during the night when the cilia were sleeping. The hacking and sneezing works, it does warm your body, (jumping up and down works too), but it starts a cascade of more sneezing and hacking. You can avoid this by having breakfast in bed, which warms the body and avoids the AM sneeze.

Do not make regular use nose drops that can cause nasal disease. For flyers and divers, I regularly recommend the product called Sudafed. Sudafed doesn't cause drowsiness, nor does it harm nasal cilia. It is usually satisfactory for opening and relieving sinus congestion.

You can even open a stuffed nose using biofeedback for the nose with no drugs at all. (See Appendix.)

Irrigation of your nasal passages is absolutely the best way, in almost all cases, to relieve, sometimes prevent, and frequently cure sinus sickness. In sinus disease, the cilia no longer do their job of defending against bacteria and toxic products. That is the basis of the best general treatment for sinusitis—that is, getting the cilia to function properly, to remove bacteria and toxic products from your nasal and sinus passages. In many persons, the cilia can't move at their best rhythm, (15 pulses per second) because of thick mucus. If we thin the mucus, we should get the cilia back into healthy functioning.

There are many methods for thinning mucus. Some of these methods have problems, and some work well. Let's cover several of these methods.

Sniffing Saline

Sniffing saline is not recommended because usually the pressure you use is too high. Sniffing saline can be done correctly at a rapid rate, and at a suitably low pressure, but few persons have had proper training to do this. You could travel to India and learn this, from yoga masters.

Using a Rubber Bulb Syringe for Irrigation

A serious problem here is that the inside of the bulb may be deteriorating and you could blow rubber particles into your nose and cause a foreign body reaction. Or the inside of this bulb may be full of bacteria, and use of the bulb could cause infection. Another problem is that the pressure may be too high. With the astonishing increase in people with rubber/latex sensitivity, possibly some of these were caused by rubber particles lodging in the nose. I have personally removed some of these pieces of rubber from a nose and suspect this is a factor in causing rubber/latex allergy.

Neti Pot

The Neti Pot is a container that can be filled with solution and tilted into the nose. It has a nasal tip that fits into the nose. You turn your head to the side, raise the can up until the fluid flows into the nose on one side and out the other. You must be properly undressed for this, or, still better, do it naked in the shower. The pressure is often too high at the beginning and too low at the end. The main difficulty with this product is that you must lean your head to the side when you irrigate, so that the water lies on the Eustachian tube and enters the middle ear, carrying nasal bacteria to the ear. This is a frequent cause of fluid in the middle ear or ear infection. The Neti Pot is simple to use and is inexpensive. It's heavily promoted as one of the "alternative" therapies.

Squeeze Bottles and Lavage

The Squeeze Bottle for Lavage, is convenient to carry for use after work or a swim. You can add the Breathe-easeXL, in the morning, and carry the lavage bottle dry until ready to use. Then just add water. Between use it must be kept dry. Leaving hydrogen peroxide in the bottle overnight keeps it bacteria free; this can be done once a week.

Proetz Sinus Irrigation

This is an effective, but difficult, way to cleanse nose and sinuses. It is best used on a very young child. The child's head is placed extended from the parent's lap. The head is upside down, the eyes below the nose. The head should be as extended as possible. Both nostrils are filled with dilute Neosynephrine 1/8 %. Then a plastic nasal bulb syringe is used to suction one side. As the fluids are removed, the opposite side is refilled with warm saline fluid. As the left side is filled, the right nostril is suctioned. Then alternate. This is repeated on each side until the return is clear. The fluid fills the sinus cavities and mucus and pus are thoroughly removed. It's effective, but hard on children as well as on parents. It's unpopular among kids of all ages. Before the Hydro Pulse Nasal /Sinus Irrigator, it was the only effective method available.

Powered Irrigators Without Pulsing.

There are powered irrigators, without pulsing, that function like the squeeze bottle, but have no advantage over the squeeze bottle. The lavage/squeeze bottle is just as effective and much cheaper and is portable.

Nebulizers

Powered nebulizers have a long history of use to deliver medications to the lungs. They specialize in making very fine particles so small that they will reach the smallest lung areas. In theory this should work for sinus problems, but there is a vast difference in inhaling fine particles vs having them flow past the sinuses. Good results have been reported by the manufacturers in patients who had previous sinus surgery, where the sinuses are widely open and where pulsatile irrigation was used first to remove thick mucus to allow the medication to get to the sinus areas. One report showed that little of the solution entered the sinuses. (Olsen)

Pulsatile irrigation using the Hydro/Pulse.

Pulsatile irrigation works like the Proetz method, except the patient leans over the sink while the stream flows past the sinus openings. The Hydro Pulse Nasal/Sinus Irrigator (*Illustration*) regulates the flow of saline at a constant pressure, a pressure gentle enough for even five-year-olds. Hydro Pulse irrigation is NOT a hose stuck into a sinus cavity. Hydro Pulse is NOT a strong stream, that is so strong that it "flushes" the sinuses clear. Instead it acts by displacing sinus contents and activating the cilia to do the drainage.

Research has shown that a pulsating stream is much more effective in removing thick mucus and bacteria than a smooth stream. (Anglen)

The pulsation of the saline stream is "tuned" to vibrate the nasal cilia, so in addition to removing thick phlegm or mucus at a gentle pressure, the stream pulses the cilia. Think of tiny pieces of paper moving about on top a piano being played loudly. Or soldiers marching across a bridge in perfect step—the bridge will start to vibrate.

Fluid flowing past a narrow opening such as the openings to the sinuses creates a vacuum called the "Bernoulli Effect". But with the Hydro Pulse, not only does the saline stream flow past narrow sinus openings to displace the material in the

sinuses, but the pulsing action acts as a pump to get more fluid into the sinuses and displace existing sinus contents—contents with toxic materials and bacteria.

Dozens of medical journal articles recommend this method of sinus treatment. (see *references*). Once the sinuses get filled with therapeutic liquid, there is a gradual release of liquid after irrigation over the next hour, as the cilia move these cleansing liquids out. With the mucus out and the cilia “tuned,” there is an opportunity to recover from sinus infection.

Advantages of Hydro Pulse:

Adults and kids find it pleasant.

It’s so simple, kids can do it themselves.

Hydro Pulse is quiet.

Switch at handle for easier use

There’s no rubber or latex so it’s safe for latex-sensitive persons.

Without latex it won’t cause latex allergy.

Hydro Pulse is useful for removing mucus containing bacteria biofilm.

Hydro Pulse is most effective for mucus removal.

Insurance may cover the cost of the Hydro Pulse.

It is useful during pollen season to lower nasal pollen.

Once cilia are restored, no further treatment may be needed.

Although the device will last for years and can be used by the entire family, it costs less than a single antibiotic prescription.

Disadvantages of Hydro Pulse

Requires a sink and an electric outlet.

Costs more than the bulb syringe or squeeze bottles.

When not to use pulsatile irrigation

If the nose is completely blocked by polyps or other tissues.

After sinus surgery or trauma, follow your doctors instructions.

Using the Hydro Pulse

One teaspoon of salt (pickling or kosher) or Breathe-ease XL is added to 500 cc of warm water. This makes an isotonic solution.

Turn on at the base. Then you adjust the stream so it is almost one inch high. Use the off and on switch in the handle.

Bend your head into the sink so you can see the drain.

It is important that the head should be perfectly straight, not tilted. Both ears should be at the same horizontal level. The stream works best this way; the stream flows past the sinus openings rather than against the septum or the sidewalls

of the nose. This way the solution doesn't lie on the sides where the openings to the ears are located on the side of the nose. Do not swallow or sneeze or cough while irrigating, stop if you must cough or swallow. These actions raise the pressure and can have a negative effect on the treatment. To sterilize the unit, add 200 cc of regular Hydrogen Peroxide 3% to the basin. Insert the nasal tip attached to the handle. Run the machine for 30 seconds so that the solution runs through. Then leave it overnight. Rinse out in the morning with clear water.

THIERE IS A PROBLM HERE MURRAY: treat a sinus infection, is much longer for sinusitis than it is for lung or other illnesses. One reason drugs need to be given over a longer period of time in sinusitis is Biofilm. This is a wrapping, almost like a cellophane cover, that protects the bacteria from the antibiotic and other body defenses, such as white blood cells. Another reason for a longer duration for antibiotics is that the penetration into the sinuses is not as effective as to other parts of the body. Pulsation irrigation is best for washing away these "protected" bacteria.

Currently doctors are applying antibiotics and antifungal medications directly to the sinuses via pulsatile irrigation and no doubt this will be the method of choice in the future. You put eye drops directly into the eye for infection, why not the antibiotic for the sinus infection? That way you can avoid some of the unpleasant systemic effects of these medications.

Hydro Pulse device contains no latex or rubber, and so is safe for latex sensitive persons. Other devices may deteriorate, and a black rubber enters the nose/sinuses. Possibly this could cause a latex sensitivity. If you are using an irrigator with latex, that gives a black solution, stop and do not use it.

Antibiotics

Antibiotics have saved many lives and are needed. I am not here to tell you which antibiotic will cure you—you will have to ask your doctor about that. Recent information on antibiotics is available for you in the Appendix. Current information can be obtained at our web sites and newsletter.

If Surgery is Necessary

From all that has been written in the preceding pages of this book, you should know that I try to avoid surgery and use other less drastic treatments whenever possible. But surgery is required at times. Let's discuss those times. Actually, Sinus Surgery is also part of the Drug-Free Approach.

One of the conditions that leads to surgery is that the nasal bones and the septum, the bone that divides the nose in two, may be so "crooked" that these block breathing and drainage. The sinuses may be so blocked by tissue such as polyps that none of the recommended methods here will work. Cilia can't perform if the septum blocks the sinus drainage. In such cases, the drug-free approach is surgery to correct the obstruction. When that is corrected, then natural healing can take place.

Goals of Sinus Surgery

- To remove polyps (benign tissue growths) or displaced structures that block sinus drainage.
- To improve sinus health by increasing the size of the sinus openings.
- To remove diseased tissue and clear chronic infection.
- To improve airway function, making room to breathe, by correcting tissue that blocks the airway. This may be due to a deviated (crooked or irregular) septum or an enlarged turbinate (one of the bony shelves on the insides of the nasal passages.)
- To do procedures so that nasal sinus tissue can return to normal function.
- Not to harm normal nasal tissue so that cilia function continues to defend the body in the best manner.
- To remove organized infected tissue.

Turbinate Surgery.

Sometimes the turbinates fail to shrink despite treatment. Their composition has changed so that they can no longer get back to normal size and, despite best efforts, continue to block the nose. In such cases reduction of the size of the turbinates is required: some common methods include:

Submucous Resection. Here the turbinate is split open and the bone is removed so that the turbinate or shelf falls to the side of the nose, where it no longer blocks breathing.

Laser or radiofrequency (Somnoplasty) Here the tissue under the mucosa is modified by heat so that it scars and no longer swells.

Surgical Reduction of Hypertrophied Nasal Turbinates. A careful removal of tissue is done, which spares most of the turbinate tissue.

Whichever method is used, extreme care must be taken not to damage the cilia function of the turbinate mucosa.

Kenalog Injection. This is an office procedure where a long lasting cortisone medication is injected into the turbinate tissue and may give relief.

Diagnostic Problems.

Good results can follow proper surgery. But the doctor must make a correct diagnosis. Here are some common errors in making that diagnosis:

Allergy. The patient's problem is allergy to something, for example, allergy to a cat. No matter how skilled the operation is, when it's finished, the patient is still allergic to cat.

Neck. The apparent sinus pain is actually coming from the neck. Obviously you have to fix the neck.

Pain from the tooth. Because the nerves from the teeth are mixed with and travel through the sinuses, the teeth and gums must always be considered as a source of pain.

Headaches. The patient may have one of several kinds of headaches that sinus surgery won't fix. These non-sinus headaches including migraine, trigeminal neuralgia, and histamine cephalgia (headache from sensitivity to histamine) will be detailed later.

Diseased Tissue. All diseased tissue may not have been removed by the surgery.

Sinus Surgery Complications

Occasionally there are problems following sinus surgery. One unfortunate surgical complication is failure of the patient to improve after the surgery and continuation of the same sinus symptoms. A frequent cause of this complication is excess removal from the nose of tissue containing cilia. Or steps have not been adequate to bring cilia back to normal function. Preventing this latter condition is why many doctors insist on pulsatile

irrigation after sinus surgery. The doctors want to restore cilia function as soon as possible.

Other rare complications from sinus surgery include creating an opening to the brain area, injury to the eye or eye muscles, loss of sense of smell, or empty nose syndrome where too much cilia bearing tissue has been removed.

Innovations in Sinus Surgery

Many of today's ENT (Ear, Nose, and Throat) specialists are trained to do FESS which is Functional Endoscopic Sinus Surgery. FESS is surgical work with fine scopes so that the outer nose need not be affected by the surgery.

Recent developments include advanced fiberoptics, rigid telescope technology, video, hard drive digital memory storage, and use of special Lasers. With specially designed sinus telescopes, ear, nose and throat surgeons can diagnose and surgically treat sinus problems that, in the past, were not easily identified by conventional examination techniques.

Some doctors use Guided Image Surgery such as Insta Trak. Here the patient has a special CT (computed x-ray) scan done where markers are included in the films. During surgery, a type of magnet is attached to the surgical instrument that is read by a monitor. The position of the magnet (therefore the position of the suction instrument) is shown in real time on the original films in three views on a monitor screen. The doctor has a full view of the position of his instrument in three different planes or views, in relation to the markers, and this positioning helps the doctor to avoid entering the eye or the skull. Jordan Josephson, sinus specialist of New York City states:

"Insta Trak is an excellent addition to the surgeon's armamentarium. It should be used in difficult cases, such as revision sinus surgery when there may be a lot of scarring or in cases where the surgeon needs to drill in the sinuses to open up bony closure of the frontal sinuses. This technology is not for every surgeon and does not make the surgery failsafe. The Insta Trak should not be used on a routine basis and can give an inexperienced surgeon a false sense of security, if he/she is not experienced operating in the remote areas of the sinuses which are abutting the orbit and the intracranial cavity."

After sinus surgery, most patients have minimal pain, much less than from a tonsillectomy. Thus, after following our recommendations, if you still require surgery, you can be comforted in knowing that you are receiving the latest and best that medical science can provide.

V. Stress and Anxiety Make You Sick

There's a collection of symptoms resulting from stress and anxiety that can both be caused by sinusitis and that can aggravate sinusitis. In other words, stress and anxiety can be increased by a sinus sickness. On the other hand, stress and anxiety from other causes, can aggravate your sinus sickness.

Everyone Tells You to Relax

How many times have you heard this, "Just Relax. You're too tense." Common situations include: before an interview, an exam, a performance. We all know people who do badly on tests because they are anxious, although they are really smart. When you are anxious your heart pounds, you perspire, and you breathe faster. The worst situation is an anxiety circle, the more you worry the more nervous you get, the faster your heart beats.

Do not belittle the importance of reducing your anxiety or stress. The ancient temple healings worked for many illnesses. A major part of their treatment was to put the patient to bed inside the temple, to rest, away from daily problems, and allow natural cortisone levels to be restored. Natural cortisone levels fight disease. Anxiety and stress lower natural cortisone levels, making a person more susceptible to sickness. Even the health factors that fight against cancer are affected by anxiety and depression!

Medication Treatment for stress and anxiety.

Nervousness builds up undesirable chemical in your body. One way to stop this build up is to take medications. Drug like Inderal and Xanax do work. However, there are many objections to that course of action. Side effect symptoms are just one of those objections. The other objection is that for most persons, non-drug methods work.

Biofeedback for stress and anxiety

Biofeedback methods work well for the muscle effects of stress and will be detailed in a discussion of treating TMJ. In Biofeedback, information is given back to the body so that the body knows when it is doing it right.

When you use a mirror to shave, that's biofeedback—the mirror tells you when you are doing it right. A 12 year old trying to put lipstick on her lips without a mirror does a poor job. With a mirror and good lighting she will do a better job because the mirror tells her what she is doing right. Similarly in biofeedback we measure the task we want to accomplish. To learn to relax the muscles of the face, we put sensors on the facial muscles and demonstrate the amount of electricity the muscles are making - say 30 micro volts by a clearly visible dial. By simply observing the dial and trying to reduce the dial reading, the body can reduce the amount of electrical output i.e. relax the muscles. You can't have anxiety if your muscles are relaxed. In the TMJ section I will discuss steps to relax using the mirror as a biofeedback device. Visualizing yourself as being well can help your sinus sickness.

You can have stress in a job interview. That stress can cause you to tighten and cut off circulation to muscles, causing pain and headache. That stressful reaction must be reduced or eliminated. But you can have a stressful situation, and as long as you don't tighten muscles and continue calm and regular breathing, you escape physical harm.

When you lie relaxed on a beach, under warm sun and ocean breezes, you don't have stress or anxiety. It takes tight muscles to have anxiety. You can still be concerned over some matters in your mind, but as long as the muscles don't tighten, the body doesn't produce undesirable chemical reactions, and you don't get the bad results of stress or anxiety.

Worse than stress is anxiety reinforcement. Here, the more you itch, the more anxious you get, the more it itches, the more nervous you get, the worse the itch. The anxiety makes the condition worse. If you had relaxed in the first place, the itch probably would have gone away.

You can give yourself suggestions to aid the visualization of a healthy body.

Reducing stress to speed sinus healing. You can speed sinus healing by reducing muscle tension. This frees your body to handle disease. This is part of a Drug-Free Approach. Try the following method.

In front of a lighted mirror, clearly see your face, jaw, and shoulders. Change your breathing pattern. Instead of equal time for breathing in and breathing out, breathe in to a count of four, then breathe out to a count of six.

As you exhale, your body sends a signal through the largest nerve in your body to relax your chest and diaphragm. Use that signal, exhalation, to get other muscles relaxed.

As you relax, look in the mirror to see your jaw, face, and shoulders relax. The mirror feeds back to you information on whether or not you're doing the relaxation right. If you are doing it right you should see your jaw drop, your eyelids droop, like when your dad falls asleep on the couch.

An example of anxiety making illness worse is the symptom of tinnitus, ringing in the ear. Police and firemen often suffer hearing loss and develop tinnitus. It's "part of the job." But recruits are taught to be aware of it so that when they do get tinnitus they don't reinforce the symptoms.

In a similar manner a patient may get a stuffy nose. Instead of taking tea and bed rest, she immediately pops pills, takes a medicated over-the-counter nose spray, and sniffs too hard to clear her nose. As her condition worsens, she has more anxiety, and the symptoms get more aggravating. Her anxiety physically reduces her body's defense. If she had relaxed in the beginning, the symptoms might have worsened slightly, but natural healing, and relief might soon have taken place. (Dr Robert Ivker was one of the first to point out the importance of relaxation to healing the sinuses.)

It's not a matter of life or death if your nose is stuffy for a day. You won't expire in your sleep if the nose is stuffed.

Guided Visualization to Help a Sinus Problem

It's not entirely practical that you take a two-week vacation in Hawaii, to lie in the sun and reduce your stress. You can get similar benefits by guided visualization.

Wow! I just looked at Amazon.com and there are 45,000 books on this subject out there! What a bargain you are getting, most of that material is right here in this part of the book.

You can create an image, in your mind, of a quiet pleasant scene, and your body responds by producing the beneficial enzymes and chemicals that promote healing.

You must employ every one of your five senses for full benefit:

See the sights of the pleasant scene

Hear the sounds of the pleasant scene

Touch objects in the pleasant scene

Smell good smells in the pleasant scene

Taste good things in the pleasant scene

For example: Imagine—create an image in your mind—of a pleasant time when you didn't have sinus sickness.

You are drifting down a stream. Feel the sun, feel what you are sitting on, taste the chewing gum in your mouth, smell the fresh flowers in the air, hear the current of water lapping on the boat. Touch the railing, touch the rudder as you steer the boat. Feel the speed of the boat and it's turns. See the water flowing past the boat Try to enjoy each sensation. Maybe you pluck a flower and taste it.

By doing visualization daily, employing all the senses, you can engage many of your body's healing mechanisms. Believe me, not only your blood pressure, but other body chemistries will be different than when you were worrying and stressing and making yourself worse by reinforcing your illness. The more you imagine yourself before the illness, the more chance you will recreate the health factors that were present then.

In another useful visualization, you can visualize going into a temple of healing (or a \$1,000-a-day fancy spa) See yourself inside the temple, feel the warm robes you're dressed in, smell the pleasant aromas, hear the music, and taste healing waters and foods.

Pick an experience that was very positive for you: a high school dance, driving your first car, doing your first solo experience, your pleasure when you glided downhill on your bike. Often your body will respond like it did before you had any sickness.

Later I will show you more ways to use biofeedback for muscle relaxation. I can't over-emphasize the importance of visualizing pleasant odors. The organ of smell is located right next to the limbic or emotional system and plays an important role in your health. This is why aroma therapy and perfume are so popular.

VI. Sinus Related Sickneses and Problems

This section of the book deals with sicknesses that are common nasal problems but not strictly common sinusitis. If these include one of your problems, let me tell you what to do for it:

- Nasal Allergy
- Common Cold
- Postnasal Drip
- Vasomotor Rhinitis
- Rhinitis of Pregnancy
- When You Fly
- Mold Allergy
- Fungal Sinusitis
- Breath Odor Prevention
- Atrophic Rhinitis
- Nasal Polyps
- Snoring and Sleep Apnea
- Nosebleeds -Epistaxis
- Rhinitis Medicamentosum
- Chronic Fatigue Syndrome
- Cystic Fibrosis
- Empty Nose Syndrome
- Anosmia and Hyposmia

These are some sicknesses and medical problems that are related to sinus diseases. Sometimes these other sicknesses cause symptoms and signs similar to sinusitis. Therefore the doctor or you must be careful to correctly diagnose and treat the actual sickness.

Of course, some of the treatment for sinus sickness , like taking hot tea and lemon, will not hurt you whether or not you have a sinus sickness or another sickness. Pulsatile irrigation of the nasal passages will almost always help, no matter what the sickness is because pulsatile irrigation makes you nasal passages healthier. Asthma and sinusitis are intimately related—both are inflammatory diseases; however since a full discussion is available at (Asthma and Sinusitis, written by me and recently updated) Grossan M. Asthma and Sinusitis. eMedicine Journal [serial online]. 2004. Available at: <http://www.emedicine.com/ent/topic516.htm>.

I refer you to that source if you need more details about asthma . Take my word (as well as those of the allergists) for it, if you have asthma, it helps to clear your nasal breathing and drainage problems.

Nasal Allergy

Does this sound like you? It does to 20 million other Americans:

- There is itching of nose, throat and eyes.
- The discharge in the beginning is clear and watery and thin.
- You feel chilled and keeping warm feels better.
- You always dress warmer and can't stand a draft.
- Your nose and throat are not painful.
- The more you sneeze the more you sneeze.
- The nose feels tender and raw.
- You can match the symptoms to the pollen calendar.
- You can match the symptoms to the time of day when plants pollinate, usually 5 AM and 5 PM. (*that's when you need to keep windows closed.*)
- There is a history of childhood allergies, asthma, or eczema.

Nasal Allergy, itself, does not necessarily produce sinus disease. Usually with an allergy the nasal cilia may be working overtime to get rid of offending pollen. With an allergy, the nasal membranes are pale, swollen, with a clear nasal discharge. Although there is a general feeling of miserable and stuffiness, there is no local pain.

Very differently, sinus disease makes the nasal membrane red, with a yellow or green discharge. This color comes from the bacteria bodies. People with sinus trouble get worse when they become tired or chilled. With sinus infection there is pain, fatigue, fever, difficulty in getting things done. With sinus infection the pain may be localized.

It is important to self diagnose your allergy. Is it dust? Then the allergy is likely to be year round. Is it pollen? Check the pollen calendar and see if your symptoms start at the same time as the pollen. Use the pollen calendar available at many web sites. (www.pollen.com) If you can pinpoint specific pollen, you can take NasalCrom nasal spray, available over the counter, starting 5 weeks before pollen time and this will usually prevent the nasal allergy symptoms. Also the calendar tells you where to travel for relief. The pollen calendar also tells you when to stay indoors.

In the Spring it's trees, grasses, and mold. By using the calendar you can determine where to go for relief once you know your culprit. As the pollen count rises, stay indoors and wash your clothes when you come into the house from the outside. In the Summer it's grasses and in the Fall it's weeds.

But allergy is cumulative. You can be allergic to dust all year round and then add tree pollen, odors, perfume, fatigue, spicy foods—all add to the histamine release to give you allergy symptoms. For example, say you are allergic to a certain weed. When that pollen count is, say 100, you can smoke and use perfume and not have symptoms. You can eat spices without making your nose worse. . Then the count goes to 400. Now you can't smoke or use perfume, but you can still eat spices. But when the count gets to 700, no matter how many other histamine releasers you avoid—spices, perfumed lipstick, dust, you still have allergy symptoms. At the 700 count, its time to take that ocean voyage.

No matter what your allergy, dust proofing the bedroom is essential. Plastic covers to keep in the mattress and pillow dust mites, wood instead of carpet floors, plastic curtains and blinds instead of drapes, and filters on the ducts are all important. You can create a dust-free bedroom so that air filters are not needed. Use houseplant as natural air purifiers such as the lady palm, areca palm, rubber plant, English ivy, dracaena and Boston fern. (*See Appendix: How to Dust Proof the Bedroom.*)

Nasal allergy, in the early stages, does not cause sinusitis. In the early stages of nasal allergy the cilia actually speed up and your nose runs. It is only in the late, exhaustion stage of allergy—after sneezing for 6 weeks, when the cilia slow or stop that a sinus infection can come about. In this exhaustion stage, resorting to bed rest may be the cure. Or a short course of prednisone can help if bed rest is not an option.

The body sneezes in order to get the inhaled dust out of your nose. The body is supposed to make extra liquid to dilute the dust from your nose. The allergic person however sneezes with just a little bit of dust. The longer one sneezes the more exhausted one gets. When the exhaustion stage is reached, then infection including sinus infection can take place.

Today there are many excellent allergy medications patients can take. When these fail to work, it is usually due to the natural resources of the body being exhausted. But don't expect the allergy pill to work if you are eating spicy foods, stroking the cats, and wearing perfumed lipstick.

Allergy recommendations a summery. When the allergy is severe, you should avoid spicy foods, perfumes, and perfumed products. Avoid ice drinks or getting chilled. Women should switch to unscented lipstick and avoid perfumed

products. Since plants pollinate at 5 AM and 5 PM, therefore sleep with windows closed and the air re-circulated. Drive with windows closed and the air re-circulated, too at those times.

With allergy, the body's temperature regulating mechanism is off. I use the term "crooked thermostat." Getting chilled causes sneezing and hacking. It is important to warm the body with hot tea before getting out of bed in the morning. This warms the body and can avoid the morning sneezing and hacking, which is the incorrect way to get the body warmed up. Also the hot tea stimulates the cilia to remove dust accumulated during the night. Wearing socks and a cap to bed is helpful because it avoids the chill effect.

Allergy tests may be indicated and can be performed in the office by intradermal testing, or scratch testing or tests can be done directly from the blood, called (RAST) which stands for **radioallergosorbent test**. RAST and other laboratory tests are performed from blood samples taken from the allergic patient. Results are usually accurate, and a treatment serum can be made based on these results. Depending on the allergic problem, scratch and intradermal tests are preferred by most allergists.

Patients can have anaphylactic reactions to intradermal or scratch tests, and the means of treatment of such reactions must be immediately available. This is why your doctor makes you wait after an allergy shot.

Should you get shots? Desensitization is often indicated, but today many persons can get adequate relief with the newer antihistamines and cortisone type nasal sprays. Other shortcuts include rinsing out the nose to remove pollen and IgE, or injecting Kenalog into the turbinates. Another shortcut that is favored for short seasonal symptoms is a short course of prednisone. Sometimes leaving the pollen area during the height of the season is an easy solution. But, a bad solution is to sell your home, quit your job, and move to a place that is supposed to be pollen free. This may work, but often the patient moves to get away from the pollen in Maine, then after a few years, becomes allergic to the pollen in Miami.

Food allergies are difficult to test for. A careful history provides the best identification of a food allergy. Once the food is identified, adding the food to the diet to induce a reaction is best in order to prove the allergy. Then, we can prescribe an allergy-free diet with avoidance of test-identified foods. For example, say you suspect eggs. Avoid eggs and foods made with egg products for a week. Do you feel better? Now eat lots of eggs and egg products for a week. Do you feel worse? That usually confirms an egg sensitivity.

Pulsatile irrigation during the pollen season is helpful because this removes IgE from the nose, as well as pollen in the nose. (*Subiza*) Researchers have reported that not only was the nasal IgE reduced, but the blood level of IgE as well.

Common Cold

Would you believe that you could prevent a cold by smiling! Well, maybe not completely. But science has shown that a pleasant sunny disposition increases our resistance to common cold viruses.

Another means of prevention is irrigation to remove a product from your nose called ICAM—1. ICAM—1 produces an entryway for the cold virus. By using pulsatile irrigation twice a day, you remove the ICAM-1 and likely allow fewer colds to develop. I only recommend this for persons who do catch colds frequently and when everyone in the office has a bad cold.

Zinc sprays are supposed to block the ICAM 1 and prevent colds. However evidence suggests that all they do is reduce about one day of symptoms and even this is still debatable. There are reports of persons losing their sense of smell —Anosmia - after use of zinc sprays. A concern about use of zinc directly in to the nose is that dilute zinc sulfate nasal flushes are used to deaden the sense of smell in research animals. (Hansen) With such uncertainty and considering the costs and the possible side effects, I have not recommended these products.

Echinacea A recent study reported that the herb Echinacea did not help symptoms of a cold in children. With a common cold, the illness only lasts 5 days, pain and swelling are minimal and there is no greenish, yellow discharge at first. There may be some generalized aching and feeling sick.

Xylitol nasal spray is heavily advertised as a cure. Instead of buying the prepared solution with preservative, you can buy pounds of Xylitol on the net for less than a single prepared bottle and mix your own, - fresh. 2 1/2 teaspoons of Xylitol sugar added to four ounces of saline equals a 5 % mix and five teaspoons added to four ounces gives a 10% solution - approximate.

Patients who have caught a cold, as well as allergy patients, benefit from green tea. A chemical in green tea appears to block a part of the allergic response, production of histamine and IgE. The Harvard Medical School Family Health Guide of July 2002 reports that drinking tea can help prevent death after a heart attack. Tea can boost the body's defense fivefold against disease according to another Harvard report. Tea is high in antioxidants, and tea chemically stimulates cilia action.

(See Appendix: Chemistry of Tea.)

Postnasal Drip.

Postnasal drip is not sinusitis. Normally the throat is moistened by nasal secretions and throat mucous glands, as part of the mucus—nasal cilia system. Normally these glands continually produce 1 - 2 quarts of mucus an day. Postnasal drip is simply a slowing down of the cilia so that the mucus becomes thickened. There is an unpleasant sensation of thick slime in the throat. Triggers for postnasal drip include smoke, allergies, low grade infections, and disorders of the nerves that supply the area.

Once the mucus slows, infection occurs easily. Some of the bacteria can cause offensive odors and taste. Because it is thick, the material may affect the voice and even upset the stomach. Because the mucus is thick and unpleasant, the patient tries to cough it up or spit it out, much to the distress of neighbors and family. There may be a balance, so that the person is not ill from the bacteria, the body resists infection, but the coughing and spitting continues.

When the body fails to resist, then sinusitis or bronchitis may be the result. Post nasal drip is particularly to be avoided by persons with asthma.

Postnasal drip should be cleared both for health as well as social reasons. Usually pulsatile irrigation restores the normal cilia function and has a healing effect. For some of my patients it only takes two weeks of pulsatile irrigation to clear the condition.

Vasomotor Rhinitis.

The nose is supplied by a very complex system of nerves that have to do with liquids being produced, with nasal tissue swelling, and these affect how you breathe and how much liquid is produced.

Usually there is a balance, and the right amount of swelling and liquid is made. But if this nerve balance is upset, then the nose is congested and there is copious liquid drainage. In such cases, there is no evidence of allergy; all the blood tests and tests for IgE factors of nasal allergy are negative. There is no evidence of sinus infection either. As a rule there is no anatomic abnormality such as a deviated nasal septum or sinus blockage. CT scans are normal.

What causes this abnormal nerve imbalance is difficult to determine. Treatment is also difficult because we are dealing with a nerve stimulation rather than an infection. Irrigation, dust proofing, etc., are of no benefit. The nasal spray Atrovent usually works because it affects the nerve function. Sometimes we cut the offending nerve in order to clear this condition.

Rhinitis of Pregnancy

This is a real bummer because you don't want to take systemic pills or use powerful sprays and you don't want to get addicted to Afrin. Research has demonstrated the benefits of nasal saline irrigation, exercise and trying the nasal strips that widen the nose. (*Ellegard*) Most of my patients do well by using Breathe.ease XL wash, trying various concentrations from isotonic to hypertonic.

When you Fly: Avoiding Colds and Sinus Infections.

Getting sick when you fly is such a drag. My patient, EJ, hadn't flown in five years because she would be sick for a week after each flight. And as though fate was against her, she always managed to sit next to the person on the flight who was coughing and had never heard of tissues.

Most airplanes today recalculate the air (*Zitter et al., 2002*). There was a comparison of flights with filtered and unfiltered fresh air which actually showed that there was little observable difference—both found about 20% incidence of common colds among passengers who fly. This 20% is much too high to be an acceptable number. In fact, many of these colds are preventable.

The primary reason for a cold is failure of the natural defense of the body's Mucociliary Clearance system. This is the protective system that grabs the viruses and bacteria, and moves them by cilia action to the stomach where the acids kill the bacteria or viruses. Normally these cilia move at 15 pulses per second. They act as oars to move a blanket of thin mucus, where the virus or bacteria are trapped, out of the nose to the stomach. This prevents the virus from entering the body through the nose. But the key here is thin mucus.

On commercial flights the air is quite dry. This dries the nose. So, even if the cilia do their best, the mucus is still too thick to move. Because it is stagnant,

bacteria and viruses can multiply and enter the body. Therefore it is vital to intake adequate fluids during flight. These fluids do not include alcohol and coffee. What is needed is warm water, preferably a green tea with mint—and lots of it! Lemon and honey are also good. Warm tea with or without caffeine helps move the cilia. Ice drinks slow the cilia. Since the key here is moisturizing the nose, saline nasal sprays (free of preservatives;—see below) and a nasal moisturizing gel are helpful.

Many ordinary medications can dry the nose. For my patients I find that certain types of nasal moisturizing gels are best for flights. The reason the gels are best is that in order for the viruses and bacteria to enter the body they must attach to a nasal protein called ICAM-1. A gel with the appropriate formulation can help to prevent this attachment. The best gels have ingredients which allow the body's natural defense elements—lysozyme, good white blood cells, etc., to be able to travel to where they are needed to fight invading organisms in this way. Read the ingredients to see if your gel aids lysozyme action. For example, Breathe-ease XL Nasal Moisturizing Gel is a water-soluble gel that can cover the nasal membranes and provide moisture to the area. Avoid getting chilled, as that will lower your resistance. Avoid undue fatigue. For saline type sprays, use before boarding, and about every two hours during the flight. With gels, use before boarding and about every 3-4 hours during flight. In particular, use twice a day after arrival as this will help fight any infection trying to get a foothold. Don't forget the liquid intake!

Some doctors may prescribe an antibiotic ointment that similarly covers the nasal membranes, and as an antibiotic, kills certain bacteria. The problem here is that they are expensive, and most require the use of fingers or a Q-tip to get it positioned, and there is the risk of developing a sensitivity or resistance to the antibiotic. For example Breathe-ease XL nasal gel has an “in the nose” applicator and only contains natural products. Whatever gel or ointment is used it MUST be water soluble, and only water-soluble products should be used in the nose. Petroleum-based or other non-water soluble materials could end up in the lungs, where they could remain permanently.

Although preventing a cold when you fly is important, preventing a blood clot is far more important to concern yourself with when you fly. Frequent walking about, pushing against the bulkheads, and straining the legs back and forth works well.

In summary: To prevent getting a common cold while flying:

- Drink lots of liquids, especially tea
- Keep the nose moist by using moisturizer gel or liquid spray
- Find a gel which aids lysozyme action
- Don't get chilled or over fatigued
- Carry tea bags on the plane

Mold Allergy.

Why does Mold attack your house? Molds are part of the natural environment. Outdoors, molds play a part in nature by breaking down dead organic matter such as fallen leaves and dead trees, but indoors, mold growth should be avoided. Molds reproduce by means of tiny spores; the spores are invisible to the naked eye and float through outdoor and indoor air. Mold may begin growing indoors when mold spores land on surfaces that are wet. There are many types of mold, and none of them will grow without water or moisture.

Can mold cause health problems? Molds have the potential to cause health problems. Molds produce allergens (substances that can cause allergic reactions), irritants, and in some cases, potentially toxic substances (mycotoxins). Inhaling or touching mold or mold spores may cause allergic reactions in sensitive individuals. Allergic responses include hay fever-type symptoms, such as sneezing, runny nose, red eyes, and skin rash (dermatitis). Allergic reactions to mold are common. They can be immediate or delayed. Molds can also cause asthma attacks in people with asthma who are allergic to mold. In addition, mold exposure can irritate the eyes, skin, nose, throat, and lungs of both mold-allergic and non-allergic people. For many people, mold is an allergy trigger that brings on sneezing and other irritating symptoms. Symptoms other than the allergic and irritant types are not commonly reported as a result of inhaling mold. Research on mold and health effects is ongoing.

"There is good evidence that people who live in moldy environments have increased health problems including asthma, nasal congestion, and possible fatigue, headaches and other problems that are not well understood," said Jay Portnoy, MD, FAACAP. "Mold avoidance may improve these symptoms."

How do I get rid of mold? It is impossible to get rid of all mold and mold spores indoors; some mold spores will be found floating through the air and in house dust. The mold spores will not grow if moisture is not present. Indoor mold growth can and should be prevented or controlled by controlling moisture indoors. If there is mold growth in your home, you must clean up the mold and fix the water problem. If you clean up the mold, but don't fix the water problem, then, most likely, the mold problem will come back..

The best way to find mold is to look in dark, damp, warm environments. It can grow almost anywhere: on sheet-rock, carpet, wood panels, garbage cans, and basement walls. Mold can even grow in areas that are not easily visible, such as inside walls and furniture. Excessive indoor humidity, resulting in water vapor condensation on walls, plumbing leaks, spills from showering or bathing, water leaking through foundations or roofs, may lead to growth of many types of mold. A common cause is the sprinklers that wet areas at the house, allowing moist areas to develop beneath the house or in the walls. Before you call in an expensive mold expert, first have a repair person check your house for leaks. (See Appendix, *Controlling Indoor Mold*)

In certain allergic persons, wheezing, difficulty breathing, shortness of breath, nasal and sinus congestion, irritated eyes, a dry, hacking cough, irritated nose or throat and skin rashes or irritation may be a sign of mold sensitivity.

Toxic mold. Although there are 100,000 types of mold, only a few are toxic. These molds produce chemicals called mycotoxins that can cause rashes, seizures, respiratory problems, unusual bleeding and severe fatigue in people. These are not allergic reactions, but rather due to the toxins. One form of toxic mold is *stachybotrys chartarum* (stack-ee-BOT-ris), a greenish-black mold that occurs where there is moisture from water damage, excessive humidity, water leaks, condensation, water infiltration, or flooding. This mold requires very wet or high humid conditions for days or weeks in order to grow. *Stachybotrys* grows only on wood, paper, and cotton products and can be found in 2%-5% of American homes.

"Since most molds are not toxic, you should not panic if you see it in your house," Portnoy said. "If you think you have symptoms that are related to mold, you should contact your local allergist for advice. Your allergist also should be able to tell whether your home needs to be inspected and how to get that done."

Best information on Mold can be found at

<http://www.epa.gov/iaq/molds/moldresources.html>

Fungal Sinusitis.

First of all, you need to understand that doctors and medical writers are using the same words for three entirely different conditions and it is very easy to get confused, especially by the news writers. Fungal sinusitis can refer to a sinus filled with a fungus; the fungus is packed into every sinus and can be clearly seen by shining a light in the nose, and by MRI. This type is RARE and is primarily seen in immune-compromised persons.

Another type, also called Fungal Sinusitis, is one described by the Mayo Clinic. Here the fungus is in the nose and sinus, can be cultured out, but the same fungus is seen in otherwise healthy persons. The theory is that a fungus is in the nose/sinus and the body's natural defense—the eosinophile—produces too much toxin trying to kill the fungus and that this toxin is what is making the patient sick. Their therapy is to try to eliminate the fungus and thus stop the eosinophile reaction. Others, such as Wellington Tichenor of New York may desensitize the individual to that particular fungus. For up to date information on this see Dr Tichenor's web site www.sinuses.com. A serious difficulty with this theory is that "sick" patients and healthy patients may both show the same fungus on culture plates. Doctors are still investigating this and the answer is not yet in.

The Mayo concept helps explain why persons using pulsatile irrigation for chronic sinusitis improve, as pulsatile irrigation is best for removing mucus and the eosinophile products from the nose.

A third type of fungal sinusitis is one where polyps or other conditions block an area of the nose and a fungus grows here for lack of drainage. Usually the patient recovers when the blockage is removed.

At this time, few allergists or ENT doctors find "Mayo Type" fungal sinusitis among their patients.

Breath Odor Prevention

In most persons, mucus flows swiftly and removes stale material. The individual drinks enough fluids and the mouth stays fresh. Unfortunately, when people have sinus disease or postnasal drip, this is associated with slow cilia that cause the mucus to become stagnant. This allows various bacteria to multiply, leading to breath problems. Restoring good cilia movement works here. But the process may also require removal of material that accumulates in crevices in the throat; hence a throat irrigator to remove these particles is part of the Hydro Pulse package. Another source of bad breath might be particles in the crevices of the tongue. With the tongue sweeper part of the throat irrigator you can sweep the tongue dry or irrigate with the solution at the same time. For my patients, the combination of throat irrigator, tongue sweeper, and nasal irrigator has been effective for typical breath problems.

Having white spots in the crypts or holes of your tonsils is not a disease. The white material is simply dead bacteria and white cells. It is the tonsil doing what it is meant to do. Although a breath condition may occur, it is not a disease that requires rushing to the doctor. Just use the pulsating steam of the throat irrigator to remove the material. For throat irrigation you can use any solution—plain water, hydrogen peroxide, Listerine, the solution used in the nose, etc.— but you cannot use the throat solution for nasal irrigation.

For this reason the Hydro Pulse unit comes with two nasal and two throat tips, so you can attack the breath problem from the nose and throat. Both throat irrigator tips have tongue sweepers for removal of stale particles from the tongue to aid the breath too. For Breath, don't forget the dental floss!

Any condition where there is less fluid intake, like fasting, can be a cause of bad breath or halitosis. Drinking water washes away stale bacteria. If you suspect a breath problem, first increase your fluid intake.

Certain conditions where the salivary glands reduce or quite making mucus also affect the breath.

Xerostomia refers to dry mouth.

Sialidinitis refers to inflammation of the salivary glands, usually accompanied by dry mouth.

Atrophic Rhinitis

This is a condition that is quite unpleasant. The nose is dry, no longer moistening the airway, and there are heavy crusts often referred to as "boogers". Some persons get this by constantly picking the nose. But it can also come from repeated infections. Recreational drugs may thin the membranes so excessively that bleeding and even exposure of the bone and cartilage can occur. Atrophic rhinitis accompanies a perforated septum. If the nose is dry and irritated, pain may result similar to a sinus headache. Here the nasal membranes are too thin. Normally, nasal membranes are extremely thick, like the pages of the telephone book. When the membranes thin out so that they become as thin as a single page, an individual feels uncomfortable, complains of a burning of the nose, and has frequent nosebleeds.

Indeed, the air going through the nose may burn and smart. This condition is called atrophic rhinitis, referring to atrophy, or thinning out of the membranes. Infection is present because the cilia function is impaired. Often clearing the infection may bring back the cilia function. Systemic antibiotics are not the correct treatment, however.

Proper treatments include good moistening. Breathe-ease XL as a spray should be used 3 - 4 times a day to keep the nose moist. A moisturizer gel such as Breathe-ease XL Nasal Gel to use at night is beneficial. By moisturizing, this gel helps natural healers like lysozyme get to the infection. Bactroban ointment can also be of benefit for certain types of infectious organisms.

Can the nose return to normal in atrophic rhinitis? To find out, it can help to measure the nasal cilia. This is done by placing a particle of saccharin in the nose and measuring how long it takes for the cilia to move the particle to the throat where it is tasted. If the saccharin test shows 30 + minutes time for the saccharin particle to pass from the nose to the throat, return to normal is not usually seen. (*Appendix. Measuring Cilia*)

Nasal cleanliness is central to good health. The nose is the body's air filter. If it is kept clean, it can do its job. Physicians such as Hanna Solomon teach their pediatric patients about irrigation very early in life, even younger than 5 years old!

L.S., age 37, is a printer. Complains of nasal dryness, and frequent infections. When he came to my office he brought a big bag of the various cortisone and other sprays he had used. His nose showed very thin membranes and crusting. His cilia system was bad because the ink powders he inhaled affected his cilia function. His therapy was to wash out his nose at work after he mixed the ink powders. With pulsatile irrigation, his cilia function eventually returned.

Nasal Polyps

Nasal polyps are like grapes or bags of water and they can form in the nose and sinuses. Science really doesn't know exactly why Bill gets it and his identical twin Harry doesn't. It is felt to be allergy related, but expert allergy management has not cleared the presence of polyps, or their return after removal, in many patients. Perhaps there are different mechanisms that cause them.

Essentially the liquid that your nose creates is supposed to leak out into your nasal chamber. But for some reason, the liquid accumulates within the cell wall and the cell enlarges to grape size. This not only blocks breathing, but also sinus drainage as well.

Often polyps can be shrunk by a course of oral prednisone combined with an antibiotic. The antibiotic is needed because any infection can enlarge the polyps. Most doctors prescribe a cortisone spray to be used after the polyps shrink to prevent regrowth. Surgical removal may be disappointing because the same factors that caused the polyps to start in the first place are still present.

Persons with nasal polyps must avoid aspirin, salicylates, and related products. For a complete list of salicylate products see

<http://www.nlm.nih.gov/medlineplus/druginfo/uspdi/202515.html>. These are known polyp stimulators. If you have nasal polyps I strongly advise you to read this list. If you suspect a nasal infection, a topical antibiotic into the nose may help prevent them. Although Breathe ease Nasal Gel is not an antibiotic, it acts like one by moistening the area to allow natural nasal defenders to get to the bacteria and may be of help to those with a nasal polyp history.

It is always a source of amazement to me that the biggest polyps, hanging out of the nose might respond to medication therapy. Unfortunately, not all polyps do, of course.

Although the connection between allergy and nasal polyps is not clear, desensitization of known allergy factors and dust proofing the bedroom can be of value. Currently some doctors are using antifungal agents for nasal polyp therapy.

Snoring and Sleep Apnea

Sleep apnea is a serious condition where the individual has obstructed breathing or quits breathing during the night. He may actually turn blue, and when we measure the amount of oxygen in his blood, it is too low. Such persons are tired, they awaken feeling tired, and they fall asleep during the day. Many persons who have several auto accidents have this because of sleep apnea. Sleep apnea is always improved by obtaining normal weight, but because you are tired you eat snacks to give you energy, yet if you lose weight the sleep apnea may improve. By eating snacks for energy you gain weight and make the apnea worse.

Snoring, on the other hand, may be "social" and not cause serious changes in the oxygen to the body. Because sleep apnea is so serious, we do testing of the body during sleep to tell the difference between the two.

At my office we maintain a Sleep Solution Center called, "Rest Assured". A patient who is suspected of having sleep apnea enters about 8 PM with his/her comfortable sleeping clothes. They are monitored during sleep as to :

- **EEG: electro-encephalography or brain waves to see if the brain suffers lack of oxygen during sleep or is the cause of the sleep problem.**
- **EKG: electro-cardiogram. Here we look for heart changes during apnea.**
- **P02: pulse-oxygen level. How low does the oxygen level of the blood go?**
- **Respiration: here the chest movements are monitored to see if the lack of movement is the problem.**

The periods of time during sleep when the patient stops breathing are called apnea episodes. The apnea episodes are counted and compared as to frequency and severity. This tells us how severe the problem may be.

For most persons with sleep apnea, we prescribe a machine called CPAP (continuous positive air pressure) which forces air into the lungs, overcoming the uvula or other blockage.

Surgical correction of an enlarged soft palate, bringing the tongue forward, moving the jaw, and other procedures all may work, depending on whether the diagnosis is correctly made.

If you think your problem is strictly one of social snoring, not sleep apnea, you may want to consider trying the methods mentioned below. If they work to stop the snoring, a sleep apnea test may not be required.

Help For Snoring

Clearing sinus blockage, straightening a badly deviated septum, and getting moisture to the nose at night may help snoring. I generally recommend Breathe-ease XL nasal spray during the day 3X a day and Breathe-ease XL Nasal Moisturizer Gel at night. This moisturizes at the nasal and the cellular level and when dryness is the cause of the blockage, it can be an easy solution.

Snoring may be dangerous to your partner too. Recent publications have reported drowsiness and fatigue among the partners of people who snore. Don't give up though, there are many things one can do to reduce or eliminate snoring. Snoring is worse when persons sleep on their back. Some success may be had by sewing a tennis ball into the back of a T-shirt. Here there is a gentle nudge to force you to sleep on your side.

Some other helps for snoring are the dilator strips; certain persons have very weak cartilages on the sides of the nose. When they take a forceful deep breath, the sides of the nose collapse, causing obstruction and forcing the person to mouth breathe and snore. These strips that hold the weak sides apart can be very helpful to the individual who has a flaccid or weak sides to his nose.

In some people, especially in the aged, the tip of the nose can hang down. This depression causes the nose to block too, by closing off a nasal valve. Simply taping the nose up can open the nose up for air passage and solve the problem. Try gently tilting the tip of the nose up to see if this improves breathing. Try tilting it up to the side too. If you find a position that works best, run some 1/4 inch medical tape from just below the bottom of the nose tip onto the surface of the nose up to the area of the nose between the eyes, and sleep with the nose tilted up this way. In addition to reducing the snoring, you get better sleep too.

Many persons have nasal dryness. This impairs breathing, causes unpleasant sounds, and can be a serious factor causing snoring and other problems. Nasal dryness may cause secondary nasal infection, crusting, and dry mouth as well. In a dry nose the body's natural defenders—lysozyme and the good white cells—can't get to the bacteria. A dry nose can't wash out pollens and dusts. A home-made saline

spray made of one teaspoon salt to a pint of water helps. A saline product that contains the body's natural electrolytes, such as Breathe ease XL spray is effective in providing moisture here. Whichever moisturizer you use, just be sure that they are fresh and don't contain harmful preservatives or anti-caking products. (See Appendix)

It is important to keep the bedroom moist. I recommend pans of water in the room that will evaporate. This is usually sufficient. Or in a hotel, hang wet towels near the bed. The fancy vaporizers have been implicated in spreading allergens and mold, so I don't recommend them.

If using a moisturizer spray during the day, and a moisturizing gel at night, plus taping the tip of the nose up at night works to significantly reduce you snoring, a sleep apnea test may not be needed.

NOSEBLEEDS.

Nearly everyone with sinus sickness gets a nosebleed at one time or another.

Winter Nosebleeds (Epistaxis) Winter comes with nasal dryness and bloody noses. Let's avoid them this year. People live in the desert and don't get epistaxis (nosebleed). Why do we get them in Chicago? Because in the desert the body is adapted to the dry condition, just as we adapt to humid conditions. But in Chicago there is extreme changes of temperature, plus rapid changes from very cold to very hot and dry. The poor nose can't keep up.

If you do get a nosebleed, here are some suggestions that I give to my patients:

How to Stop a Nosebleed:

- Don't panic. The more the panic, the higher the blood pressure, the more the bleeding.
- Forget about the dress, it's already bloody and anxiety and trying to keep further blood from it raises the blood pressure and causes more bleeding.
- Apply pressure from the outside. Use your finger to press the soft part of your nose to the midline gently.
- Ice to upper lip and back of neck is good. Sit up.
- Pressure from the inside is good—gauze, tissue, or cotton applied inside and slight pressure from the outside helps.
- If you have nose drops such as Neosynephrine or Afrin, put this on cotton and apply it into the nose over where you think the bleeding is coming from.

- Stay calm. Stay off the phone. Anyone you call will tell you horror stories about their Aunt's terrible nose bleed and make you nervous.
- Sitting up is better than lying down. If you lay down you raise the pressure to the nose.
- If bleeding persists, go to the ER.
- If bleeding is controlled, stay quiet all day. Don't go skateboarding.

To prevent nosebleeds, in winter keep a pan of water in the room . Have plants in the room that take a lot of water. If you are traveling, hang wet towels in the bedroom and put water in the bathtub. Breathe-ease XL Nasal Moisturizer Gel is useful, as mentioned previously. No prescription is needed, and it is often available at airport counters where it is used by travelers to prevent nosebleeds and colds while flying. It is water soluble, so there's no concern of it lodging permanently in the lungs like water insoluble products.

plf you are susceptible to nosebleeds, regular use of the gel twice a day helps prevent epistaxis. I recommend using the gel twice a day for two weeks after the bleeding has stopped. Bactroban ointment can also be used in this manner. It is primarily an antibiotic that requires a prescription and helps clear up infections associated with nosebleeds. It may be prescribed by your doctor after the bleeding has stopped. Neosporin ointment is also useful, but more persons are showing sensitivity to this product, and it is not soluble for nasal use. Although Breathe-ease XL Gel is specifically designed for nasal use, with a direct in the nose applicator, Bactroban and Neosporin are not.

Other causes of epistaxis. In addition to Winter Dryness there are dozens of other causes of epistaxis that physicians must consider. These include hypertension, effects of drugs and herbs - including Gingko Biloba.

Persons on Coumadin and other blood thinners should be diligent about keeping the bedroom moist and the nose moist too. Stick to pans of water or plants with lots of water rather than a vaporizer. Vaporizers may moisten the air too much and bring on an increase in dust mites as well as destroy the wallpaper.

Other helps for nosebleeds. Vitamin C and Bioflavonoids all help strengthen the blood vessels as does Rutin. Rutin is often successful in removing the dark skin spots seniors get.

A nosebleed with a sinus infection may indicate a certain kind of bacteria that requires an antibiotic or just may be from the nose being so raw from blowing too hard.

"Recreational" nasal drugs significantly cause nosebleeds. Cocaine will cause the blood vessels to clamp shut, cuts off circulation, and leads to ulceration

and nasal bleeding. Cocaine use is a frequent cause of a hole (perforation) in the nasal septum.

Certain industrial products lead to thinning of the membranes and subsequent epistaxis. Various paint solvents and thinners are some of these. Skydrol is used as a solvent inside of airplanes during manufacture. If you experience burning when exposed to chemicals, consider washing the nose by lavage after exposure to remove the products.

Use of the various Cortisone Nasal Sprays. Nasarel, Flonase, Nasocort, etc.— over time may cause thinning of the membranes and lead to epistaxis. I have my patients alternate with the Breathe-ease XL solution as a spray to “restore” the membranes so they can continue with a cortisone spray that works for them. On the other hand, cortisone nasal sprays have been used for decades with few problems.

With extreme dryness, hard crusts may form that lead to nose picking and a resultant epistaxis. Copious use of Breathe-ease XL as a Nasal Spray helps clear this up—this liquid not only softens the crusts, but helps restore the cilia that defend the nose.

Winter or summer, certain medications can lead to a nosebleed —such as aspirin products. The common baby aspirin is not of concern, unless it’s combined with other similar products plus Gingko. Some antihistamines can dry the nose excessively and there are numerous drugs for heart and other conditions that have a nasal drying effect. Before stopping the medication, see if you can maintain nasal moisture adequately, starting with water in the bedroom.

A primary cause of nosebleed is blowing the nose too hard and allowing it to get dry. Use of a liquid moisturizer is essential. Do not use a hypertonic spray for epistaxis.

Nasal Gels work well because they remain in place and moisturize for a steady period of time. Ayr gel and Ponaris both are good products. Breathe-ease XL Nasal Gel has the advantage of coming with an “in the nose” applicator tip so there is no waste or mess. In addition it liquefies at the cellular as well as the nasal level and contains Xylitol, the product used in toothpaste and candies to reduce bacterial levels. When Breathe-ease XL Nasal Gel is used, it is used twice a day and should be used for 14 days after the bleeding has stopped.

If you have seen the doctor, been treated, and still are having nasal bleeding, you probably need an antibiotic to clear the infection that is usually associated with epistaxis. But also check: are you taking an herb that leads to bleeding like Gingko Biloba or Ephedra? Always check the blood pressure when there is epistaxis. Are you taking excessive amounts of aspirin type products?

S.V., age 62 was in for his third visit for epistaxis, despite my treatment. For the third time he was asked what medications, herbs, etc he was taking. This time his wife admitted he was taking Gingko. “But that’s not a medicine” he shouted. Once he stopped the Gingko, the aspirin, and the Pepto Bismol, his bleeding stopped.

Rhinitis Medicamentosum

Rhinitis Medicamentosum (RM) is a fancy name for being addicted to nose drops. What happens is that your nose is stuffy and you can't sleep. So you spray with the nose spray and open the nose beautifully. Now you can breathe and sleep. But later, the nose clogs again, worse than before, due to the "rebound effect", and you use the drops again, maybe more than the first time. At first you only use them every 12 hours. Then every 8, then 6, now every 4 hours or more often. . You KNOW the bottle says only use for a few days, but the nose is really plugged unless you use the drops. Meanwhile you feel nervous and irritable. This is the "adrenergic" effect of the drops, whether you take them orally or by nasal spray. These are the common nasal sprays that can cause RM.

Oxymetazoline (Afrin)

Phenylephrine (Neosynephrine)

Xylometazoline (Otrivin or Inspire)

Any constrictor nose drop can do this. There is evidence that it is the preservative, usually benzalkonium (BZK) that is the culprit. It seems that the Afrin—oxymetazoline—shrinks the nasal tissue but the BZK irritates it so that you need more Afrin. Products without BZK may not cause RM. Unfortunately they are only available from a compounding pharmacy and are quite expensive.

It is easy to tell the patient to stop using the product, but the extreme misery is quite severe and often will power doesn't work, even in the most strong-willed persons.

One solution is a course of prednisone with antibiotic. This will shrink the nasal tissues and reduce inflammation. Sometimes I add Benadryl at night to help the patients get some sleep. This is a fairly severe course of therapy.

A gentler solution is to gradually dilute the amount of drops you are using. Take the nose drop solution and add an equal amount of saline or Breathe.ease XL. Label this Bottle A. Use this for a week. Now add an equal amount of saline or Breathe-ease solution to an equal amount from bottle A. Label this Bottle B. Use this spray for a week. Remove one cc from Bottle B and add it to bottle C with an equal amount of Breathe-ease. Keep on diluting each week till you stop the drops. Since you are no longer getting the rebound effect, this is a preferred method, and you avoid "More Drugs". The extremely dilute nose spray with Breathe.ease XL can now be switched to regular Breathe-ease XL without the Afrin or other product. The advantage of continuing with Breathe ease XL is that it acts to moisten the nose and stimulate cilia action. In some cases where the medication has been used a long time, the cilia fail to resume good movement right away and the nose may still feel as though it is stuffy. Hot tea, chicken soup, and compresses to the sinus area help. Or pulsatile irrigation with Hydro Pulse® Nasal Sinus Irrigator is a rapid way to refresh the nose. The Hydro Pulse Nasal / Sinus irrigator pulses at a rate to best restore normal cilia speed. This is important because the condition that caused the patient to overuse nose drops may still be present and it is best to get the cilia moving properly.

Prevention of RM. Advertisements today are constantly telling us to take this pill and use that spray. The advertisement shows that happy person after his loving wife put the nose drops in his nose. It doesn't show the unhappy person now

addicted to the nose drops. If you do get a stuffy nose, on the first day, take it easy. Don't rush to the medicine cabinet. Plenty of tea and rest may be all you need. But once you start overusing the nasal sprays, you can wind up addicted. Not because you are "weak", but because of the rebound effect of these medications.

I must emphasize that "willpower" is not the issue here. The RM is a "chemical" condition caused by the rebound of the medication. Patients with RM do need assistance to quit the nose spray habit. Best of course is not to get started.

Cortisone sprays, saline sprays without benzalkonium, and Breathe-ease XL spray—these do not cause Rhinitis Medicamentosa. Some persons find they need to continue using certain cortisone sprays, but that is not from the rebound phenomenon and is not an addiction.

If only getting cured of my addiction to chocolate candy were this easy!

Chronic Fatigue Syndrome—Is it Sinusitis?

Chronic fatigue syndrome is a term applied to patients who develop fatigue or tiredness without an obvious medical cause. Fatigue after a 10K run is OK, but these persons have it all the time. Usually anemia, sleep apnea, and thyroid deficiency have been ruled out as causes. Depression is always considered as an etiology.

When I see a patient enter my office with this diagnosis from another physician or a self-diagnosis, it is important to check for an infection as a source for the fatigue. We regularly see patients in whom sinusitis or tooth and gingival disease was never suspected, but was found to be a cause of the fatigue. In one study, more than one half the patients with fatigue were found to have a sinus or gum disease.

S.L., a 32 year old mother came to have her ears cleaned. She checked chronic fatigue as one of her symptoms. Yes, she had already had Sinus X Rays, and a complete work up. I noticed evidence of swelling in her gums and mentioned it. She still had a childhood fear of dentists. I insisted that this might be her problem. When she came for another visit later I learned that the dental problem had been cleared and she no longer had unusual fatigue. Any hidden infection can cause fatigue.

Cystic Fibrosis

In cystic fibrosis (CF) there is an increase in the salt outside the cell wall which causes thick mucus to accumulate. This heavy mucus in the nose and chest prevents cilia movement and the result is many infections of the sinuses and the lungs. Persons with CF also have digestive difficulties.

Dr. Terrance Davidson of UC San Diego has done much to help here, using antibiotics with the pulsatile irrigator for these patients. The pulsation makes up for the absent cilia movement. In cystic fibrosis chronic sinusitis is very common due to cilia failure, so efforts are directed to sweep away bacteria and mucus by pulsatile irrigation. If you or your family have CF, be sure to read his excellent web site listed in the references.

Empty Nose Syndrome

Dr. Eugene Kern of Mayo Clinic first coined the Empty Nose Syndrome term. He applied it to the persons complaining of pain and burning in the nose, a sensation of "can't breathe" through the nose, recurrent infection, heavy crusting, and sometimes depression. It is often seen when too much turbinate material has been removed. This was further described in the Los Angeles Times article by Aaron Zittner on May 10, 01. He interviewed persons who complained of these symptoms. Many persons do develop depression because of constant symptoms and sensation of not getting enough air.

Do I have Empty Nose Syndrome?

Some persons, after surgery find that they have crusts and a constant feeling that they are not getting enough air. This can occur when too much nasal structure is removed during surgery. Here the turbinates no longer function to warm and moisten the air. The nasal opening may be too wide. It's like a garden hose, when it is wide open, it can't reach the flowers nine feet away. Pulsatile irrigation, as a substitution for absent cilia function often helps these symptoms. Breathe-ease XL Nasal Moisturizer Gel acts to bring moisture to the nasal membranes. Patients have considerable emotional problems because for 24 hours a day they feel like they are not getting enough air. These persons are even more sensitive to irritation from benzalkonium.

There are three sets of turbinates or shelves on the sides of the nose. These provide moisture, warmth, and direct airflow. Sometimes these are lost to disease. They shrivel and no longer function to moisten and warm the air. Sometimes they are removed by surgery. There are articles in journals recommending removal in order to provide adequate opening for breathing. When the turbinates are enlarged and block the breathing, removing them does open the airway. But now there is dryness, burning, crusting, and sometimes pain. The pain may come from the raw surface or the exposure of nerve endings or infection.

Once the turbinates can no longer provide mucus, cilia, and enzymes to protect against infection, then secondary infections occur regularly and the patient may require additional surgery to clear the infection. Often these are the persons who have had three or four subsequent surgeries. They are repeatedly on antibiotics too.

Current treatment consists of pulsatile irrigation twice a day and a moisturizer gel twice a day. Various surgical procedures are being explored. Dr. Steven Houser of Cleveland is using procedures to build up the sides of the nasal walls. See <http://www.geocities.com/shouser144/> for his latest news. His original approach to solving this problem is not just to make the nose narrower, but to direct the flow of air in order to reduce the symptoms.

The worst symptom, in my opinion, is the feeling of not getting enough air. The nose acts like a pressure valve, like the control on the water hose. Pinch the opening of the hose and the stream sprays far. Open the hose wide, and the water dribbles at your feet. So the patient is missing the correct pressure and flow of air and feels he isn't able to breathe adequately.

All this can lead to depression. After all, you breathe 24 hours a day. With an upset stomach or broken finger, the pain is limited. With asthma, no matter

how severe, there is relief with medication and oxygen. With ENS, you always have this feeling.

In sinus surgery it is often necessary to move or even remove the middle turbinate, however this doesn't cause ENS if the inferior turbinates remain.

Anosmia

Anosmia refers to loss of sense of smell. There are approximately 2.7 million Americans with chronic smell disorder. Hyposmia refers to reduced

sense of smell. The organ of smell called the olfactory bulb sits in the skull at the roof of the nose. Nerves from the bulb go through very tiny openings in the ethmoid bone to open into the nose. Surgical procedures may rock the ethmoid bone and damage these nerve endings. Since they are in a narrow canal, even a small amount of swelling can damage them.

More commonly, a viral infection may cause the nerves to swell. Because they are encased in narrow bony canals, they expand too much, circulation is cut off, and the nerves die. Treatment is to give medications for swelling.

Another cause of Anosmia may be anything that blocks the passage of air to the roof of the nose where the smell fibers are housed. (*A list of diseases that may cause Anosmia is listed in the Appendix.*) One reason to remove nasal polyps is that they block the smell organ, and the longer the blockage, the less chance for return of function.

If the nose is not blocked, pulsatile irrigation should be tried to see if restoring cilia function and removing bacteria, and thick mucus will help.

In the sudden acute stage, anti-inflammatory medications may "cure" the condition. Cortisone sprays directed to that area at the very top of the nose are used.

Loss of olfactory function exposes the person to certain serious risks just as loss of other senses might. Not being able to detect smoke is obviously life threatening. Other hazards are failure to recognize cooking odors and spoiled food odors. The following suggestions should be followed.

- Tips for Daily Living for loss of Sense of Smell.
- Use multiple Smoke Detectors. Use the ones that are powered by electricity and backed up by battery. Should be checked once a month.
- Use a gas leak detector to warn of gas leaks.
- Inspect stored food carefully. Since you can no longer smell the food, you must rely on sight and taste. Label stored food by dates and look at the sell-by dates on purchased foods.
- Carefully watch or time foods that are being cooked or baked to avoid overcooking or fires.

- Eating is always a problem. Food is less enjoyable. If you lose weight, see a nutritionist for suggestions about eating.
- If you have a child in diapers you need to feel or look at the diaper every hour and within 30 minutes of feeding to see if diapers need to be changed.
- Pets not trained need to be followed around the house to check for "accidents".
- Need a trusted friend to check for personal breath, or body odor or house odor.
- Disclose to friends or relatives the inability to smell perfume, flowers, and food. This can help relationships.

From Susan F. Rudy: Nuances of Nasal and Sinus Self Help, page 190

VII. The Throat and The Voice

Frequent Sore Throats.

Everyone gets a sore throat at some time. The nose and throat are constantly defending against insults like viruses and bacteria. When bacteria settle in the nose, the bacteria are seized and dragged off to "battle stations" or lymph glands where the good white cells are kept. More good blood comes to the area. There, the concentration of good white cells can overwhelm the bacteria. But when the lymph material swells, this causes a painful throat. The throat infection may be from a bacteria or a virus. It may be part of a generalized infection.

There are 3 parts to the throat: the part behind the nose at the top of the throat called the nasopharynx where the tubes that run from the ears to the nose open, the middle throat where the tonsils are located and where you can look at the throat called the oropharynx, and the lower part, behind and below the tongue, where the larynx or voice box is located, called the laryngopharynx.

The throat is especially painful when there is swelling of the Uvula, the part that hangs down the middle of the throat from the soft palate. The uvula can also swell as an allergic reaction, just as the eye or nose can. Ice is good, as well as an antihistamine. Sometimes crackers or tostados can scratch the uvula and cause swelling. Swelling of the uvula doesn't serve any useful purpose.

The uvula functions to rise up when you swallow to keep food from going up into the nose. Infection can come here as well as to the tonsils or the back of the throat, except that swelling of the uvula is quite frightening because of fear it will obstruct the airway. It rarely does, but it may feel like it.

With a sore throat, the uvula is often involved. Gargling will cause it to swell. Drinking very hot fluids will swell the uvula as well, causing discomfort. Warm drinks help the throat heal and ice drinks take the pain down. Do both. With a sore throat, ice cold foods take away the pain and enable you to eat.

Swelling of the throat for whatever cause is helped by proteolytic enzyme tablets with papain and bromelain (such as Clear-ease), one three times a day dissolved in the mouth between the cheek and the gum. In the emergency room the doctor may give a cortisone or similar injection. Non-steroidal anti-inflammatory drugs such as Aleve and Motrin also help.

If your throat stays sore and you feel "real sick" all over, you do need to be checked. The doctor may do a quick culture looking for streptococcus infection and that will determine the antibiotic he will choose.

If you have trouble opening your mouth and your voice sounds like you have a potato in it, you may have a serious throat abscess deep to the tonsil called a Peritonsillar Abscess or one behind the throat itself called a Retropharyngeal Abscess. These are emergency conditions that require immediate care.

To prevent frequent sore throats and frequent hoarseness you should try pulsatile throat irrigation on a daily basis. This washes away surface bacteria and massages the area so that fresh blood comes in and stale old blood leaves. Sometimes a throat infection won't clear with antibiotics because of a layer of biofilm that surrounds the bacteria and keeps out the antibiotic and the body's healing elements. Pulsatile irrigation can help wash these away.

Tonsil white spots. Many patients are frightened when they see white spots on the tonsils. This is perfectly O.K. These are the dead white cells and dead bacteria that accumulate in the holes of the tonsils called crypts. Here the tonsils are just doing their job. If breath odor is a problem—consider pulsatile throat irrigation. With the Hydro Pulse Throat irrigator, the pulsatile stream is directed to the tonsil crypts for easy removal of this material from the deep crypts. The irrigator tip rests on the tongue, the stream is directed to just behind the last tooth. Thus the stream bathes the tonsil area and the stream goes around the back of the throat and exits the other side without any gagging. The gentle pulsation effectively cleans out the deep holes.

Pharyngitis. This is the fancy name for sore throat. Many kinds of bacteria and viruses can cause pharyngitis. The throat culture can be helpful to sort out which organism is doing the damage.

One of the top priorities in medicine is to prevent a throat infection from going to each member of the family. By starting throat irrigation as soon as a sore throat begins, you can wash away surface bacteria, bring fresh blood to the area and prevent the spread to the rest of the family. This is why two throat irrigator tips are included with the Hydro Pulse unit. Dad can start throat irrigation right away and avoid giving it to mother. When one member of the family has a sore throat it is important to dispose of used tissues, bag these tissues right away, use paper cups and plastic utensils, and avoid close contact if possible.

Lump in the throat. In the throat there are a whole series of muscles that are involuntary, or automatic, that squeeze the food so it goes down to the esophagus which also has muscles. With so many muscles it's easy to get a spasm or tightness that is actually a lump, and feels like a lump, but there is nothing to see or record on X ray. Diagnosis is made by checking the throat with a laryngoscope that looks directly at the throat as well as palpating the throat muscles. Relaxation and gentle throat exercises are therapeutic. Sometimes this is a sign of GERD.

Gastroesophageal Reflux (GERD)

Throat symptoms can also be caused by gastroesophageal reflux disease. (GERD).

R.J., age 36, heard about throat cancer and was worried because of a constant feeling of a "lump" in his throat. His ENT doctor looked, and saw irritation and redness of the inter-arytenoid area. This is the area that borders the back of the larynx in front and the opening to the esophagus which is behind the larynx and windpipe. If acid from the stomach backs up into the throat, this is the first area to be irritated. His doctor put him on GERD management and his throat symptoms cleared.

Diagnosing reflux may be difficult. One diagnostic help is looking at the larynx with a flexible scope called a laryngoscope and looking for areas of acid erosion in the back part of the larynx that borders the esophagus. Also using an esophagoscope to look at the esophagus and the upper part of the stomach attachment is diagnostic too. Doctors examine the entire esophagus to check for unusual erosion areas.

Why is GERD so popular now? Is it only the advertisements for Nexium? No, here's why. Your stomach produces acid in order to digest your food and kill germs that come from the upper respiratory system. Sinuses, and throat. When you swallow thick green phlegm, the stomach acid disposes of it.

Your stomach has a stopcock or valve called a sphincter that closes off to prevent the acid from going out of the stomach into the esophagus. For various reasons this valve becomes weak, allowing acid to reflux or come up to the esophagus. Eating a big meal and then going to sleep lying flat can cause a weakness of this sphincter.

Gerd can cause or aggravate a voice or a sinus condition because the acid coming up irritates these areas. More frequently it can affect the voice. About 75% of those coming for voice problems may show GERD. GERD may be caused by personal stress, performance stress and physical stress. Fatigue, a singer's worst enemy, is another contributing factor. Obesity is a reflux trigger. Losing weight relieves abdominal pressure.

Singers, Actors, and other professional voice users are more at risk, because the increased intra-abdominal pressure needed for performing works against the esophageal sphincter. Many voice professionals do not eat before performing, and they usually sing in the evening. A full stomach interferes with abdominal support. To make matters worse, singers arrive home late at night, eat a large meal, and go directly to bed. When a singer "supports the tone," the contents of the stomach are pushed up toward the diaphragm, weakening the lower esophageal sphincter. The "GERD process" has begun!

Knowledge of the digestive process is helpful in understanding reflux. Digestion consists of a process of dissolving food and breaking it down into simpler chemicals that can be absorbed by the blood and used to provide energy. Foods and liquids we swallow travel through a tube, the esophagus, to the stomach, where the contents are mixed with gastric acid and enzymes. This process takes about an hour. The food then continues through the pyloric sphincter, the "doorway" from the stomach into the duodenum, which is the first part of the small intestine. There it is mixed with digestive juices secreted by the liver and pancreas. The partially digested

food is then transported down the small intestine where more enzymes break down proteins, fats, and starches into food molecules easily absorbed into the bloodstream. Undigested food and waste products are handled by the large intestine (colon). Normally, the sphincter muscle at the bottom of the esophagus prevents "refluxing," but fatty and acidic foods, chocolate, alcoholic beverages, some medications, and cigarettes relax the esophageal sphincter. If it fails to close tightly after food has passed through on its way to the stomach, the gastric acid backs up into the esophagus, causing a burning sensation or a painful "fire" in the stomach, throat, and/or chest—hence the name heartburn.

The vocal process (Arytenoids) is attached to the posterior "end" of the vocal folds near the uppermost opening of the esophagus. The stomach contains extremely corrosive hydrochloric acid that flows or is flushed backwards or refluxed into the esophagus. This acid irritates the mucous membrane lining of the esophagus and "eats away at" the very thin, delicate covering of the arytenoids (cartilage-like muscles). The sphincter is supposed to act as a one-way valve (not a true valve) to keep the contents of the stomach from backing up into the esophagus. The corrosive acid can cause swelling, vocal ulcers, contact ulcers, granulomas (a sort of tumor or nodule), and erosive esophagitis (Barrett's esophagitis, an inflammatory process). Erosive esophagitis, which contributes to poor motility, causes refluxed stomach acid to be trapped in the lower esophagus and may predispose patients to esophageal and laryngeal cancer. This is called Barrett's Esophagitis. Untreated erosive esophagitis can also result in a build-up of scar tissue which may require dilation (stretching) of the esophagus to allow the patient to swallow.

Otolaryngologists or laryngologists (throat specialists) can usually recognize and diagnose reflux by inspecting the vocal folds. The characteristic red and swollen mucosa covering the arytenoids and the swelling and irritation of the posterior third of the vocal folds indicates probable reflux. Other, more definitive diagnostic tests used to confirm the diagnosis of reflux are: Barium swallow, 24-hour pH monitor study, and gastroesophageal endoscopy (insertion of a fiber-optic tube which lets the physician visually examine it).

If you have several of the symptoms listed below, you may have reflux. Some of the most common GERD Symptoms are:

- Bad breath (halitosis) and a bitter taste in the mouth when one awakens.
- Excessive thick phlegm, particularly in the morning.
- Heartburn.
- Chronic throat clearing and tickle in the throat.
- Chronic, irritating cough.
- A scratchy, sore throat, particularly in the morning.
- Chronic Hoarseness.
- A "lump in the throat."
- Excess mucus production.

- Prolonged vocal warm-up, with low or husky voice quality.
- Undependable voice—good one day and hoarse and tired the next.
- Vocal fatigue after short periods of singing and speaking.
- Trouble breathing or laryngospasm (closing-off of the airway).
- Regurgitation of food and liquids.
- Exacerbation of asthma. Asthma is also more difficult to control when complicated by reflux.

The tickle cough, throat clearing, coughing and Vocal Fatigue resulting from reflux can be eased and soothed by spraying with a soothing spray called Entertainer's Secret. Be sure to drink plenty of liquids, especially hot tea, so that your throat membranes are not dry. Remember, for a beautiful sound and correct resonation of the voice, the mucus membranes of the nose and mouth must be moist. For thick mucus and laryngeal swelling, Clear-ease enzymes of papain and bromelain help moisten the throat and reduce swelling.

Sleeping on your left side to reduce GERD can be relatively simple solution. This moves the acid liquid away from the esophagus. Elevating the head of the bed also helps reduce symptoms. The most common medications recommended by physicians are antacids. Four over-the-counter medications are Gaviscon, Maalox, Mylanta, and Gelusil. Diet restrictions and antacids may be sufficient to relieve symptoms of mild reflux, but physicians may recommend taking antacids in conjunction with other medications. Some prescribed medications that suppress production of stomach acid are Zantac (ranitidine), Tagamet (cimetidine), Pepcid (famotidine), Axid (nizatidine), Prilosec (omeprazole), and Nexium (esomeprazole). There are frequent articles in the medical literature now of cure of sinus conditions with these drugs in children as well as adults.

Singers, Allergies, and Sinuses.

You sang beautifully as a child and now you want to make it as a professional, but the voice comes and goes. Because the sinuses, post-nasal drip, and allergies are so involved with voice, here is an excerpt from the forthcoming book on voice. "Vocal Survival Techniques for Singers and Professional Voice Users" by Rosalie Loeding, a leading voice teacher who can tell you what has helped her many grateful students

Asthma, bronchitis or any reduced airway condition often remains undiagnosed and untreated because singers and professional voice users with mild, "silent asthma" seldom wheeze, they appear to be in good health, and the speaking voice may sound relatively normal. They are still able to perform, though not at optimal levels.

Why can't they perform at top levels? When pulmonary function tests are performed on these performers, the results are usually evaluated as "Good" because the pulmonary specialist is not aware that singers and actors normally have higher lung volumes than the average population, often 120% of normal values. In order to properly treat these patients, it is important to ascertain reversibility. For example,

if the lung volume is found to be 85% of predicted, a singer could be operating 30-35% below *their* 100%. Athletes and singers are very similar in this area. Even performers with 5-22% reversibility often experience dramatic improvement in their speaking and/or singing voices following treatment of “minor” pulmonary conditions.

Vocal technique—speaking and singing—is a learned response. The technique becomes automatic and we are seldom consciously aware of how we use our voices. A series of small or large disasters are responsible for vocal problems. Sometimes, it sneaks up on you; your voice is hoarse one day and seems almost normal the next (day-to-day variability), so you assume it is a temporary problem. I refer to this as “Denial Syndrome.” Most of my clients have come to realize, after beginning vocal rehabilitation, that their problems really began years before. Your vocal folds can be permanently damaged and sometimes it is irreversible. A stiff, fibrous cord may never vibrate adequately to allow you to sing professionally. With long term overuse and abuse, the folds may become essentially paralyzed. I am trying to shock you into taking hoarseness and vocal problems seriously. Even when there is no pain, there can be significant damage.

Below are listed some of the physical manifestations of vocal problems that are caused by or exacerbated by asthma and allergies. I will give some other possible causes, because most singers and professional voice users with vocal dysfunction may have a number of problems, so one cannot assume asthma to be the cause unless professionally diagnosed. But, don't succumb to “Denial Syndrome” either—if your runny nose and sneezing has lasted for two weeks, it is not a cold!

Voice Problems: Signs and Symptoms

These are grouped by Loading as

- Coughing, tickle and throat clearing.
- Heavy breathing and wheezing
- Poor posture
- Excessive tension or muscle tightness
- Excess voice fatigue

Coughing, Tickle, Throat Clearing and Gunk.

Do you have a frequent, persistent dry cough, particularly at night? Virus infections, bronchitis, or reflux could be the cause.

A tickle in the throat during singing may be caused by asthma and allergies, but also by irregular practice habits, reflux, laryngitis, or second hand smoke.

Do you frequently clear your throat or have a persistent dry cough? This can be a symptom of asthma, but can also be caused by reflux, xerostomia (dry mouth), postnasal drip, and voice disorders such as overuse and abuse, nodules, etc.

Is there a thick mucus rattling around on the vocal folds—asthma, virus, or sinusitis can be a cause.

Heavy Breathing or Wheezing.

A tight chest, wheezing and shortness of breath with moderate exertion should send up a red flag. Go to the doctor immediately. Do

you feel that you need a breath before completion of a relatively short phrase?

The answer is that poor posture inhibits relaxed deep breathing. Try the following to experience the effect of poor posture on breathing:

- Pull your shoulders up and forward and try to take a deep breath.
- Now, slump, with your arms forward and do the ribcage "Cave In". Both of these behaviors restrict the expansion of the ribcage.
- The head/chin raised or jutting forward may be an asthmatic's compensation for inability to take a deep, relaxed breath. This produces tension of the extrinsic neck muscles and the stretched, tense neck muscles makes it impossible for the vocal folds to work properly. The sound is strained. (Of course, it can be caused by straining to reach a high note).

Excessive Muscle Tension

- Tension in the chest wall is often the result of constriction of airways and can cause tight vocal muscles leading to early fatigue.
- Excessive tension of the muscles of the face, neck, and in particular, of the jaw is a common cause of voice disability.
- Tension of the extrinsic and intrinsic neck muscles, above and below the glottis can also be caused by poor vocal technique and poor posture, as well as emotional stress and TMJ.

Miscellaneous Signs of Excess Muscle Tension.

- Fatigue after normal activities, without sufficient cause;
- A wrinkled forehead, indicating tension;

- The appearance of nervousness, restlessness, or irritability, the "short fuse syndrome", can be caused by tension.
- Pain while speaking or singing is usually the result of vocal abuse and bad technique.

Other causes of excess muscle tension include GERD, infection, arthritis of the arytenoids joints, and poor singing technique. For excess tension, the biofeedback exercises described for TMJ, Part VIII are useful. Recall, the head is balanced, and makes no difference in the balance if the front and back muscles pull equally with 2 pounds or 40 pounds, the head is still balanced; but at 40 pounds the voice is fatigued, so relaxed muscle tension is a must.

For vocal cord swelling, enzymes to shrink the swelling such as Clear ease can help. Avoid gargling as this "strains" the voice. Steam inhaled with the tongue out is good.

Whether you use your voice part or full time, Rosalie Loedings's book, "Vocal Survival Techniques for Singers and Professional Voice Users" can be of value to you.

VIII. Headaches Are Not All Sinus Related

Does this sound like you?

- Daily head pains.
- Daily pounding head pain with visual disturbance.
- Head pain severe enough to keep you from daily activity.
- Headache associated with nausea and vomiting.
- Headaches that keep you bedridden in a dark room.
- Severe headaches partially relieved by walking about.
- Headaches that start in the neck and end in the sinus.

If you are one of the 50 million persons with these symptoms, I have some suggestions for you.

Types of Headaches and Ways to Prevent Them

There are some simple steps that anyone can take to prevent or relieve headaches. This is because headaches have multiple triggers and eliminating some of these reduces the frequency of headaches.

Physical therapy to relieve headaches. Headache patients do better on an exercise program and sometimes the right series of exercises can be the "cure." I make sure that my patients do engage in an exercise program, whether to reduce "stress" or improve circulation or muscle action. I frequently refer patients to physical therapists in order to have them prescribe an individualized program. One patient had certain neck muscles that needed strengthening. Another hated exercise because he couldn't do 100 pushups; in other words he was trying to do precisely the wrong types of exercise! When the individual program was prescribed, he did fine. Walking is always good, and I recommend, if you don't already have a dog, that you find one in the neighborhood and "borrow" him to take walking. In any illness, the patient benefits when he or she assumes responsibility for their health. Headache medications are improving, but there are still actions the patient can take that can be crucial to preventing their headache. These include the headache diary, exercise, and muscle relaxation.

Headache diary. By recording when the headache comes on, sometimes the answer becomes quite obvious. The diary may show that the headache comes premenstrual, or after eating at the Mexican restaurant, or when you drive with the top down.

Circulation. All headache sufferers should do cervical shower exercises. Simply stand with the water stream directed to the back of the neck and slowly, gently turn to see who is standing behind you, from side to side, for three minutes. This removes lactic acid from the muscles and makes the blood vessels less "irritable." Avoid extreme chilling to the neck. For example, you can bring on your headache if you chill the back of your neck and then suddenly apply heat. The cold constricts the blood vessels, followed by the sudden dilatation of the vessels by the heat. This replicates the migraine mechanism. Wear a scarf when you go to a movie in case you need it and NEVER drive at night with the wind blowing on your neck. Many of my patients respond to small doses of slow release vasodilators to keep the blood vessels open in order to avoid the constriction.

Neck Headaches. If your chair is too low so that you have to strain your neck, this can be a trigger. If your computer screen is too low or the lighting is bad or the chair is too soft, you can strain your neck. Check the lighting at your desk too. T.V. headache? As a rule, the softer the couch the worse it is for the headache patient as well as for the back patient. Trying to view the TV screen when one is slumped down will cause a headache. Try to have a chair similar to a secretary's chair with erect posture.

Cervical headaches. A patient presents with a history of recurrent frontal sinus pain; the nose looks fine, CT scan is clear. I palpate the neck—it is tight and spastic and trigger points reflect to the frontal area. This is because the nerve root of the trigeminal nerve that supplies the frontal area gets stimulated when certain cervical roots from the neck are painful. Treatment is to treat the neck. Proper massage may be the cure. If this is you, get a referral to a physical therapist so they can clear the condition.

Never crack the neck unless an MRI or CT shows that this is safe to do so.

Vision related headaches. If your visual correction is off, this can trigger a headache because the eye and other muscles squeeze in order to focus. Thus, if your headaches come on after reading, check the prescription. Squinting does the same thing. Nearly everyone gets a headache when they start to wear bifocals, but that is temporary.

Headaches related to food allergies and vitamins. Food allergies can cause head pain. You have to test to see if it is a cause. Try two weeks without the food and then lots of that food for a week. Niacin is a vasodilator so if your vitamin formula contains niacin, that can be a trigger too. See later section on Migraine.

Pre-menstrual headaches. Headaches that always present 10 days before menstruation are due to water retention and usually respond to a salt-free diet, or a mild diuretic. Dr. Lee Kudrow has found that eating dark chocolate, which is rich in phenylethylamine, also stops these headaches if it is taken 10 days before the onset of menses.

Tension headaches. Tension headaches refers to head pains due to tight muscles. If muscles are tight, lactic acid can build up in the muscles and this is

painful. You can make a headache. Put alcohol on the back of the neck and have a fan blow on it. The cold of the evaporation will cause blood vessels to constrict. Then apply heat to dilate the blood vessels and you will get pain. Any sprained muscle can result in pain, and if it is referred to the skull, it is felt in the head as a headache. To help cramped muscles, do massage-type cervical exercises. For example, take a hot shower, focusing on the back of the neck at night before bedtime, and gently turn the head, in order to remove lactic acid built up during the day. Best way to avoid headaches is to avoid muscle tension. See the relaxation method in the TMJ section on biofeedback.

Sinus related pain. As an ear, nose, and throat specialist I have a unique advantage in being able to differentiate between sinus pain and headaches. Much frontal sinus area pain comes from the posterior neck because of the way the nerves are connected. However there are individuals whose headaches are triggered by congestion, and the pus of an infection. To avoid this trigger, it is beneficial to use pulsatile irrigation whenever there is thick mucus or pus in your nose and sinus. True sinus headaches are discussed in detail later in this part.

Any symptom whatsoever is made worse by anxiety reinforcement and this must always be avoided. (see appendix)

Many patients are bothered by pain above the nose and between the eyes, where the sinuses are located. The pain may be due to swollen membranes, or, if the sinus is blocked, due to the vacuum within the sinus. Persons who descend from a flight with a plugged nose may get a vacuum sinusitis which is quite painful. If there is a sinus inflammation pain, this may respond to Clear ease lozenges, one three times a day, dissolved in the mouth between the cheek and gums. This is especially useful if the pain follows flying or scuba diving. Clear ease is designed for oral use, and consists of bromelain from pineapple and papain from papaya. The enzymes are calibrated as to enzyme units. It can be used safely by pilots and divers.

If an infected sinus is causing the pain, this suggests taking an antibiotic and a decongestant such as Sudafed. Over-the-counter Sudafed is helpful. Avoid getting chilled, drink lots of liquids. If there is colored drainage, pulsatile nasal Irrigation is an excellent way to remove pus and stimulate natural nasal function. But severe sinus pain is rare, even when the patient is blowing yellow mucous out the nose. However, in cases of long duration, the "sinus headache" is really "referred" pain from the neck. Feel the back of your neck. Does the pain travel to the front of your forehead? This is because of the hookup of the nerves; painful stimuli radiates to the front area above the eyes. For neck treatment see *Cervical Pain*.

Pain in the sinus usually comes from pressure on the membranes. Often the most severe pain comes when a vacuum is formed. For example, while flying at high altitude your nose may clog because of the dryness in the cabin and your failure to drink adequate fluids, such as hot tea. The nose closes and almost immediately the body starts to absorb the oxygen in the sinus which is now plugged. On landing, the sinus is now at a low pressure whereas the atmosphere outside is at a higher pressure (15 psi) and the pain is like having a 5 pound weight (~2 kg mass) on your eyeball. A similar thing can happen in scuba diving.

Treatment consists of opening the sinus passages so the air pressure can equalize. Try spraying the nose with a nasal decongestant. The doctor may give you

cortisone by injection or pill to get the passages open. Take papaya enzyme lozenges such as Clear ease every four hours, dissolved in the mouth between the cheek and gums. This thins the mucus as well as reduces membrane swelling, and the swelling that blocks the sinus openings. Taking a decongestant like Sudafed is helpful. In my office we spray the nose well and put pledgets (small wads) of cotton with nose drops at the sinus openings. Sometimes we have the patient breathe helium which easily goes into narrow openings. The nasal irrigator is recommended if there is phlegm or drainage that should be removed.

Pain from bacterial sinus infections is surprisingly minimal, even when the X-rays show significant disease. Drainage of the pus is done in the office, by local shrinking and suction, or by Hydro Pulse pulsatile action in the office and daily at home. Antibiotics are also used in some cases, plus decongestant and Clear ease® to reduce swelling and thin the mucus. Apply hot compresses over the sinus area, and drink hot tea, about 8 glasses a day, to help restore movement to the microscopic cilia of the nose and sinuses. Sometimes nasal pain is due to extreme swelling of the membranes against a deviated nasal septum or nerve area.

If someone has pain in cold air, while skiing for example, we consider that they may have a nose where the bones don't come together at the top, where the roof of the nose is open, allowing cold air to strike the membranes directly. This is called an "open roof" syndrome. But most persons who have pain on skiing have it because of the dryness of the nose. Here using a moisturizer gel such as Breathe.ease XL nasal moisturizer is beneficial.

Pain from The Trigeminal Nerve. This is the fifth cranial nerve; it is in 3 parts to transmit pain sensations from the face. The nerve can be irritated by a viral infection and cause a neuralgia; here a virus has attacked the roots of the nerve. We diagnose this by the distribution of the nerve. Trigeminal neuralgia where all three divisions of the nerve are involved, is quite painful and requires good care, but can be helped. This type of pain is not helped by relaxation or exercises.

Injury or inflammation to a part of the trigeminal nerve called the supraorbital nerve can result in supraorbital neuralgia. If you feel along the upper border of the orbit, you can often feel a notch about in the center. Here the nerve exits from a canal where it is then exposed. Because the nerve is enclosed in a canal, it has no room to expand when inflamed and hence can lead to permanent symptoms such as neuralgia. Some misinformed "experts" recommend pressing on this nerve to anesthetize it for headache relief. This idiotic advice is an absolute no-no, as pressure here against a closed canal can cause the neuralgia.

Migraine.

Migraine is a specific kind of headache. Generally migraine comes from the blood vessels becoming twitchy or spastic. Migraine starts with an aura of flashing lights, feeling light headed, a need to urinate, or knowing that the headache is coming. This is called the prodromata. The aura comes when the blood vessels constrict. Then the blood vessels slam open, often causing leakage through the vessel walls. This is the cause of the headache pain and it is usually described as throbbing. The pain is more severe than a tension headache, and the patient feels

better lying down in a dark room. Some patients awaken in the middle of the night with this headache. This is usually diagnostic of migraine.

There is a hormonal relationship in Migraine. In families where one sister started birth control pills and got migraine, other sisters get the same result. It may stop or increase in pregnancy or menopause. Children can get this too.

For my patients with migraine, I have them focus a shower to the back of neck for several minutes, while slowly rotating the head from side to side gently. This may train the blood vessels not to be so "twitchy." Some persons can take 125 mg of slow-release niacin twice a day without getting the headache. This maintains the blood vessels in a dilated state so that when the trigger comes on the vessels can't constrict much since they are already open, and they can't quite slam open so vigorously since they are open. Migraine won't respond to OTC aspirin, acetaminophen, ibuprofen or Aleve. If it does, it may not be migraine. Imitrex, Zomig, Maxalt, and Amerge are some choices for relief of the migraine headache, as is Migranal Nasal Spray ([Dihydroergotamine](#)). For headaches that occur three or more times a month, preventive treatment is often recommended. Drugs used to prevent classic and common migraines include methysergide, which is a weak constrictor of blood vessels; propranolol, which stops blood vessel dilation, and amitriptyline, an antidepressant. Excedrin Migraine is an effective medication containing 250 mg acetaminophen, 250 mg aspirin, and 65 mg caffeine.

Another technique for prevention is to start with very low dose of slow release niacin, gradually increase the dose till the medication brings on the headache, then stay at the pre - headache slow-release niacin dose. This prevents the extreme constriction of the vessels.

Dozens of foods and beverages can trigger migraines and other headaches, but most people are bothered by only a few. To identify the foods that affect you, avoid all potential triggers (see the following list) for two weeks. If your headaches are food-related, you'll notice an improvement.

Migraine Triggers

- Bacon and all canned, cured or processed meat products containing sulfites.
- All cheeses, except for American, ricotta, cottage, Velveeta, and cream cheese.
- All alcoholic beverages, including cooking sherry, and especially red wine.
- All cheeses, except for American, ricotta, cottage, Velveeta, and cream cheese.
- All chocolate, carob, and licorice.
- Pickles, chili peppers, and olives.
- Soy sauce, olive oil, and vinegar, except for white and cider.
- All artificial sweeteners, including those found in diet sodas.
- Non-dry mustard, ketchup, and mayonnaise.
- All beans, including lima, string, garbanzos and lentils.
- Whole milk, sour cream, buttermilk, whipped cream and ice cream.

After the two-week period, resume eating one food from the prohibited list each week. If you experience no change, the food is not a headache trigger for you. If your headaches return or worsen, the reintroduced food is probably a trigger and should be permanently eliminated from your diet. These suggestions are from Dr. David Marks and Dr. Laura Marks of Norwalk, Ct, co-authors of The Headache Prevention Cookbook. ISBN: 0395967133

Histamine Cephalgia, Horton's Headache, Cluster Headache.
Histamine cephalgia is much more severe than migraine or sinus headache.

It is episodic and the frequency varies enormously. It doesn't appear to be related to hormones or age. Headaches occur in clusters. Affected areas are temple, eye and neck. Usually in middle-aged men. These may occur in sleep, often last less than 30 minutes, and is repeated over a 24- hour period or longer. Once the cluster is over the next cluster may not appear for years. The eyes and the nose tear and the eyelid droops. There are changes in the pupil—the pupil constricts—and the eye is red on the side of the headache. Alcohol provokes an

attack. In Migraine the person is better lying quietly in a dark room. In Cluster the person paces and pounds his fist. Although the nose runs and the eye tears, there is no association with sinus disease. I have had some success in injecting Kenalog into the turbinates for this condition.

TMJ – Temporomandibular Joint Pain Syndrome

TMJ is the quick way we refer to Temporomandibular Joint Syndrome that are associated with the joint between the mandible or jaw and its attachment just in front of the ear canal. This is a very common source of pain. Put your fingers in front of your ear canals on both sides. Open your jaw wide. Do you hear or feel cracking and popping? If so, please read on.

Temporomandibular Pain Dysfunction Syndrome or TMJ symptoms are quite common. They include local joint pain, ear ache, headache, noises and pain when you chew, and various associated muscle pains. The ability to open the mouth wide may be limited. Ordinary chewing of food may be difficult.

TMJ Causes

Teeth not straight. Difficulty with moving the jaw easily up and down may be due to the teeth not being “straight” or what the dentist calls good occlusion. Then treatment is to get dental work to create a proper bite. If there are teeth missing so that the teeth can’t come together correctly, that can cause TMJ. The problem is that I see patients with a perfect bite and yet they have TMJ. I also see patients with a terrible bite, and they don’t have TMJ.

Muscle Imbalance. In other patients I feel that it is the muscle imbalance that is of paramount importance. Correcting the bite may take care of the problem, Using mirror biofeedback may also relieve the condition.

Opening the Mouth to the Side . The proper way of opening and closing the mouth or of biting and chewing is to have the lower jaw move up and down in a midline direction, rather than strongly to one side. In TMJ, the person opens his mouth to the side, not in the midline. There may be a noise called crepitus. This is the sound made because the joints are swollen, or the membranes are worn away or displaced. This usually means that the muscles that guide the jaw are not functioning correctly because they aren’t balanced. Here correction of the bite is certainly desirable when this is the cause of the muscle imbalance. But there may be other causes. Often patients with TMJ express their stress by biting hard or gnashing their teeth. This may replace clenching the fist or sweating when tense. The more the discomfort the more they bite down or clench. The more they clench, the more the pain. The more the pain, the more the anxiety, the more they bite down, the more nervous and so on. In TMJ the person may grind his teeth in his sleep; this is most upsetting to the partner and to the dentist who has to repair the damage.

TMJ Treatments.

Proteolytic enzyme lozengess. Enzymes such as papain from papaya and bromelain from pineapple are examples of proteolytic enzymes that reduce swelling, when melted in the mouth between the cheek and the gums. Clear ease® lozenges are designed for this function and one melted in the mouth 3 to 4 x a day may be effective.

Anti-inflammatories. Aleve, aspirin and other non steroidal medications are useful.

Steroids. These may be administered by your physician or dentist, either orally or by direct injection into the joint. An MRI (Magnetic Resonance Imaging) test will give maximum information on the condition of the joint and can be a guide to treatment.

Resting the jaw. Use a bandana or chin-strap to support the jaw and take the weight off the jaw joint.

Relaxation to relieve TMJ. The following program can be used to relieve headache and TMJ syndrome *after a medical examination shows that there isn't a medical condition that needs to be treated.* Always get a medical examination so that you receive the correct diagnosis and treatment.

Relaxation Technique.

How Relaxation can Help.

Relaxation can help all headaches and TMJ problems and almost any pain. Here is a relaxation process for you that takes 10 minutes to do. It will help any situation where you are too tense, where anxiety is evident. This relaxation process will probably help you a lot in your life in general.

It will help most muscle problems in the neck and back, no matter what is the cause of the muscle tightness. There will be some specific instructions for TMJ problems, but remember, the technique works for all kinds of anxiety, tension and nervousness.

Some patients build up an anxiety circle. The more they worry the more nervous they get. The more nervous, the more they tense and affect the circulation to the muscles (or clench their jaw). The more the tension, the worse the anxiety, the more nervous. Certain undesirable chemicals get built up. One way to stop this is to give huge doses of medications. You won't feel nervous if you are knocked out. There are many objections to this, of course. A better approach is to use biofeedback.

Biofeedback

In the 1970's I published the results of my experiences with TMJ patients who were treated using biofeedback. It worked in anxiety reinforcement patients; once that cycle was broken they lessened their symptoms significantly. This was successful in cases of tinnitus, high blood pressure, TMJ syndrome, headaches, tinnitus, allergy, asthma and many other conditions. I reported 66% relief of TMJ using biofeedback alone. Other centers reported similar figures.

Biofeedback simply means that you are given information about your body so you can change it. Usually we hook up very sensitive sensors that record the electricity your muscles put out. The forehead is where the muscles show worry and anxiety. So we place the sensors there. A large dial that shows how much electricity your muscles are putting out. You see this, and you use this information to lower the electricity, thus relaxing the muscles. You cannot have anxiety if the muscles are relaxed.

I have developed a simpler method for my patients with TMJ. This works for sinus, headaches, and tinnitus as well. It is like biofeedback with the machines, except that here we use the mirror as a feedback mechanism. You can see when the face is relaxed, when the jaw opens correctly. My patients have done well following these 10 steps. By daily repetition, the habit becomes a desirable one producing good outcomes. 10 minutes a day is all it takes. Once you have learned this muscle relaxation method, you can do it without thinking and without the mirror.

In my practice I find that unless you are given the information as to when you are doing it RIGHT, it may not work. So, here we use the mirror as a biofeedback device to show you when you do it right.

This method is based on:

- using the breathing technique to direct the relaxation.
- using the mirror to tell you when you do it right.
- using the mirror to tell you when the jaw is in correct position.
- repetition that you can do daily at home.
- the advantage of you being in charge of your health yourself.
- the body learns when it is using the muscles correctly and given this information will continue to do it right.

Biofeedback for Relaxation

Getting started with a mirror.

Take a large mirror that you can stand or sit in front of. Draw a straight vertical line down the middle of the mirror. Please measure carefully to be sure the line is centered and vertical. Initially you can mark the middle of your forehead, nose, lip and chin in order to line up with the mirror's line. Then do the following ten steps.

The Ten Steps for Relaxation.

1. Breathe in 4 counts. Concentrate on counting 4 on inhalation.

This makes the breathing regular. Do this in front of the mirror.

2. Breathe out 6 counts. Make exhalation longer than inhalation. Use the act of relaxing the diaphragm as you exhale to signal other muscles to relax. As you exhale, your chest, shoulders, and rib muscles relax.

3. Breathe in count of 4 and out count of 6; as you exhale let this be a signal to relax. The actual time is not important as long as exhalation is longer than inhalation and you relax as you exhale. Feel an energy enter your body as you inhale. Feel the tension leave your body as you exhale. *(Or feel the tinnitus, pain, headache leave.)*

4. See the face relax. Look at your face in the mirror. Tighten your muscles. Now relax them. As you exhale let this be a signal to relax the facial muscles.

5. See the jaw relax in the mirror. Note the position compared to the vertical line. Don't open the jaw. Let it fall open as you relax, like when your dad fell asleep on the couch. For TMJ problems, you use the straight vertical line on the mirror and line up your face to the midline to make sure your jaw opens in the midline and not to the side. For TMJ patients, once the jaw opens midline, the muscles are then balanced to relieve the condition.

6. See/feel the shoulders relax as you exhale. Think good energy, good air going into your lungs, and old used-up air leaving your body.

7. Recall a place where you felt relaxed, like the beach. Picture a rose or look at a picture of an object to remind you of this place. Be as relaxed as you were at this beach. Still breathe in 4 and out 6.

8. Relax from toes on up. Toes, legs, tummy, chest, neck, eyes, forehead. Maintain the in for 4 out for 6 breathing count.

9. Raise a finger. Take three breaths (in and out, still counting). At the third breath, drop your raised finger and when it touches, let that be a signal to relax as you exhale. You may repeat this for a minute.

10. Imagine going to a healing place. An island or a place famous for healing. So many people you know have been healed here. Imagine the trip. Do you go by boat or plane? Or even by magic carpet! The water, food,

music, air, scents, flowers, all help heal you. Imagine a guide to take you around. Make an image in your mind that here the TMJ symptoms, tinnitus, or head pain is reduced. You can imagine a golden light healing you, or the special bubbling spring that you bathe in. Be sure to use all senses. See and smell the flowers surrounding a clear crystal stream of delicious mountain water that is famous for healing. Taste the water. Hear the guide explaining that there is a special mixture of elements in the water that act as a tonic. Again use all 5 senses, taste, feeling, smell, sight, and hearing. See the flowers, smell them, touch them, hear the breeze blowing on them, imagine a musical note, even try tasting them.

In this place of healing it all comes together—the anxiety is better! Here when the phone rings or there is a disturbing sound, you aren't bothered, your muscles remain relaxed. Here your receptors are wide open. You can suggest, imagine, feel yourself getting better. At the same time, because the receptors are open you can suggest whatever you wish to "improve"; "I will skip the doughnut with my coffee, or I will only eat one slice of bread for lunch." These must be "minor" suggestions. You can also picture that here you will remember to relax whenever the signal of TMJ or pain or tinnitus comes on.

Later when you have done this awhile, let tight muscles act as a signal to relax to the healing place.

Why this works. Science has shown that you cannot have anxiety if the muscles are relaxed. For 30 years I have demonstrated this with my patients. You do have to do this daily. I prefer doing it for one minute every hour on the hour. Soon it is so automatic, you are in a different "state" most of the time. If you do this for three months, I assure you your symptoms will improve because

- * You are reducing the unwanted body chemicals
- * You are in charge, in control of your treatment
- * This is a tested and proven method
- * This follows known scientific principles

Whether you do this for TMJ, sinusitis, tinnitus, headache or sore neck, the principle and the "chemistry" are the same. (*see Trip to Healing Place in Appendix*)

IX. Sinus Disease Prevention for Kids

Sinus Problems among Children

The American Academy of Otolaryngology in conjunction with the American Academy of Allergy is urging parents to take steps to prevent their kids from growing up with chronic sinusitis. Children are born with sinus cavities and they can be infected at any age.

Often sinus problems start in childhood. A common cause is that the child could be blowing his nose too hard. Parents are urged to teach their kids to blow the nose GENTLY or not at all. Heavy blowing spreads the bacteria to uninfected areas including the ears and irritates the delicate nasal membranes so they can't function to protect against disease.

Here are 12 rules to teach the kids to avoid them growing up as a sinus patient;

1. If you see a green drainage from one side of the nose only, the cause might be a foreign object, like a raisin or a nut. Best to have this removed by an ENT specialist.
2. Insist your child blow his/her nose GENTLY or not at all.
3. Follow your doctor's instructions regarding medications. Never stop the antibiotic before the recommended dose is finished. This is how we develop drug resistant bacteria.
4. Make sure your child is up on his immunizations.
5. Try to avoid the child getting chilled.
6. Don't overheat bedrooms.
7. Child's bedroom should preferably be as bare as possible. No moth flakes, insecticides, or dust collectors. (see appendix for dust proofing)
8. Pets should be kept out of the bedroom as well as out of the bed.
9. Moisturize the bedroom in cold or dry weather. Best method is to use pans of water for evaporation.

10. Avoid nasal sprays with Benzalkonium or Thimerosal (Mercury) as these may irritate the nose. *(especially avoid mercury in sprays).*

11. Avoid smoking in the child's presence

12. If there is considerable dust, use a HEPA filter (not an ionizer).

There are some other common sense steps to prevent a life of sinus misery for your child. It is very important to keep the bedroom moisture at no more than 50%. If the moisture goes above 50% this encourages dust mite growth. Check for leaks that may grow mold. A regular light bulb turned on in a damp closet or basement is a mold deterrent.

Yellow green drainage that persists for more than a week suggests a sinus infection. Three of these episodes/year suggests a chronic sinus infection.

If your very young child has a persistent nasal/sinus infection, ask your doctor about performing Proetz Sinus Irrigation. This is an inexpensive treatment parents can do at home. Here the child is placed with his head lowered and dilute nose drops are placed in one nostril and suctioned from the other with a simple nasal aspirator till all the colored pus is removed.

For the child 5 or older who has persistent sinus drainage, ask your doctor about using pulsatile irrigation to remove the pus and thick mucus to allow the natural healing to take place. Units such as the Hydro Pulse Nasal /Sinus irrigator are gentle enough for use by kids age 5 or older, and most kids (and adults) appreciate the relief they get. Because the pressure is regulated exactly right, it is much safer than sniffing from the hand or unregulated pots and syringes where the pressure can be too high. With the pots, when the child tilts his head over for the irrigation, the fluid pools at the Eustachian tube, the entrance to the ear, and the child ends up with fluid in the ear. The problem with most pots is that unless you hold your head just right, fluid can cause you to cough or choke. With Hydro Pulse you simply bend into the sink and none of the fluid goes to your throat or spoils your clothes. Most kids like to perform the entire process—adding salt, water, adjusting the pressure themselves, doing the irrigation, and experiencing the relief.

Allergies

If your child is sneezing, eyes look puffy, but he is free of fever or fatigue, the problem may be allergy. Note the date on your calendar; often you can tell what the offending allergen is by using the pollen calendars available on the net such as at www.pollen.com. Next year you can start the child on over-the-counter NasalCrom before the pollen flies and avoid the allergy symptoms.

Your doctor may recommend one of the cortisone sprays. These nasal sprays have been in use for decades and are now felt to be safe for kids to use. Of course, avoid any medication if it isn't necessary.

Morning sneezing? Usually this is an effort of the allergic child to get warm. Prevent this by having warm tea in bed before getting out of bed. Usually a thermos does well. Tea without caffeine is fine. Ice drinks make the allergy worse. If the child has asthma, it is even more critical to prevent and clear sinus problems.

It is very important to follow your pediatrician's instructions regarding the age at which foods are started. This helps avoid allergies. Breast feeding is also an allerg preventer.

Enlarged Adenoids

Does your child have sinusitis or enlarged adenoids? Adenoids are the tonsil-like tissue in back of the nose. With sinus infection they may enlarge and block nasal breathing. Or they may enlarge on their own, usually accompanied by enlarged tonsils. Before you rush to have surgery for this condition, ask your doctor about measures to shrink the adenoids. Clearing a sinus condition is the first step in getting adenoids back to normal size. Other methods include anti-inflammatory medications, often combined with antibiotics.

Your doctor may recommend fruit enzymes for this: papain from papaya or bromelain from pineapple, such as in the product Clear ease to help shrink the adenoids.

In general, enlarged tonsils are not a cause for surgery. With chronic tonsillitis the goal is to cure the condition, just as we would cure a chronic eye condition.

One reason the Allergy and ENT groups want to call attention to sinus and other childhood ailments is so that the parents can appreciate that a child who is constantly mouth breathing and snoring, is not a healthy child. He/she may not sleep well, have bad breath, and be constantly fatigued, cranky, or run down. They do poorly in school. Such a child deserves care so they can grow up and not be one of the 37 million persons who now have sinusitis.

Clearing the sinuses, reducing adenoid enlargement will reduce ear infections, where the hearing is blocked by liquid trapped behind the eardrum. Normal hearing is vital to the learning process; therefore delays in clearing trapped fluid that affects hearing can be harmful. The sooner the hearing is restored by removal of the fluid, the sooner the child resumes learning.

Despite the daily barrage of advertisements for medicines and potions, the best thing for your child's cold is still chicken soup, tea with lemon and honey, and bed rest. Consult your doctor.

Part X. Recap and Final Advice

I have written this book to help you:

- *Understand*
- *Treat*
- *Get the right treatment*
- *Cure*
- *Prevent*
- *Ease the symptoms of*

Sinus disease and related sickness.

My approach has been basically “drug-free,” although there are many times where you must take drugs for your condition. Your physician is the best guide in this matter. But it helps if you have knowledge about the conditions that can affect your health. Then you can suggest to your physician some other possibilities when antibiotics and other drugs are advised. More important, when you actively participate in managing your illness, you help mobilize the healing powers within you.

If your symptoms and signs are severe, as in having had the sickness a long time, or you have had failure of treatment over a long period of time, then hopefully the approaches recommended here will help guide you and your doctor to a successful cure.

Many milder conditions can be alleviated with relatively easy treatments and the same methods can often prevent a more serious disease.

Most of the treatments advocated in this book are helpful in more than just sinus disease. In the program for reducing stress and anxiety, you have a means of greatly lessening, if not curing, the severity of many sicknesses—in fact, a means of making your life a lot healthier and happier. Now you have a life program in this book, you don’t need to buy one of the 45,000 books on stress/meditation listed on Amazon.com. I assure you that none of this is “New Age” mumbo jumbo. Every recommendation is backed by the most rigorous scientific studies. The references that are listed here are only a very small part of the science that verifies that these procedures work.

Overview of How to Deal with Sinus Problems

Here are the basic approaches that I propose as general means to treat and prevent moderate sinus disease and related problems. First, determine whether or not you have sinus sickness.

Some of the Sinus Symptoms are:

- Nose stuffy most of the time
- Yellow-green discharge in the nose
- Coughing and hacking
- Use lots of tissues
- Bad breath
- Thick unpleasant mucus in the throat
- Voice raspy and hoarse
- Reduced sense of smell and taste
- Nose runs and hurts a lot
- Pain over the eyes
- Pain over the upper teeth
- "Sinus" headaches

Although these items paint a good picture of a sinus condition, the diagnosis still must be made by a medical examination. Remember we discussed the conditions that can also give you these symptoms, so the competent medical examination needs to cover matters like the common cold, bad breath, head pains and aches, postnasal drip, snoring, sore throats, and TMJ. These and others related conditions have been covered in this book because they can be misdiagnosed. And you won't be misled by some of the erroneous newspaper articles that say foolish things, like, "All sinus headaches are actually migraine."

Strong Belief in Natural Healing

I want to be sure you understand my definitions of "Natural Healing" here. I am NOT saying ignore medical science and depend on the products advertised as "natural." Heck, cobra venom is natural, but that doesn't mean it's good for you. If you read some of the advertisements of 1800's for Snake Oil, the natural healer, they sound amazingly similar to the ads you find on the Internet today for "natural products." (Snake oil would be considered natural, too). I am saying that there are natural healing chemicals in your body that you want to utilize to the fullest, as long

as there is a scientific provable basis behind it. When your mind heals, chemicals are produced that can be measured.

This belief in utilizing the body's healing is based on my years of practice to support it. A great deal of healing can be done by the mind and that's the kind of natural healing I am speaking of here.

The kinds of things I advocate for sinus sickness, and in general for lots of symptoms are: When you first suspect a sinus problem, emphasize the following:

- Rest,
- Lots of chicken soup and green tea.
- Hot compresses to the sinus area—above, between and below the eyes.
- Don't weaken your resistance by anxiety.

Take Charge of Your Medical Care

Even with the diagnoses and treatments provided by medical practitioners, you must take charge of your medical care. You have to decide whether you want a second opinion, whether to seek a generic product instead, and where to go for the X-ray. You have to know information about your sickness in general. Properly following your doctor's instructions is another way of taking charge.

That's one of the reasons in earlier parts of the book, I brought out matters of the kinds of chemicals or situations that could aggravate sinus sickness and related areas. We discussed the things you can do to avoid making the sinus sickness worse, and you should strive to avoid those things. There are powerful "natural healing" approaches, like various cleaning techniques to make a bedroom relatively dust free and inhibit dust mites. When people "takes charge" of their treatment, they are already visualizing themselves healthy, which is a significant benefit. Some other recommendations:

Gentle nose blowing. Just this simple advice, not blowing hard when your nose is stuffed with lots of thick mucus, can prevent much serious damage to your nasal passageways and ears. Gentle nose blowing can make a world of difference in the way that your sinus disease progresses.

Avoiding colds, chills, and fatigue. When you have a sinus condition, not letting yourself get very cold, get chilled by the weather or get run-down or fatigued is basic "natural healing" advice.

Drink lots of hot tea with lemon and honey. Doing this simple procedure can liquefy the thick mucus in sinus sickness and help it drain away, lessening infection, and preventing further deterioration in the nasal passages. And you'll feel better.

Using isotonic solutions, without preservatives. You can make your own saline solutions. Its easy to do and inexpensive.

Don't get addicted to medicated nose drops. Repeated use of Afrin or similar nose drops is an illness in itself. (Rhinitis medicamentosum).

Relaxation and relief from stress and anxiety . Stress and anxiety can complicate every medical condition whether it is TMJ, tinnitus or sinus sickness. This book includes simple techniques for reducing stress and anxiety without pills. Applying this easy to use program could change your life. It deserves a chance, both for improving your response to any medical condition, and for improving your vitality in everyday life.

Look at the above advice. The actions to take are simple, easily understood, and inexpensive. Do these qualities make the advice unappealing, because you want to pay big dollars to get expensive medical advice and expensive antibiotics and procedures to make you well?

You have to be smart enough to consider time proven methods.

There is a slight expense I do advise you to pay, in order to prevent, relieve, and hopefully cure persistent sinusitis.

The Way to Prevent, Treat, and Cure Nasal/Sinus Problems

In order to prevent, relieve, and hopefully cure persistent sinus sickness, you should use pulsatile irrigation. As discussed throughout the book and as supported by extensive research, this simple, drug-free procedure is the best approach to sinus problems. The best way to perform pulsatile irrigation is to use the Hydro Pulse® Nasal/Sinus Pulsatile Irrigator with its attachments for nasal/sinus and throat Irrigation. Irrigation by Hydro Pulse is very acceptable by children as well as by adults. It's simple to use, non-injurious, and pleasant compared to other techniques. It fits into the idea of taking charge of your own health.

The most important point about using the Hydro Pulse machine is that it will almost always help. It provides just the right pressure for nasal irrigation and the right pulsing rate to stimulate the nasal cilia into normal functioning for clearing out contaminants, as well as pollens, from the nasal passages. Although the device works for years, it costs less than a week of antibiotics and may be covered by insurance reimbursement.

My company makes this machine. Thirty years ago I pleaded with many companies to make this device for my patients and to make it available to the public. The companies said, "there's not enough profit, the profit is in making pills." So I had to make the Hydro Pulse myself.

There are several other products that my company makes that are useful for relieving sinusitis symptoms and similar conditions.

Breathe-ease XL Nasal Moisturizer Gel has an "in the nose" applicator and moisturizes the nose with natural products.

Breathe-ease XL for spray or irrigation is recommended for use three times a day when used as a spray. It contains the body's natural electrolytes and is effective in providing nasal passageway moisture. Or it can be used for Hydro Pulse irrigation. Having no preservatives, it is much safer for irritated nasal passages, and feels nicer in the nose than other nasal products. It is best for improving cilia movement.

Clear ease® Lozenges are useful to dissolve in the mouth, between the cheek and the gums, to ease sinus inflammation pain and to thin thick mucus. Since

the ingredients are pineapple and papaya fruit enzymes, there are none of the side effects that some products have. Here too, I had to make this lozenge myself because the other products were not designed for this action, and were not calibrated.

Ear aid® Capsules combines the elements known to be supportive of ear function in such a manner that they work synergistically for tinnitus and hearing loss.

If this book enables the reader to breathe clearly, to clear respiratory problems without resorting to massive intake of drugs, the book will have doubly served its purpose

Remember, nasal allergy, the common cold, postnasal drip, sore throat, and bad breath are all helped by pulsatile irrigation. The basic idea is to remove contaminating substances, bacteria, and viruses as well as to stimulate good functioning of the nasal and chest cilia for continuous natural removal of such contaminants

I hope you've found the information in this book to be useful. Foremost has been my goal of enabling you to take charge of your health.

Information on obtaining products made by Hydro Med is at

www.hydromedonline.com

Postscript: although this book is copyrighted, you are invited seek the author's permission to copy parts for non-commercial use for friends.

You are also invited to join ZAAP Zaap Antibiotic Abuse Personally at <http://www.hydromedonline.com/zaaphmol.html> to help reduce current antibiotic abuse. No dues or meetings, just spread the word about not abusing antibiotics. If you wish to receive my newsletter, with updates write to entconsult@aol.com

This book is based on the AMA exhibit: Mucociliary Clearance that Received AMA Certificate of Merit Award

Hydro Pulse is features in: Inventions Time Magazine November 2000

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Letter from a Sinus Sufferer

Here is a letter from a typical sinus sufferer I received June 7, 2004. If this sounds like you, you know what to do now!

* I hope you can give some suggestions. I am 28 years old and have had 2 septoplasties and turbinectomies. I continue to get sinus infections on a routine basis. I have tried all the prescription allergy meds from nasal sprays to antihistamines and decongestants and also allergy shots when I was younger. They seem to work a little bit, but before you know it here comes the low temp, sinus pressure and the yellow discharge. Since January 1st 2004 I have been on six different antibiotics. Each has been a 15 day supply. I get to feeling better and then before you know it here comes the heavy yellow discharge again. I went for another CT scan which showed mild mucosal thickening of the ethmoid and frontal sinuses. I was told there was nothing to do for it and to hope the allergy meds clear it up. Could this be the cause of the chronic infections? Any ways to reduce the mucosal thickening? Or just any suggestions at all??

Thanks
Jim

If you read our book you know his problem is slow cilia and what he needs to do is to restore his cilia. Notice that he didn't use pulsatile irrigation to restore his cilia, he didn't use Clear-ease to thin his mucus to help the cilia, and he didn't use Breathe-ease XL as a spray to help his cilia. He didn't use hot tea, chicken soup. Obviously stress is making his immune system weaker. I did answer him and hopefully we will have a, "It Worked!" letter from him soon.

How to Dust Proof Your Bedroom

- **If you have allergies or asthma**, breathing in particles of dust, pollen and other pollutants can make your life miserable. To effectively control your allergy problem, your home must be as free of allergens as possible. It makes good sense to ensure that your home is a healthy one. By minimizing your exposure to allergens within your home, you can give your body time to rest and recuperate. To accomplish this follow your doctor's housecleaning instructions and our "Steps to Take" below.
 - Dust mites are the major cause of allergy and asthma problems within the bedroom. They are found mainly in your mattress, box spring and pillows. Dust mites are a fact of life and their presence is not a reflection on one's housekeeping. Allergic people react to the waste products of mites and to the mite itself after it has died and disintegrated into dust. With a new generation being born every 3 weeks, the bedroom area can quickly become a major health problem to allergy and asthma sufferers. Follow your doctor's cleaning instructions carefully and pay particular attention to your bedroom (see below "an Allergen Free Bedroom").
 - For a more comfortable and restful sleep seal your pillows, mattress and box spring with our medically proven Allergen Tight encasements for protection against dust, mold and mites.
 - Install Electrostatic Air Cleaner in your furnace and make your whole house a healthier place to live.
 - To remove odors and toxic chemicals, install enviro-filter in your register vents.
 - Have your furnace ducts professionally cleaned every two to three years.
 - The use of a HEPA air cleaner in your bedroom can help minimize your exposure to allergens.
 - Treat bathroom tiles, grouting, window frames and sills with mold inhibitor.(Lysol, Tilex, etc.)
 - Vacuum regularly using a well filtered portable vacuum or a central vacuum system vented to the outside.
1. Keep decor as simple as possible. No books, open shelving etc. as they attract dust. Damp mop regularly. No smoking.

2. Doors and closets should be spotless and contain only items you use regularly.
3. Simple wooden furniture, is recommended. Do NOT use stuffed or upholstered furniture.
4. Wood or linoleum floors are best. Small, washable scatter rugs may be used. If you can't eliminate the rug, clean and vacuum it regularly.
5. Use washable, synthetic blankets and bedspread. Launder these regularly on hot cycle. Store nothing under the bed.
6. An allergen free bedroom is most important. Mattresses, box springs and pillows MUST BE sealed inside dust mite proof encasements like Sleep Fresh™ encasements from Health Solutions Medical Products Corporation are available at National Allergy Supply and retailers of allergy products and allergy avoidance item(s).
7. Pillows should be of washable, synthetic material. All pillows should be encased in allergen tight encasements.
8. A centrally installed electrostatic air cleaner and/or a portable HEPA air cleaner can be very helpful.
9. Window curtains must be washed regularly.
10. No stuffed toys. Necessary toys should be of wood, plastic or metal. Ornaments in general should be avoided. No flowers, perfumes or powders.
11. Never allow pets in the bedroom.
12. Use a mold cleaner on window frames.

How to Measure Nasal Cilia

- Actually you can take a tiny piece of carbon paper, put it in the nose and keep checking the throat until you see the particle in the throat.
- You can place a radioactive particle in the nose and use radiation counters and count how long it takes to move a certain distance, usually one centimeter. This is the method used at Johns Hopkins.
- You can take a biopsy of the nasal or chest cilia, place it in a solution, and use a strobe unit to measure the speed. You can adjust the speed of the strobe until it matches the cilia speed. This method is used for diagnosing certain conditions of impaired cilia function.
- The method I use is to place a particle of saccharin in the nose and see how long it takes for the patient to taste the sweet taste. I generally place two particles, with dye, red and green in each nostril and when the patient reports he tastes the saccharin, look in the throat and see what color came through first. Then I check the throat to see when the other particle comes through. This is an easy test to do in the office. Normal persons taste the saccharin in 5-8 minutes, 8-16 minutes is slow, and 20 - 30 minutes is very slow. If the patient doesn't taste the saccharin in 30 minutes, this suggests a poor prognosis.
- With the Breathe ease XL Moisturizing Gel persons can measure your own nasal cilia movement time and measure the effectiveness of their treatment. Simply place the gel in the nose and see how long it takes to taste the sweet taste on your tongue.

The Chemicals In Tea

A compound called EGCG was reported in the Journal of Agricultural and Food Chemistry (Oct 9, 2003) to block the receptor involved in allergic response. The compounds found in tea helps with allergy to pollen, dust, pets, etc., by blocking the production of histamine and IgE.

The Harvard Medical School Family Health Guide July 2002 reported that drinking tea can help prevent death after a heart attack. In addition to other benefits it can increase bone mineral density which helps prevent fractures and osteoporosis.

Tea can boost the body's defense fivefold against disease. Dr Jack Bukowski of Harvard reported that five cups of tea a day increased the body's defenses against disease. The tea chemical is L-theanine. In the liver it becomes ethylamine, a molecule that primes the response of an immune blood cell, one of the T cells. They even have anti-tumor factor. These T cells called gamma delta T cells prompt the secretion of interferon, a key defense against infection. Tea is high in antioxidants and chemically stimulates cilia action

How to Control Indoor Mold

According to the American Academy of Allergy, Asthma and Immunology (AAAAI), taking the following steps to rid your home or business of molds can lead to a decrease in allergy symptoms and lessen the potential burden on your pocketbook:

- > **Clean the area.** Use a solution of water and dish detergent to clean the moldy area. Then wipe off the mold. Remember to wear rubber gloves and use a protective mask if your symptoms are severe.
- > **Remove the source.** If mold or mildew is visible in carpeting or on wallpaper, remove them from your home. Also, if you have a leaky pipe or roof, quickly repair and seal these moisture sources.
- > **Dry it out.** Use exhaust fans in the bathroom and wipe down the shower after use. Periodically clean the bathroom and other mold-promoting places with a product that kills mold and mildew, and throw away shower curtains at the first sight of mold.
- > **Lower humidity.** Try to maintain a humidity level of 30 to 40 percent in your house.
- > **Stay above ground.** In general, it's not a good idea for people with mold allergies to have a bedroom or a family/work room in the basement.
- > **Air it out.** Ventilate damp rooms, attics and even crawl spaces under the house to try to keep them dry. If you use a dehumidifier, empty and clean it regularly to prevent mildew from forming. Also, air filters may help control airborne mold spores throughout your house.
- > **All rooms, especially basements, bathrooms and kitchens, require ventilation and consistent cleaning to control mold growth.**
- > **A light bulb in the closet or basement or under the house can be quite beneficial. Mold doesn't do well in light.**

What You May Want to Know About Antibiotics

But don't take my word for it, your doctor knows best.

Yes we are opposed to the abuse of antibiotics and recommend non-drug methods. But infections do occur that require antibiotics and they may be life saving. The following information can guide you in the bewildering world of antibiotics.

Most common organisms of sinus infections are *Streptococcus pneumoniae*, *H influenzae*, and *Moraxella catarrhalis*. Increasingly resistant strains of bacteria are developing. Standard treatment for acute sinusitis must include antibiotics for *H influenzae* and *S pneumoniae*. Treatment is usually one of the following:

- * Amoxicillin 500 mg 3 times a day
- * Trimethoprim-sulfamethoxazole (Septra DS) twice daily
- * Cefuroxime (Ceftin) 250 mg twice daily
- * Cefaclor (Ceclor) 500 mg 3 times a day
- * Other medications include the following:
- * Trimethoprim-sulfamethoxazole double strength (Bactrim DS) twice daily
- * Cefixime (Suprax) 400 mg once daily
- * Loracarbef 400 mg twice daily
- * Augmentin 400 mg 3 times a day
- * Clarithromycin (Biaxin) 500 mg 2 times a day
- * Azithromycin (Z-Pak) 250-mg tablets, 2 the first day followed by 1 every day for 4 more days. A recent approved dose is taking it for three days.
- * Erythromycin adult dose for chronic sinusitis is 250 mg four times a day.

* For chronic sinusitis, the usual pathogens, *Streptococcus pneumoniae*, *H influenzae*, and *Moraxella catarrhalis*, and *Staphylococcus aureus* are involved. Start amoxicillin 500 mg 3 times a day, amoxicillin with clavulanate (Augmentin) 500 mg 3 times a day, or clindamycin (Cleocin) 150-300 mg every 6 hours. With all antibiotics, patients should take a full glass of water before and after each dose. Antibiotic sensitivities change almost daily and from region to region. Physicians must receive and use the drug resistance/sensitivity data available from hospitals.

- For treatment of *Pseudomonas* infections, use piperacillin, ticarcillin, and carbenicillin, depending on the secondary organisms.

General Classification of Antibiotics

- * Antimicrobials such as penicillin G and V are bacteriocidal because they inhibit cell wall synthesis.
- * Anti-staphylococcic penicillins include dicloxacillin (Dynapen).. These are used when the culture shows staphalococcus organisms.
- * Amino-penicillins include ampicillin and amoxicillin.
- * Augmented penicillins include amoxicillin plus potassium clavulanate (Augmentin).
- * Anti-pseudomonal penicillins include ticarcillin and carbenicillin, which are for IV use.
- Cephalosporins are bactericidal (they inhibit cell wall synthesis).
- First-generation cephalosporin's include cefazolin and Acef for IV administration and cephalexin, cefadroxil, Duricef, and Keflex.
- Second-generation cephalosporins include cefuroxime (Ceftin) and cefaclor (Ceclor). Second-generation equivalents include loracarbef (Lorabid).
- Third-generation cephalosporins include cefixime (Suprax).
- * Macrolides include erythromycins, clarithromycin, and azithromycin.
- * Clindamycins include Cleocin and Lincocin.
- * Tetracyclines inhibit protein synthesis. Bacteriostatic tetracyclines include minocycline and Vibramycin.
- * Aminoglycosides can be ototoxic, are bacteriostatic, and inhibit synthesis. They include streptomycin, neomycin, gentamicin, tobramycin, and amikacin.
- * Quinolones include ciprofloxacin (Cipro) and ofloxacin (Floxin).
- * Sulfonamides are bacteriostatic but, when used with other antibiotics, are synergistic.
- * Trimethoprim and sulfamethoxazole include Septra and Bactrim.
- * Antifungal medications include amphotericin B, ketoconazole, and fluconazole (Diflucan).
- *Antiviral medications include acyclovir (Zovirax) and amantadine (Symmetrel).

Compounds Used in Salt to Prevent Caking or Sticking

Prevent Caking:

Calcium silicate, ferric ammonium citrate, silicon dioxide, sodium ferrocyanide, magnesium silicate, magnesium carbonate, propylene glycol, aluminum calcium silicate, sodium aluminosilicate (also called sodium silicoaluminate), and calcium phosphate.

Sea Salt is evaporated sea water and contains fish products, depending on the area.

Preservatives used for Commercial Saline Products

- Phenylcarbinal
- Benzalkonium Chloride
- Sodium Phosphate
- Thimerosal (Merthiotate -Mercury)
- Mono Sodium Phosphate
- Dibonic Sodium Phosphate
- PEG-32
- Polyethylene Glycol
- Disodium EDTA
- Povidone

Breathe ease XL contains none of the anticaking ingredients and none of the preservatives, and contains no iodine or silica.

Common Causes of Loss of Sense of Smell

Common cold

- Viral Infection
- Rhinosinusitis
- Aging
- Chronic allergies
- Nasal growths or masses
- Head trauma
- Complications of Nasal /Sinus Surgery
- HIV infection
- Liver Disease
- Alzheimer's Disease
- Huntington's Disease
- Parkinson's Disease
- Work Related toxic substances (Skydrol)
- Uremia /dialysis
- Cystic Fibrosis
- Endocrine disorders
- Sarcoidosis
- Wegner's Granulomatosis
- Excess Smoking
- Drug side effect
- Recreational drugs (cocaine)
- Heavy Nose Blowing

Nasal Polyps

Dr Jordan Josephson of New York has written extensively on nasal polyps and treatment. He writes:

“ Nasal Polyps is a disease where infection causes the membranes of the sinuses and nose to swell to the point of polyp formation. It is one of the worse forms of Chronic Sinusitis and in it's worst form is related to Asthma, and allergy to Aspirin. Although these polyps are rarely cancerous, as they can be in the colon, they cause a significant problem in the sinus's capability to function to clean the air that we breathe. They cause obstruction, and chronic infection (both bacterial and fungal) lingers in the sinuses making the patient feel worse. The patient often feels fatigued, complains of low grade fever, snores and in general does not sleep well, feeling tired all day. Polyps may cause either reversible or irreversible loss of sense of smell or taste. Asthma and bronchitis may act up when polyps get worse and more obstructive. Often patients will experience difficulty breathing and wheezing. The patients may suffer from bad post-nasal drip, cough, and hoarseness. Headaches may be severe, or the patient may complain of mild to moderate sinus pain and/or pressure and problems equalizing their ears.

The treatment for nasal polyps is primarily medical and surgery is adjuvant. It is very important for patients with nasal and sinus polyps to be on continuous medical therapies. This may include various sprays, antibiotics and antifungals and irrigation with saline solution (i.e. the Hydro Pulse or neti pot) even when they are feeling relatively normal. There are dietary and holistic medicines that may be helpful like acidophilus. Most importantly, the patient must remember that they still have a disease "nasal polyps" which needs to be taken care of even during quite phases of their disease. As the patient with high blood pressure needs to take care of their blood pressure, despite them feeling relatively well, nasal polyp-sinus sufferers need to do the same. Furthermore, patients with polyps should go to their Sinus Specialist for intermittent treatments and removal of the polyps as they form so that they do not become too large and obstructive. This can be done in the office under topical spray anesthesia with an endoscope and patients usually go back to their routine schedule right after leaving the doctors office. If the polyps grow too big and become obstructive, your physician may not be able to remove them in the office. The patient may then require a visit to the operating room usually as an outpatient same day surgery where these polyps and obstructions should be removed. This can usually be performed under a local anesthesia, with no black and blues and without packing. The patient should be able to return to work the next working day. Regardless, surgery is just adjuvant to medical therapy and for those

patients with nasal polyps, continued medical treatment is extremely important for them to control their disease. This proper care will afford them the best quality of life possible. All nasal polyp-chronic sinusitis sufferers should be under the care of a sinus specialist that specializes in both the medical and surgical management of this disease process. "

Visualization: Trip to a Healing Place

Throughout history mankind has always had places to go to for healing. Whether the aborigines of Australia, the Greeks at Delphi, or the Indians at the Hot Springs, these places were regularly visited by the sick in body and spirit. And these healing places worked long before antibiotics.

Most were characterized by clean air and water, nice temperature, hot springs, plain food. Most important was the expectation that they would be healed, boosted by the knowledge that other individuals had been cured there. People with asthma and arthritis did get better because the hot water, the rest, the clean air allowed their natural steroids to regenerate. Headaches got well; they got away from their problems and saw things in a new light. Or they discussed their problems with "counselors" or priests. Early psychotherapy.

Road Map to A Healing Place. Be sure to use sight, sound, taste, feel and smell.

Take off your shoes. Sit or lie comfortably. Turn your palms down. Close your eyes. Breathe in 4 and out 6. As you exhale let this be a signal to relax. Picture yourself on a boat or vehicle approaching this beautiful island . The water is crystal clear, you can see down to the bottom and see the fish in the water. Try to identify them. As you approach the island you see hills or mountains green and with all kinds of trees and flowers. You step onto the warm sand, feel the sand. You smell the flowers. Recognize the smell You hear the wind in the trees and so many birds singing. Some of the trees have fruit and you taste the fruit and it is delicious. You feel the coolness of the leaves. Maybe someone has a radio because you hear music as well.

When you feel that you have arrived at this place, turn your palms up. Now you can feel the rays of sun and healing that this place is famous for. You drink the clean water that this island is noted for. You bathe in the healing springs that so many have raved about. And you may wish to speak to some of the counselors about anything that is on your mind. In you your mind picture the counselor and tell of your feelings and concerns.

Spend as much time as you wish here. Know that this is another of the healing places that have helped mankind since the beginning of time.

The Return Trip

When you are ready to return, put your palms down, get back on the boat or vehicle and open your eyes. Physiologically, if I were to measure you, I would find that some healing has actually taken place!

Biofeedback Exercise for the Nose

The human nose has major nerves and blood vessels and is also subject to various chemical and nerve stimuli.

Biofeedback simply means you feed back to your body certain information that shows the body what to do right. For example, you put a sensor on the pulse, put a big dial in front, and the person can raise or lower that pulse rate. Similarly the temperature of the hand can be raised or lowered. This system works for rats as well as humans.

For the nose you can purchase a \$ 10,000 gadget that measures temperature and turbinate swelling, look at the dial placed in front of you and ask/allow your body to lower the temperature or shrink the nose. But you just can't "will" it to shrink, you must show it how to do it right.

You are short \$10,000? No problem. Take an eraser tipped pencil; use a pin to stick a feather onto the end of the pencil. Hold the feather so it is moved by your nasal respiration. Try to move the feather with your nasal breathing. If you are relaxed, the body will see what to do the right way and actually open the nose so you can move the feather fully.

Another method:

Cut a piece of paper in the shape of a T with the wide top to go on your forehead and the long T about 1/2 inch wide so that it comes in front of your nose. If your nose is stuffy, no air will move the paper. As your nose opens, the paper will move further and further out with air from your open nose.

This only works if you are relaxed—breathe in count of four and out count of six—so your body can use its "wisdom" to follow the "thought". This is feedback. You are feeding back to the body that when it does X the paper moves fully: when the body does Y the

information is fed back that it is doing it wrong. As more and more correct responses come back, the body soon is doing it right.

The Physiology of Stress and Anxiety Reinforcement

You are designed to sleep with the owl and cricket sounds, yet awaken ready to fight if the tiger approaches. Similarly, as you munch your food, you are designed to come alert and ready to fight when you recognize a twig snapping as a tiger approaching. The problem is, to properly recognize which is the tiger and which is the family dog.

When you perceive it as a tiger, the limbic system sends adrenalin through the body. Non -critical factors like digestion shut down. Heart rate increases; glucose is mobilized to the muscles. Hormones alert the brain to faster activity. .

Sensory input first goes to the thalamus. The input then goes to the limbic system - the amygdala which puts an emotional spin on the input, before it goes to the higher brain. First the limbic system decides the twig snap is a danger, later the higher brain decides it is only the family dog that caused the twig to snap.

It can take a bit of convincing to teach the limbic system that the stuffy nose is not a tiger, not to tighten the muscles and reduce the immune response. This is where the exercises given in the section on stress are so important. In anxiety reinforcement, the more the anxiety the tighter the muscles, the more the symptoms, the tighter the muscles and the more the anxiety. Therefore changing the breathing to longer exhalation with the muscles relaxing can break this anxiety reinforcement. That is how muscle biofeedback works. This is why using the mirror as a biofeedback device, breathing out count of 6 to relax, and in count of four works- you are training the limbic system to work "healthfully".

What is Anxiety?

The phone rings, "Hello! Hi Bill! What's new?" This is the normal discourse of daily life. But what if every time the phone rings, the jaw tightens, the pulse increases, you sweat, the blood vessels constrict, and the MUSCLES contract severely enough to cut off circulation and restrict blood flow. In your mind the phone ring may be identified as a threat—the mother-in-law, the landlord for his overdue rent, the hated boss, the threatening boy friend. It is one thing if it really is the threatening landlord, but suppose you get this reaction every time the phone rings or worse still, all day long at any sound or call. Being nervous if the call is a real threat, is one thing, and is OK. But reacting at every minor signal is not OK. In our "jungle" today, there is no excuse to be tight all day.

Everyone tells you to relax

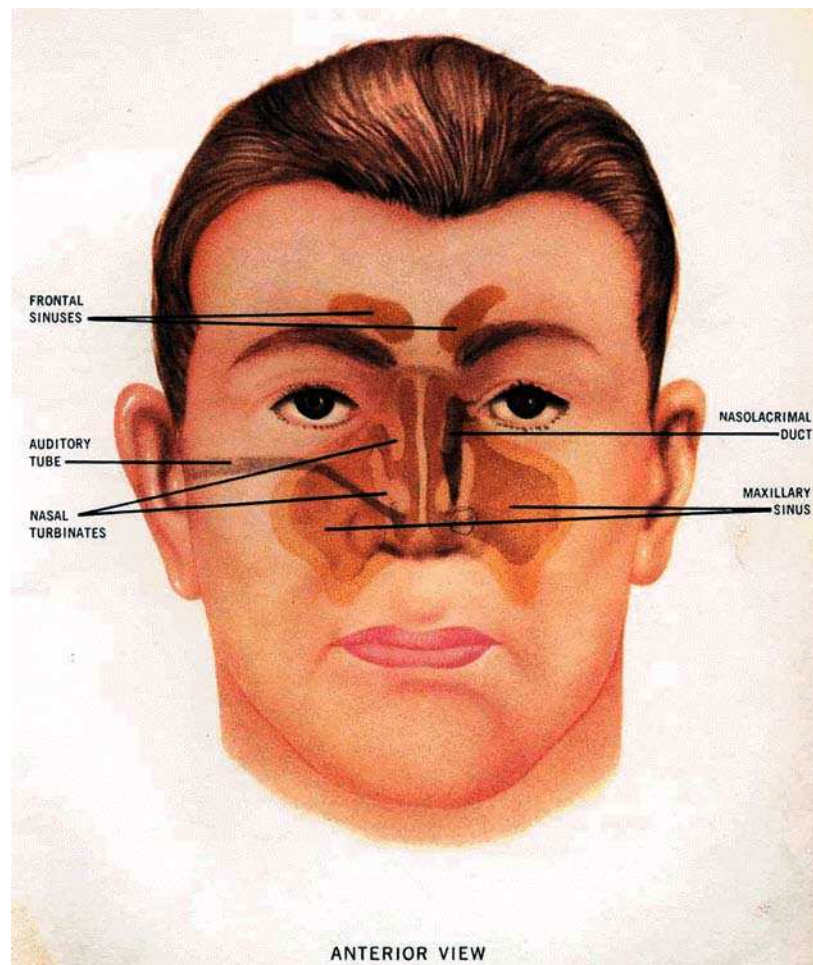
How many times have you heard this? Before a performance on stage, or an interview, or an exam you are told to Relax! We have all known a really smart student who knew all the answers but flunked the test because of anxiety. Maybe you could hardly answer at the job interview. You came out perspired and heart pounding. Because of an anxiety "habit", some patients may build up unhealthy chemicals in their body, which can cause serious health problems such as hypertension. By doing the stress reduction exercises in this book, that type of reaction can be reduced or avoided.

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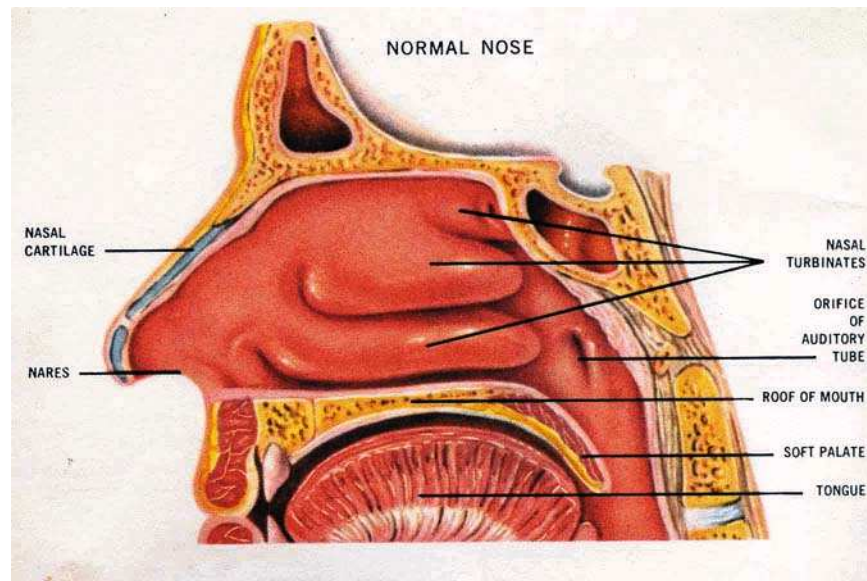
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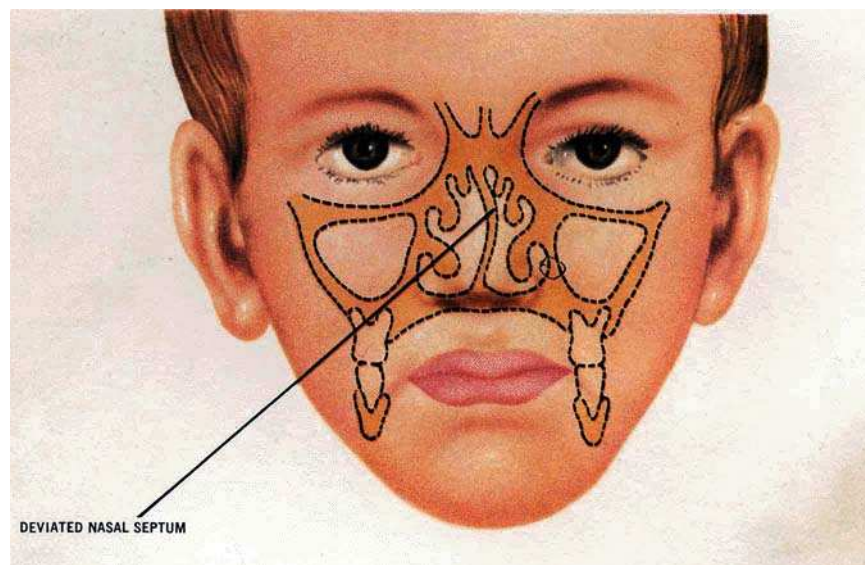
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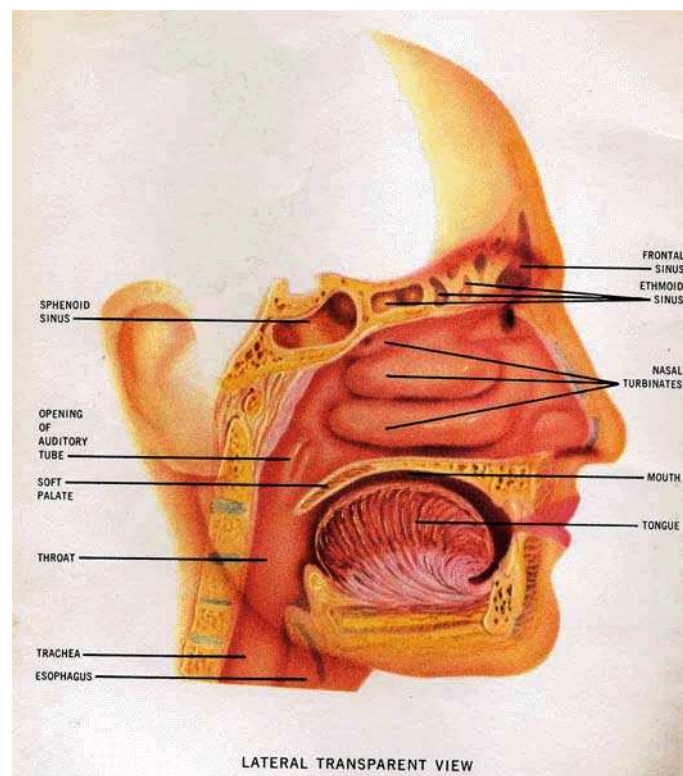
The Nasal Sinuses



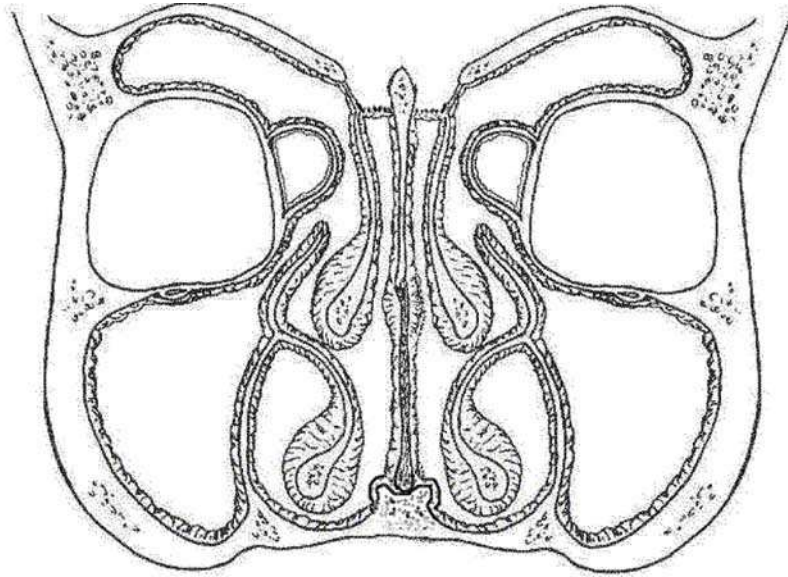
Normal Nose



Deviated Nasal Septum



Ethmoid, Sphenoid, and Frontal Sinuses



Sinonasal anatomy

From Houser, Steven <http://www.geocities.com/shouser144/>

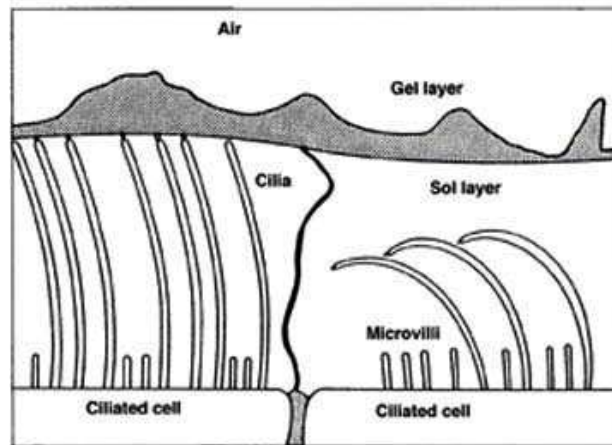
The frontal sinuses are situated above the eyes. The septum divides the nasal cavity into two sides. The turbinates are shelves of bone that project into the nose to moisten the air as it is inspired. The turbinates are termed inferior, middle and superior based on their location relative to one another.

The maxillary sinuses sit below the eyes and above the upper teeth. They are the largest of the sinuses.

The ethmoid air cells are located between the eyes.

The osteomeatal complex is an ill-defined region containing the outflow tracts of the anterior ethmoid cells, maxillary sinus, and, frequently, the frontal sinus.

Mucus Blanket



Mucus and Cilia



Hydro Pulse® Nasal / Sinus Pulsatile Irrigator



Hydro Pulse with Throat Irrigator Attachments

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("use a Pulsatile irrigator with nasal attachment to irrigate with warm saline solution to relieve pressure and congestion in your nasal passages")

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(After 6 days the symptoms of placebo and antibiotic patients were identical.)

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(Clearing the sinus condition can help the asthmatic child)

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(Pulsatile irrigator irrigation is the preferred method of treatment after endoscopic surgery. Highly accepted by patients.)

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(Davidson was first to recommend adding antibiotics to pulsatile irrigation for sinus treatment, especially in cystic fibrosis.)

\
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Davidson, Terrance: <http://www.drdavidson.org/> Excellent overview of general ENT from U of C San Diego. Discusses use of Hydro Pulse for sinus relief.

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(By clearing the sinus condition of the asthmatic, the asthma condition is improved both in symptoms and measurable pulmonary function.)

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Lucent, FE Rhinitis And Nasal Obstruction,. In: *Nasal Obstruction. Otolaryngology Clinics Of North America*, Volume 22, Number 2, pp 307, 1989.

(The Pulsatile irrigation device with the ... nasal irrigator tip is an efficient system for irrigation . The irritant is instilled as a pulsating stream into one nasal cavity and drains out through the other side. [Pulsatile irrigation] effectively loosens crusts.)

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