CONTENTS

07 HEALTHY HABITS
Five tips for better sleep

08 NEWS
The latest research

09 BY THE NUMBERS
Stats and facts about nasal polyps

10 NASAL POLYPS 101
Causes, symptoms, and diagnosis

12 A LOOK INSIDE
Explore the nasal cavity

14 FIRST PERSON
One woman’s 8-year journey with nasal polyps

16 QUIZ
Test your knowledge

18 FIRST PERSON
Ways Laura Greiner keeps her symptoms under control

20 TREATMENT SMARTS
Know your options

22 HEALTH SMARTS
Do foods inflame nasal polyps?

23 GOOD TO KNOW
How nasal polyps affect your sense of smell
**THE NON-SURGICAL TREATMENT THAT HELPS YOU:**

**DU MORE** FROM SCRATCH WITH LESS NASAL POLYS

- REDUCES CONGESTION AND NASAL POLYP SIZE
- CAN IMPROVE SENSE OF SMELL IN AS LITTLE AS 3 DAYS
- CAN REDUCE ORAL STEROID USE
- IS AN ALTERNATIVE TO SURGERY

*Don’t stop taking your corticosteroid medicines unless instructed by your doctor.

Ask your doctor how **DUPIXENT** can help you DU MORE with less nasal polyps.

**INDICATION**

**DUPIXENT** is a prescription medicine used with other medicines for the maintenance treatment of chronic rhinosinusitis with nasal polyposis (CRSwNP) in adults whose disease is not controlled. It is not known if **DUPIXENT** is safe and effective in children with chronic rhinosinusitis with nasal polyposis under 18 years of age.

**IMPORTANT SAFETY INFORMATION**

Do not use if you are allergic to dupilumab or to any of the ingredients in **DUPIXENT**.

Before using **DUPIXENT**, tell your healthcare provider about all your medical conditions, including if you:

- have eye problems.
- have a parasitic (helminth) infection.
- are scheduled to receive any vaccinations. You should not receive a “live vaccine” right before and during treatment with **DUPIXENT**.
- are pregnant or plan to become pregnant. It is not known whether **DUPIXENT** will harm your unborn baby.
  - A pregnancy registry for women who take **DUPIXENT** during pregnancy collects information about the health of you and your baby. To enroll or get more information call 1-877-311-9772 or go to https://mothertobaby.org/ongoing-study/dupixent/.
- are breastfeeding or plan to breastfeed. It is not known whether **DUPIXENT** passes into your breast milk.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins and herbal supplements.

Especially tell your healthcare provider if you are taking oral, topical, or inhaled corticosteroid medicines or if you have CRSwNP and asthma and use an asthma medicine. **Do not** change or stop your corticosteroid medicine or other asthma medicine without talking to your healthcare provider. This may cause other symptoms that were controlled by the corticosteroid medicine or other asthma medicine to come back.

**DUPIXENT** can cause serious side effects, including:

- **Allergic reactions.** **DUPIXENT** can cause allergic reactions that can sometimes be severe. Stop using **DUPIXENT** and tell your healthcare provider or get emergency help right away if you get any of the following signs or symptoms: breathing problems or wheezing, swelling of the face, lips, mouth, tongue, or throat, fainting, dizziness, feeling lightheaded, fast pulse, fever, haze, joint pain, general ill feeling, itching, skin rash, swollen lymph nodes, nausea or vomiting, or cramps in your stomach-area.

- **Eye problems.** Tell your healthcare provider if you have any new or worsening eye problems, including eye pain or changes in vision, such as blurred vision. Your healthcare provider may send you to an ophthalmologist for an eye exam if needed.

- **Inflammation of your blood vessels.** Rarely, this can happen in people with asthma who receive **DUPIXENT**. This may happen in people who also take a steroid medicine by mouth that is being stopped or the dose is being lowered. It is not known whether this is caused by **DUPIXENT**. Tell your healthcare provider right away if you have: rash, chest pain, worsening shortness of breath, or a feeling of pins and needles or numbness of your arms or legs, or persistent fever.

- **Joint aches and pain.** Some people who use **DUPIXENT** have had trouble walking or moving due to their joint symptoms, and in some cases needed to be hospitalized. Tell your healthcare provider about any new or worsening joint symptoms. Your healthcare provider may stop **DUPIXENT** if you develop joint symptoms.

The most common side effects in patients with chronic rhinosinusitis with nasal polyposis include injection site reactions, eye and eyelid inflammation, including redness, swelling, and itching, sometimes with blurred vision, high count of a certain white blood cell (eosinophilia), trouble sleeping (insomnia), toothache, earache, and joint pain (arthralgia).

Tell your healthcare provider if you have any side effect that bothers you or that does not go away. These are not all the possible side effects of **DUPIXENT**. Call your doctor for medical advice about side effects. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

Use **DUPIXENT** exactly as prescribed by your healthcare provider. It’s an injection given under the skin (subcutaneous injection). Your healthcare provider will decide if you or your caregiver can inject **DUPIXENT**. Do not try to prepare and inject **DUPIXENT** until you or your caregiver have been trained by your healthcare provider.

Please see accompanying Brief Summary of Important Patient Information.
Information about DUPIXENT® (dupilumab) (DU-pix’-ent) injection, for subcutaneous use

What is DUPIXENT®?
• DUPIXENT® is a prescription medicine used:
  – with other medicines for the maintenance treatment of chronic rhinosinusitis with nasal polyps (CRSwNP) in adults whose disease is not controlled.
  – with other medicines for the maintenance treatment of moderate to severe asthma in adults and children 12 years of age and older whose disease is not controlled.
• DUPIXENT works by blocking two proteins that contribute to a type of inflammation that plays a major role in chronic rhinosinusitis with nasal polyps.
• It is not known if DUPIXENT is safe and effective in children with chronic rhinosinusitis with nasal polyps under 18 years of age.

Who should not use DUPIXENT®?
Do not use DUPIXENT® if you are allergic to dupilumab or to any of the ingredients in DUPIXENT. See the end of this summary of information for a complete list of ingredients in DUPIXENT.

What should I tell my healthcare provider before using DUPIXENT®?
Before using DUPIXENT, tell your healthcare provider about all your medical conditions, including if you:
• have eye problems.
• have a parasitic (helminth) infection
• are scheduled to receive any vaccinations. You should not receive a “live vaccine” right before and during treatment with DUPIXENT.
• are pregnant or plan to become pregnant. It is not known whether DUPIXENT will harm your unborn baby.

Pregnancy Exposure Registry
There is a pregnancy exposure registry for women who take DUPIXENT during pregnancy. The purpose of this registry is to collect information about the health of you and your baby. Your healthcare provider can enroll you in this registry. You may also enroll yourself or get more information about the registry by calling 1-877-311-8972 or going to https://motherbaby.org/ongoing-study/dupixent/.

• are breastfeeding or plan to breastfeed. It is not known whether DUPIXENT passes into your breast milk.

Tell your healthcare provider about all of the medicines you take including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Especially tell your healthcare provider if you:
• are taking oral, topical, or inhaled corticosteroids.
• have asthma and use an asthma medicine.
• have CRSwNP, and also have asthma.

Do not change or stop your corticosteroid medicine or other asthma medicine without talking to your healthcare provider. This may cause other symptoms that were controlled by the corticosteroid medicine or other asthma medicine to come back.

How should I use DUPIXENT®?
• See the detailed “Instructions for Use” that comes with DUPIXENT for information on how to prepare and inject DUPIXENT and how to properly store and throw away (dispose of) used DUPIXENT pre-filled syringes and pre-filled pens.

Use DUPIXENT exactly as prescribed by your healthcare provider.
• Your healthcare provider will tell you how much DUPIXENT to inject and how often to inject it.
• DUPIXENT comes as a single-dose pre-filled syringe with needle shield or as a pre-filled pen.
• DUPIXENT is given as an injection under the skin (subcutaneous injection).

If your healthcare provider decides that you or a caregiver can give the injections of DUPIXENT, you or your caregiver should receive training on the right way to prepare and inject DUPIXENT. Do not try to inject DUPIXENT until you have been shown the right way by your healthcare provider.

If you miss a dose of DUPIXENT, give the injection within 7 days from the missed dose, then continue with the original schedule. If the missed dose is not given within 7 days, wait until the next scheduled dose to give your DUPIXENT injection.

If you inject too much DUPIXENT (overdose), get medical help or contact a Poison Center expert right at 1-800-222-1222.

Your healthcare provider may prescribe other medicines to use with DUPIXENT. Use the other prescribed medicines exactly as your healthcare provider tells you to.

What are the possible side effects of DUPIXENT?
DUPIXENT can cause serious side effects, including:
• Allergic reactions. DUPIXENT can cause allergic reactions that can sometimes be severe. Signs using DUPIXENT and tell your healthcare provider or get emergency help right away if you get any of the following signs or symptoms: breathing problems or wheezing, fast heart rate, fever, general feeling of being ill with symptoms anywhere on your body, lip swelling, rash, trouble breathing, hives, itching, nausea or vomiting, fainting, dizziness, feeling light-headed, joint pain, skin rash, or cramps in your stomach-area.

• Eye problems. Tell your healthcare provider if you have any new or worsening eye problems, including eye pain or changes in vision, such as blurred vision. Your healthcare provider may send you to an ophthalmologist for an eye exam if needed.

• Inflammation in your blood vessels: Rarely, this can happen in people with asthma who receive DUPIXENT. This may happen in people who also take a steroid medicine by mouth that is being stopped or the dose is being lowered. It is not known whether this is caused by DUPIXENT. Tell your healthcare provider right away if you have rash, worsening shortness of breath, persistent fever, chest pain, or a feeling of pins and needles or numbness of your arms or legs.

• Joint aches and pain. Joint aches and pain can happen in people who use DUPIXENT. Some people have had trouble walking or moving due to their joint symptoms, and in some cases needed to be hospitalized. Tell your healthcare provider about any new or worsening joint symptoms. Your healthcare provider may stop DUPIXENT if you develop joint symptoms.

The most common side effects of DUPIXENT in patients with CRSwNP include:
• Injection site reactions, eye and eyelid inflammation, including redness, swelling, and itching, sometimes with blurred vision, high count of a certain white blood cell (eosinophilia), gastritis, joint pain (arthralgia), trouble sleeping ( insomnia), and toothache.

The following additional side effects have been reported with DUPIXENT:
• facial rash or redness.
• Tell your healthcare provider if you have any side effect that bothers you or that does not go away.

These are not all of the possible side effects of DUPIXENT. Call your doctor for medical advice about side effects. You may report side effects to FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

How should I store DUPIXENT®?
• Store DUPIXENT in the refrigerator at 36°F to 46°F (2°C to 8°C).
• Store DUPIXENT in the original carton to protect from light.
• DUPIXENT can be stored at room temperature up to 77°F (25°C) for up to 14 days. Throw away (dispose of) any DUPIXENT that has been left at room temperature for longer than 14 days.
• Do not heat or put DUPIXENT into direct sunlight.
• Do not freeze. Do not shake.

• Keep DUPIXENT and all medicines out of the reach of children.

General information about the safe and effective use of DUPIXENT.

Medicines are sometimes prescribed for purposes other than those listed in a Patient Information Leaflet. Do not use DUPIXENT for a condition for which it was not prescribed. Do not give DUPIXENT to other people, even if they have the same symptoms that you have. It may harm them.

This is a brief summary of the most important information about DUPIXENT for this use. If you would like more information, talk with your healthcare provider. You can ask your pharmacist or healthcare provider for more information about DUPIXENT that is written for healthcare professionals.

For more information about DUPIXENT, go to www.DUPIXENT.com or call 1-844-DUPIXENT (1-844-383-9367)

What are the ingredients in DUPIXENT?
Active ingredient: dupilumab
Inactive ingredients: L-arginine hydrochloride, L-histidine, polysorbate 80, sodium acetate, sucrose, and water for injection

Manufactured by Regeneron Pharmaceuticals, Inc., Tarrytown, NY 10591 U.S. License # 1769; Marketed by sanofi-aventis U.S. LLC., Bridgewater, NJ (88067) and Regeneron Pharmaceuticals, Inc. (Tarrytown, NY 10591). DUPIXENT is a registered trademark of Sanofi Biologics ©2022 Regeneron Pharmaceuticals, Incorporated / sanofi-aventis U.S. LLC. All rights reserved.
Issue Date: September 2022

Rx Only

Brief Summary of Important Patient Information about DUPIXENT® (dupilumab) (DU-pix’-ent) injection, for subcutaneous use

5 TIPS FOR BETTER SLEEP

REST EASY WITH THESE METHODS

By Kendall K. Morgan
Reviewed by Brunilda Nazario, MD,
WebMD Chief Physician Editor, Medical Affairs

Nasal polyps can give you trouble during the day, causing discomfort and pain not to mention an inability to smell and taste even the most crave-worthy foods. But if nasal polyps are blocking your airways, they also may be keeping you from enjoying the things you love by making it hard to sleep at night. While it’s not quite the same as sleep apnea, polyps can cause many of the same problems—snoring, headaches, irritability, and excessive sleepiness during the day.

“We know nasal polyps can affect sleep,” says Patricia Loftus, MD, an otolaryngologist at University of California, San Francisco Health. As polyps fill your nasal passages, she explains, the blocked airflow may force you to breathe through your mouth. Those blocked airways not only lead to trouble in getting enough ZZZs, but they also can hurt the quality of sleep you do get. If nasal polyps have you tossing and turning or you’re waking up tired, Loftus offers these tips to better sleep:

1. First, see your primary care doctor or an ear, nose, and throat specialist for help. Treating the runny nose, stuffy nose, and postnasal drip that come with polyps should lead to better sleep.

“Treat the core problem, and you’ll be that much easier to address any other sleep problems,” Loftus says. Since nasal polyps block the nose, it’s not likely that sleeping in any particular position will help, Loftus says. But, if you’re having trouble sleeping, it’s always a good idea to think about your sleep habits. Go to bed and get up at the same time each day. Make sure your room is dark and quiet. Avoid caffeine, alcohol, or eating too much before bed, and get some exercise during the day.

If you’ve done all this and you’re still struggling with sleep, Loftus says it’s time to see a sleep specialist. You could have sleep apnea, insomnia, or another sleep disorder, too. With those nasal polyps under control, it’ll be that much easier to address any other sleep problems you may have.

3. If medicines don’t do the trick, the next step is surgery to remove the polyps. “Sinus surgery opens the sinuses up,” Loftus says. Once you’ve got better airflow, your sleep should improve.

4. For more information on how to get your trouble sleeping, the American Sleep Association recommends keeping the room dark, quiet, and cool at night. You may also want to use a sleep aid, but make sure you don’t get “abused” by them. For more information, visit www.sleepfoundation.org.

3. If medicines don’t do the trick, the next step is surgery to remove the polyps. “Sinus surgery opens the sinuses up,” Loftus says. Once you’ve got better airflow, your sleep should improve.

4. For more information on how to get your trouble sleeping, the American Sleep Association recommends keeping the room dark, quiet, and cool at night. You may also want to use a sleep aid, but make sure you don’t get “abused” by them. For more information, visit www.sleepfoundation.org.
Do you have asthma that’s difficult to get under control? Your nasal polyps may be to blame. A recent study looked at a group of 151 people who have both nasal polyps and asthma. They found that those who had the most severe nasal polyps were more likely than others to have difficult-to-control asthma. The study points to the need for a customized approach to the treatment of both asthma and polyps in each patient. If you have uncontrolled asthma, talk to your doctor about your entire treatment plan for both your asthma and your nasal polyps.

SOURCE: American Journal of Otolaryngology

WHY DOESN’T EVERYONE WITH SINUSITIS GET NASAL POLYPS?

Why are polyps more severe in some people than in others? Scientists may have answers. In a study that looked at the genes of people with chronic sinusitis, researchers found that the people with polyps had an overactive gene called CRTH2. Those who had the most hyperactive CRTH2 gene tended to have stubborn polyps that came back after surgical removal. This discovery may lead drugmakers to develop a medicine that can calm this gene down.

SOURCE: Frontiers in Immunology

REGAIN YOUR VOICE

Nasal polyps can give you a nasal-sounding voice. So can removing the polyps bring your old voice back? A new study says “yes.” Doctors measured the opening between the oral air passage and the nasal air passage—the velopharyngeal opening—both before and after surgery. Its size determines how nasal your voice sounds. They also had patients rate their satisfaction with the sound of their own voice both before and after the procedure. The velopharyngeal opening continued to expand up to 6 months after surgery and, during this time, people’s satisfaction with their voice kept improving, too.

SOURCE: Scientific Reports

BREATHE EASIER

Do you have asthma that’s difficult to get under control? Your nasal polyps may be to blame. A recent study looked at a group of 151 people who have both nasal polyps and asthma. They found that those who had the most severe nasal polyps were more likely than others to have difficult-to-control asthma. The study points to the need for a customized approach to the treatment of both asthma and polyps in each patient. If you have uncontrolled asthma, talk to your doctor about your entire treatment plan for both your asthma and your nasal polyps.

SOURCE: American Journal of Otolaryngology

STATS & FACTS

By Sonya Collins
Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

BY THE NUMBERS

1 in 50
Estimated number of people in the U.S. who have nasal polyps.

SOURCE: National Library of Medicine

1 in 4
Number of people with chronic rhinosinusitis in the U.S. who have nasal polyps.

SOURCE: National Library of Medicine

Age group most affected by nasal polyps in the U.S.

6 in 10
Number of people with nasal polyps who are men.

>6 in 10
Number of people with nasal polyps who also have asthma.

>1 in 5
Number of people with chronic rhinosinusitis who also have nasal polyps.

>3 in 4
Estimated number of people with chronic sinusitis with nasal polyps who are white, non-Hispanic. Black people with chronic sinusitis are less likely to have polyps.

>40%
Number of people with chronic sinusitis who also have nasal polyps.

SOURCES: National Library of Medicine, Journal of Asthma and Allergy

4 x
Your increase in risk for nasal polyps if a next-of-kin has them, too.

>40%
In 10
FOCUS ON

NASAL POLYPS

101

CAUSES, SYMPTOMS, AND DIAGNOSIS

By Rachel Reiff Ellis

Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

Your stuffy nose just won’t seem to go away, and then you learn it’s something more: nasal polyps. Here’s what you need to know about these nose growths.

Nasal polyps are small, noncancerous sacs that form inside your nose and sinuses. Some people don’t feel or notice them at all when they have them. In other people, they cause uncomfortable and long-lasting symptoms.

CAUSES

Doctors don’t know exactly why nasal polyps form, but they’re linked to having constant bouts of inflammation in your nose and sinuses, also called chronic rhinosinusitis. Inflammation can have different causes such as allergens, upper respiratory infections, or even secondhand smoke.

“Things we know about for sure include environmental allergies, such as grasses, trees, ragweed, and allergies to cats and dogs that are significant,” says Meha Fox, MD, assistant professor of otolaryngology–head and neck surgery at Baylor College of Medicine in Houston.

You may also get polyps if you have an underlying disease such as cystic fibrosis or other autoimmune disease.

COMMON SYMPTOMS

Once your nasal polyps have grown to a certain size, you’re likely to have a hard time breathing through your nostrils. You may have more mucus, cough, have headaches and sinus pressure, and you may lose some of your senses of taste and smell.

“Polyps tend to develop slowly over some time, and so it may either take a while for symptoms to develop or people may get so used to the slow changes in their upper airway that they never develop major symptoms,” says Zara M. Patel, MD, director of endoscopic skull base surgery at Stanford University School of Medicine in California.

Nasal polyps don’t typically cause any pain or bleeding, so if you have either, tell your doctor.

DIAGNOSING NASAL POLYPS

You might think that a doctor could simply take a glance in your nostrils to diagnose you, but it takes more investigation than that.

“It’s rare that you can see polyps from just looking from the front of the nose, like a primary care or urgent care provider would be able to do,” Patel says.

An otolaryngologist (ear, nose, and throat doctor, or ENT) can use a small, flexible tube with a camera on it called an endoscope to examine far enough back in your nostrils. This helps them see your nasal cavity and sinus drainage pathways.

If you’ve never had a sinus surgery before, your doctor may need to use a CT scan to look deeper in your sinuses.

“Sometimes we get a CT scan to determine the extent of disease, such as how many sinuses are involved,” Fox says. “This helps guide our treatment plan.”

WHO’S AT RISK?

Meha Fox, MD, lists factors that increase your chances of nasal polyps.

+ Multiple allergies
+ Cystic fibrosis
+ Autoimmune conditions (such as granulomatosis with polyangiitis)
+ Cilia (nose hair) dysfunction
EXPLORE THE NASAL CAVITY

NASAL POLYPS
These painless growths can develop along the lining of the nasal passages and sinuses in response to chronic inflammation.

RUNNY NOSE
When you have a sinus infection, fluid builds up in your nasal passages, which can lead to a runny nose.

SUPERIOR, MIDDLE, AND INFERIOR TURBINATES
These bony structures, surrounded by blood vessels and nasal lining, clean and humidify the air that enters the nasal passages. In chronic sinusitis, they can get swollen and inflamed, produce too much mucus, and lead to a stuffy nose.

NASAL INFLAMMATION
Swelling and irritation in the nasal passages can prevent proper drainage, cause a buildup of mucus and sometimes pus, and make it difficult to breathe.

SOURCES: Mayo Clinic, World Allergy Organization, Pharmacy Times, Current Medical Research and Opinion, CDC, Stanford Health Care
MY 8-YEAR JOURNEY

LIVING WITH NASAL POLYPS

By Edna Lenore Marson Canty
Reviewed by Neha Pathak, MD,
WebMD Lead Medical Editor

For me, it started with a flood.

My town flooded back in early 2015. My house flooded, and despite our best efforts, we got mold in our home. Before long, I started to get congested and started wheezing. I thought it was just a cold. But this felt different.

My doctor said I had asthma and prescribed a rescue inhaler. He also recommended sinus surgery, but I didn’t have enough information at the time to proceed. I decided to wait and just use my inhaler, which I did often.

MY QUEST FOR KNOWLEDGE

I was referred to an ENT (ear, nose, and throat) doctor who officially diagnosed me with nasal polyps after a few months. I was given antibiotics to kill any infections that might have worsened my congestion. During this time, I could still see this small white bubble inside my nose. I would blow my nose, and nothing would come out!

I still wasn’t ready for surgery, so my ENT put me on a steroid. It was shrinking the polyps for about 2 months. I was feeling better. I was happy! Then my smell dropped again. I became depressed after having so much hope. My doctor suggested I try prednisone again. The same thing—it worked, then stopped. I spoke to an ENT surgeon in the office who gave me two options. He explained that nasal polyps are from inflammation, which is what forms the teardrop. He described surgery as “mowing a lawn” and walked me through the post-surgery instructions. After getting my questions answered, I moved forward with the endoscopic sinus surgery in December of the same year. My recovery was intense, about a month, but my older children helped me a lot.

A SWEET SMELL

Before surgery, I would tell my doctors, “I can’t smell!” I was burning food. I had a new baby at the time, and I couldn’t even smell if he had a dirty diaper. Those were some tough times. People underestimate how much you need your sense of smell for daily life. I’m sure I was around people with lots of perfume or around smoke and I didn’t know it. I’m guessing this made my asthma worse.

A few months after surgery, I got congested again and my doctor found some smaller polyps. It was so stressful. I felt like no one understood me.

This was affecting my job. Because I was stuffy, it made me sound weird on the phone. I did a steroid series every 3 months for about 3 years. By 2021, the prednisone stopped working.

I went to a new ENT who did an imaging of my sinus cavity, which was full of polyps. He suggested another surgery that would remove some of my sinus bone. Again, all of this sounded scary. Plus, there’s no guarantee they won’t come back.

A NEW DAY

After some discussions of pros and cons, my doctor suggested a new drug. It targets the cells to prevent the growth of polyps. Another doctor confirmed this for me and said it was safe to take while breastfeeding. After 2 weeks, I was smelling hints of coffee and slight scents of perfume. After a few weeks, my sense of smell came back strong.

Today, I’m taking this drug via self-injections. I also watch my sugar intake to reduce inflammation. I take a maintenance inhaler and another prescription medication for my asthma and allergies. I’m even able to spend a little more time outside. I went camping in the backyard with my kids recently. I’m still deciding if I want to try surgery. In the meantime, I look forward to enjoying life.

EDNA’S TIPS

+ GET A THIRD OPINION
I don’t just get a second opinion; I believe in third and fourth opinions. It helped me compare advice from different experts to make an informed decision.

+ ALWAYS WRITE DOWN YOUR QUESTIONS
When I’m prepared for my appointments, they go much better.

+ FIND RESOURCES
I researched nasal polyps, doctor success rates, medications, and more. This helped me make decisions when I had multiple options.
1. TRUE. About 20% of people with chronic rhinosinusitis will also have nasal polyps.

2. TRUE. There’s a condition called aspirin-exacerbated respiratory disease (AERD) that about 1 in 10 people with nasal polyps have. People with this condition also have asthma and a specific sensitivity to aspirin and related chemicals. But most people with nasal polyps can take aspirin and other over-the-counter medicines without any issue.

3. FALSE. If a doctor looked at your nasal polyps under the microscope, they’d probably see an unusually high number of allergy-related immune cells called eosinophils. But the exact cause of nasal polyps isn’t known, and seasonal allergies are not thought to be a main cause of nasal polyps.

4. FALSE. Many people with nasal polyps also have asthma. Nasal polyps can also block your nose, making it hard to breathe. While both conditions are related to chronic inflammation, your nasal polyps can’t give you asthma.

5. FALSE. Many people with nasal polyps will need surgery to open their nasal passages back up. But polyps often will come back despite surgery. Talk to your doctor about your treatment options.
For me, life has always included breathing and sinus issues. My first asthma attack happened when I was only 1. My sinuses were forever acting up. I had chronic sinus infections, horrible allergies, and my nose was always running. It was a joke among friends that you’d never see me without a Kleenex. It was just who I was.

Then when I was 16, I experienced an asthma attack after taking an ibuprofen, which had never happened before. It was confusing for me, but clarifying for my doctors—they diagnosed me with a rare condition called aspirin-exacerbated respiratory disease, or AERD.

In order to be diagnosed with AERD, you have to have what they call the triad: asthma, nasal polyps, and an allergy to NSAIDs, or nonsteroidal anti-inflammatory drugs. The allergy was new for me; it was like a switch flipped in my body and suddenly I couldn’t tolerate it. AERD is uncommon in general, but it’s even more uncommon to be diagnosed at a young age.

I had my first surgery to remove my nasal polyps at age 17. They had grown large enough in the year since my AERD diagnosis that they had started to obstruct my breathing. And the surgery worked—for a while. But unfortunately, what happens with this condition is they just start growing back. Surgery ends up being a short-term solution.

My next surgery wasn’t until I was 27. I had a pretty good 8 years, and then the last 2 years before the surgery, I hadn’t been able to breathe out of my nose. If you’ve ever had a cold, you know how annoying it is to have clogged nostrils. That was my every day. I sounded funny all the time. People constantly asked if I was sick, but I’d say, “No, this is just me.” And I had no sense of smell at all. So I had surgery to remove the polyps again.

Then my doctors had me try aspirin desensitization, where they built me up with tiny doses of it until I got to a point where I could take one aspirin a day as a maintenance dose. As a result, I could breathe out of my nose again. I could smell! It was almost like I was completely cured. But it couldn’t last forever, unfortunately.

The issue with the aspirin desensitization process is you have to keep taking higher and higher doses. For some people, this starts to cause stomach problems and blood thinning issues. I was on aspirin for a couple of years, until I wanted to get pregnant. High doses of aspirin don’t quite go with pregnancy, so I stopped. And then shortly after, my tolerance just reversed back.

The polyps got worse with my first pregnancy. But interestingly, they got better with my second. They were almost nonexistent during that pregnancy, and I got my sense of smell back. Then when my daughter was 6 months old, they came raging back. Doctors don’t know exactly what causes polyps, but think there’s some hormone component, which may be part of why my pregnancies affected them.

For a while, I was just kind of maintaining, with bouts of really bad symptoms every so often. I’d have to go to the doctor for a steroid shot or take a big burst of prednisone a couple of times a year. At times the polyps would get so bad, I could see them in my nostrils.

But these days I’d consider my symptoms under control. I use steroid drops in my daily nasal wash, which has been a game changer. Now I can breathe through my nose. I still can’t smell, but for me, breathing through my nose is way more important.

**LAURA’S TIPS**

+ Find a doctor in the know. You need someone who has experience with nasal polyps to explore underlying causes and get the most effective treatment.

+ Figure out your triggers. Pay attention to your body to see what makes your symptoms worse. Certain alcohols, wheat, and too much sugar all set mine off.

+ Be diligent with treatment. If I go more than a day without doing my drops, things get pretty bad, pretty quickly.

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**FIRST PERSON**

In order to be diagnosed with AERD, you have to have what they call the triad: asthma, nasal polyps, and an allergy to NSAIDs, or nonsteroidal anti-inflammatory drugs. The allergy was new for me; it was like a switch flipped in my body and suddenly I couldn’t tolerate it. AERD is uncommon in general, but it’s even more uncommon to be diagnosed at a young age.

I had my first surgery to remove my nasal polyps at age 17. They had grown large enough in the year since my AERD diagnosis that they had started to obstruct my breathing. And the surgery worked—for a while. But unfortunately, what happens with this condition is they just start growing back. Surgery ends up being a short-term solution.

My next surgery wasn’t until I was 27. I had a pretty good 8 years, and then the last 2 years before the surgery, I hadn’t been able to breathe out of my nose. If you’ve ever had a cold, you know how annoying it is to have clogged nostrils. That was my every day. I sounded funny all the time. People constantly asked if I was sick, but I’d say, “No, this is just me.” And I had no sense of smell at all. So I had surgery to remove the polyps again.

Then my doctors had me try aspirin desensitization, where they built me up with tiny doses of it until I got to a point where I could take one aspirin a day as a maintenance dose. As a result, I could breathe out of my nose again. I could smell! It was almost like I was completely cured. But it couldn’t last forever, unfortunately.

The issue with the aspirin desensitization process is you have to keep taking higher and higher doses. For some people, this starts to cause stomach problems and blood thinning issues. I was on aspirin for a couple of years, until I wanted to get pregnant. High doses of aspirin don’t quite go with pregnancy, so I stopped. And then shortly after, my tolerance just reversed back.

The polyps got worse with my first pregnancy. But interestingly, they got better with my second. They were almost nonexistent during that pregnancy, and I got my sense of smell back. Then when my daughter was 6 months old, they came raging back. Doctors don’t know exactly what causes polyps, but think there’s some hormone component, which may be part of why my pregnancies affected them.

For a while, I was just kind of maintaining, with bouts of really bad symptoms every so often. I’d have to go to the doctor for a steroid shot or take a big burst of prednisone a couple of times a year. At times the polyps would get so bad, I could see them in my nostrils.

But these days I’d consider my symptoms under control. I use steroid drops in my daily nasal wash, which has been a game changer. Now I can breathe through my nose. I still can’t smell, but for me, breathing through my nose is way more important.
KNOW YOUR OPTIONS

SYMPTOM MANAGEMENT FOR YOUR POLYPS

By Rachel Reiff Ellis
Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

The treatment you and your doctor will choose for your nasal polyps will focus on reducing your polyps in size or making them go away completely. You may also work with your doctor to identify what might be causing your inflammation—such as an allergy—so you can treat those factors as well.

MEDICATIONS

The first thing your doctor will likely suggest is a corticosteroid to shrink your polyps. Typically, you’ll start with a steroid spray you inhale directly into your nose. “Some nasal steroid sprays are available on an over-the-counter basis, whereas some are prescription only,” says Daniel M. Beswick, MD, an otolaryngologist at UCLA Health in California. “The evidence shows that people who use high-volume saline rinses typically have better results with this medication than those patients who use nasal saline sprays, which are low-volume.”

If a spray doesn’t work, you may need an oral corticosteroid, which you might take in combination with your nasal spray. Severe polyps may need steroid injections.

Other medication options include antibiotics and antihistamines to help control conditions that lead to swelling in your nasal passages such as infection or allergies.

In the past few years, the FDA has approved several biologic medications for nasal polyps. You take these by injection. “Biologics are a newer class of medications that target the underlying inflammatory pathway that produces nasal polyps,” Beswick says.

SURGERY

Sinus surgery may be a good option for you if you’ve tried medications but still haven’t had relief from your symptoms.

During surgery, your doctor puts a small tube with a lighted magnifying lens or tiny camera (endoscope) through your nostrils into your sinus cavities. Then with small instruments, they cut out the polyps. “The objectives of surgery are to remove polyps, open up swollen, inflamed sinus passages, remove mucus, and provide a route for topical steroids to get in there after surgery,” says Bruce K. Tan, MD, associate professor of otolaryngology—head and neck surgery and medicine (allergy and immunology) at Northwestern University Feinberg School of Medicine in Chicago.

You have this surgery as an outpatient procedure. Afterward, you’ll continue to use steroid spray to help prevent your polyps from growing back. You may also need a nasal saline spray to help your nasal passages heal.

POLYP PREVENTION

Try these methods to keep polyps from coming back after treatment.

+ Take medications as prescribed.
+ Avoid allergens.
+ Use a humidifier at home.
+ Rinse regularly with saline.

MULTIPLE SURGERIES

WHAT TO EXPECT:
+ About 20% of people with nasal polyps need repeat surgeries.
+ Your risk of repeat surgery is lowest in the first 5 years.
+ Success rates are similar to first-time surgeries.
Eating a healthy diet is never a bad idea. But if you worry as many do that certain foods are the cause of your nasal polyps—or may be making your symptoms worse—don’t. Food sensitivities or allergies generally aren’t the cause of nasal polyps. “Bottom line—diet doesn’t affect things much,” says Leigh J. Sowerby, MD, a head and neck surgeon at the University of Western Ontario in London, Ontario, Canada. “Very specific patients with aspirin sensitivity notice some improvement in symptoms following a low-salicylate diet, but that’s it. It’s minor and it is a hard diet to follow.”

**ASPIRIN SENSITIVITY AND SALICYLATES**

The exception is if you have chronic nasal polyps plus asthma and you also have a severe reaction or shortness of breath after taking aspirin, a condition known as aspirin-exacerbated respiratory disease (AERD). AERD often doesn’t respond well to treatments that work for other people. If you think this might be you but aren’t sure, talk to your doctor about it.

Sowerby ran a small study to see if a diet low in chemical salicylates might help people with AERD including nasal polyps. Aspirin is the most common salicylate, and many foods also have salicylates in them. People in the study ate a high- or low-salicylate diet for a week and then switched to the other diet. Biochemical tests didn’t show any difference, but people eating less salicylates did report feeling better.

**TRY THIS AT HOME?**

Most people with nasal polyps find that alcohol makes symptoms worse, Sowerby notes. So you may want to limit or avoid alcohol and see if you get better. If you think a certain food or food ingredient is causing a reaction and making your nasal polyps worse, it’s likely safe to avoid it for a while and see what happens. Talk to your doctor, too. In most cases, though, this isn’t likely to be your solution. Limiting salicylates won’t help most people with polyps much and it’s also a drag. “All the good things in life tend to have higher levels of salicylates,” Sowerby says.

**Foods high in salicylates**

- Black pepper
- Basil
- Chili powder
- Peppermint
- Olive oil
- Wine
- Dried fruit
- Raspberries
- Blackberries
- Honey
- Almonds
- Green olives

**NASAL POLYPS AND YOUR SENSE OF SMELL**

By Sonya Collins
Reviewed by Neha Pathak, MD, WebMD Lead Medical Editor

Nasal polyps can make it hard to breathe through your nose. But in some people, that’s not their only effect. These noncancerous growths in the nasal passages can affect your sense of smell, too. And, of course, this can affect how foods taste. Here’s a look at how nasal polyps affect sense of smell and why it may not happen to everyone.

**POLYPS BLOCK ODORS**

You have specialized nerves inside your nose called olfactory nerves that detect odors. They live in narrow passages called the nasal cleft—one on each side of your nose—high up in the nose. “One way that nasal polyps affect sense of smell is that they block odorants from finding the olfactory nerves,” says Eric H. Holbrook, MD, director of the division of rhinology at Massachusetts Eye and Ear in Boston.

**POLYPS DAMAGE ODOR-SENSING NERVES**

Researchers also suspect, Holbrook adds, that the inflammation caused by nasal polyps can damage the lining of the olfactory cleft, reduce the number of nerves, and make it less sensitive to smell.

**NOT EVERYONE LOSSES SMELL**

Nasals polyps may only block and damage odor-sensing nerves when the polyps are located in or near the area where those nerves live. “In some people, all the inflammation is in the sinuses and doesn’t reach the rest of the nasal cavity, so they have a normal sense of smell,” Holbrook says.

It also depends on the severity of inflammation in your nose. In some cases, the inflammation may not reach such a level that it affects your ability to pick up on odors and fragrances.

**SMELL THE ROSES ONCE AGAIN**

Fortunately, Holbrook says, when you get treatment for nasal polyps, in most cases as the inflammation and swelling are reduced, the ability to smell the world around you comes back. “But there is evidence that over a long period of time, if not treated, it could be permanent,” he says.

That’s why it’s important to get treatment. You might get topical steroids that only go into the nasal passages. If you need more help, you may try steroids in pill form. Surgery could also be an option. If your polyps come from allergy-related inflammation, your doctor will use medication to treat your allergies, too.

“If you have persistent polyp disease that doesn’t respond to anything else, biologic medications are coming out that have been extremely helpful.”
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