

Nasal Options for MOLD

Thanks to pioneering doctors in the field and their dedication to advancing the science through research, I learned that by adding nasal treatment to the protocols of my mold-sick patients, things got better much faster.

Now that I think it through, this makes logical sense. Our first interface with moldy air is our respiratory passages, specifically our sinuses. Mold moves in and colonizes our sinuses. Persistent colonization of the sinuses seeds the gut every time we swallow, becoming a whole-body problem.

In addition, we know that moldy buildings also host bacteria, so we get a mix of microbial inhabitants which leads to bad-guy biofilm.

When we address all of these factors, people feel better faster, and are more resilient to future incidental mold exposure.

I typically combine measures, such as using an antifungal in the morning, propolis mid-day, and a biofilm agent at night. But this varies greatly by patient.

Sinus applications can be atomized into a mist, used as an additive to a Neti rinse, or made into a nasal spray. From my experience, atomized preparations are the most effective, but hardest to stick with due to time and messiness.

Treat both nostrils or sides, not just the side that you have symptoms. Our tubes connect, which is why when you do a Neti rinse, it drips out the other side. For Neti applications, make sure to alternate which side you start on.

A little stinging is normal with most nasal treatments, as they're administering a therapeutic dose of the compound, but it shouldn't be so strong that it's intolerable. Pause treatment if it's causing excessive nose bleeds or irritation, and consider cutting the strength by half.

PROBIOTICS

Purpose - prevention and fortification of the sinus flora.

Lactobacillus sakei - helps to restore the mucous barrier integrity of the sinuses.¹

Brands - NasoBioTex and Lanto Sinus

Dose - begin with ¼ of the provided scoop and mix into a normal 100mL saline mix for Neti pot or saline spray.

Safe to use daily, but not necessary. It can be effective if used from 1-3 times per week.

¹ Martens K, De Boeck I, Jokicevic K, Kiekens F, Farré R, Vanderveken OM, Seys SF, Lebeer S, Hellings PW, Steelant B. *Lactobacillus sakei* AMBR2 Restores Airway Epithelial Integrity in Chronic Rhinosinusitis With Nasal Polyps. *Allergy Asthma Immunol Res.* 2021 Jul;13(4):560-575. doi: 10.4168/aaair.2021.13.4.560. Erratum in: *Allergy Asthma Immunol Res.* 2022 Jan;14(1):146. PMID: 34212544; PMCID: PMC8255346.

Bacillus species - early research is showing benefit of the enzymes in reducing polyps.²

Brands - MegaSporeBiotic by Microbiome Labs

Dose - begin with ½ capsule and mix into a normal 100mL saline mix for Neti pot or saline spray.

Safe to use daily, but not necessary. It can be effective if used from 1-3 times per week.

Humic extract - helps to restore the mucous barrier integrity of the sinuses.

Brand - ION (Intelligence of Nature)

Safe to use from 1-2 times daily

PRE-MADE PREPARATIONS

Purpose - the use of various agents to restore normal flora by combatting colonizers.

Essential oil preparations - antifungal activity

Brands - CitriDrops by MicroBalance (homeopathic), SinuSoothe (homeopathic), Activated Nasal Mist by NOW (essential oils+biofilm agent), Pureessential (essential oil), Nasal Clear by Physician Standard (essential oil+ozonated oils), Alkalol (essential oil).

Dose - typically use at least once per day to keep colonized fungi at bay.

Safe to use from 1-3 times daily.

Propolis - antifungal, antihistamine, well tolerated by kids

Brand - NaturaNectar Nasal Guardian Spray

Safe to use from 1-3 times daily.

Manuka honey - antifungal, antibiotic, antibiofilm, and antihistamine activity^{3,4}

Brand - ManukaGuard

Safe to use from 1-3 times daily. Well tolerated by kids.

Grapefruit seed extract - antifungal, antibacterial

Brand - Nutribiotic Citricidal Nasal Spray

Safe to use from 1-2 times daily.

² Takabayashi T, Imoto Y, Sakashita M, Kato Y, Tokunaga T, Yoshida K, Narita N, Ishizuka T, Fujieda S. Nattokinase, profibrinolytic enzyme, effectively shrinks the nasal polyp tissue and decreases viscosity of mucus. *Allergol Int.* 2017 Oct;66(4):594-602. doi: 10.1016/j.alit.2017.03.007. Epub 2017 Apr 4. PMID: 28389065.

³ Lee VS, Humphreys IM, Purcell PL, Davis GE. Manuka honey versus saline sinus irrigation in the treatment of cystic fibrosis-associated chronic rhinosinusitis: A randomised pilot trial. *Clin Otolaryngol.* 2021 Jan;46(1):168-174. doi: 10.1111/coa.13637. Epub 2020 Oct 2. PMID: 32852889; PMCID: PMC7895450.

⁴ Ooi ML, Jothin A, Bennett C, Ooi EH, Vreugde S, Psaltis AJ, Wormald PJ. Manuka honey sinus irrigations in recalcitrant chronic rhinosinusitis: phase 1 randomized, single-blinded, placebo-controlled trial. *Int Forum Allergy Rhinol.* 2019 Dec;9(12):1470-1477. doi: 10.1002/alr.22423. Epub 2019 Aug 28. PMID: 31461581.

DIY OPTIONS

Essential oils - are antifungal and prevent fungal defensive mycotoxin production.^{5,6}

See the video instruction on my Video Blog page [here](#).

The following essential oils have been shown to be effective against mold:

| | | |
|------------|----------------------|------------------------------------|
| Cedar | Cumin | Eucalyptus |
| Rosemary | Tea Tree | Pine |
| Ajwain | Thyme (red or white) | Citrus (lemon, orange, grapefruit) |
| Holy Basil | Frankincense | |

Brands I trust for essential oils are [Snow Lotus](#), [Pranarōm](#), [Aura Cacia](#), and [Young Living](#).

Manuka honey - antifungal, antibiotic, antibiofilm, and antihistamine activity

Mix $\frac{1}{16}$ - $\frac{1}{8}$ tsp into a normal 100mL saline mix for Neti or saline spray. Needs to be warmed in order to mix well.

Safe to use from 1-3 times daily.

ANTIBIOTIC

Purpose - to address common colonizing bacteria such as MARCoNS and MRSA.

Silver - antibiotic

Brands - Colloidal Silver Nasal Spray by Source Naturals, Argentyn23 Natural Nasal Spray

Safe to use from 1-2 times daily.

Garlic - antibiotic, antibiofilm, activity against MRSA⁷

Brands - Allimax Rescue Spray

Safe to use from 1-2 times daily.

Ozone - antimicrobial, antibiofilm

Reference Dr. Neil Nathan's book *Mold and Mycotoxins* for detailed instructions.

DECONGESTANTS

Purpose - to either break up mucous, reduce swelling, or reduce migration or subsequent activity of the mast cell reaction to mold spores and/or mycotoxins.

Try to avoid heavy use of steroid nasal sprays, which may lead to fungal infections.

⁵ Cai J, Yan R, Shi J, Chen J, Long M, Wu W, Kuca K. Antifungal and mycotoxin detoxification ability of essential oils: A review. *Phytother Res*. 2022 Jan;36(1):62-72. doi: 10.1002/ptr.7281. Epub 2021 Sep 15. PMID: 34528300.

⁶ Mutlu-Ingok A, Devecioglu D, Dikmetas DN, Karbancioglu-Guler F, Capanoglu E. Antibacterial, Antifungal, Antimycotoxigenic, and Antioxidant Activities of Essential Oils: An Updated Review. *Molecules*. 2020 Oct 14;25(20):4711. doi: 10.3390/molecules25204711. PMID: 33066611; PMCID: PMC7587387.

⁷ Cutler RR, Wilson P. Antibacterial activity of a new, stable, aqueous extract of allicin against methicillin-resistant *Staphylococcus aureus*. *Br J Biomed Sci*. 2004;61(2):71-4. doi: 10.1080/09674845.2004.11732646. PMID: 15250668.

Essential oil inhalation sticks - menthols, thymols, or eucalyptols temporarily open respiratory passages.

Brand - Olbas

These may be used immediately before administering any of the other treatments to increase dispersion of the treatment.

NAC - thins mucous, reduces congestion, antioxidant, antiinflammatory

10% Acetylcysteine Nasal Spray

Rx required by compounding pharmacist

Safe to use from 1-4 times daily.

Cromolyn sodium - reduces the local effects of allergic mast cell reactions in the sinuses.

Brand - NasalCrom Nasal Spray

Safe to use from 1-4 times daily.

I find this to be most helpful for people with unknown food sensitivities who are eating those foods, and therefore inflaming their mucous membranes.

PRESCRIPTION OPTIONS (TALK TO YOUR DOCTOR)

Purpose - to add or replace previous measures if there's persistent colonization or biofilm.

There are many alterations and substitutions, but these are some common formulations.

*Your doctor will want to know that these need to be ordered by compounding pharmacies and are considered off-label use of the medications. Some preparations are to be mixed just before use, atomized or irrigated, or some may be made into a spray. Check with the compounding pharmacist. We may add compounds to maximize mucosal adhesion.

Nystatin

50,000 IU per 10 mL sterile saline

Safe to use from 1-2 times daily.

Blend-K (for co-infection with Klebsiella)

Nystatin (50,000IU) + Tobramycin (100mg) per 10 mL saline

Safe to use from 1-2 times daily.

Blend-P (for co-infection with Pseudomonas)

Mupirocin (0.2%) + Itraconazole (0.2%) + Triamcinolone (0.03%) +
Xylitol (2%) + Quercetin (0.5%)

Safe to use from 1-2 times daily.

Dr. A qid, 30mL

For patients intermediate in reactivity,
I start with itraconazole (1%) nasal
spray or 2% ketoconazole nasal spray
You can use a compounded nasal spray
containing EDTA with atomizer or
BEG spray (I now use just BE spray)
to treat biofilm concurrently

Blend-AB (for allergic biofilm)

Tobramycin (100mg) + Allicin (40mg) + Amphotericin B (25mg) + Ketotifen (0.5mg) +
EDTA (75mg) + Mupirocin (50mg)

Safe to use from 1-2 times daily.

Ketoconazole 1% or amphotericin B 0.1%

Amphotericin B 0.1% + gentamycin 0.1%, Ketoconazole
1% 2 sprays each nostril bid x 2 weeks
(ketoconazole - 1% is a lot of powder - 0.5%?)

Mupirocin 0.2%, EDTA 1%, Gentamycin 0.5
or 1%

3% compounded H2O2, nebulize qd-tid

Dose 1-4mL

Dr. JILL CRISTATM
BREAK the MOLD
TAKE BACK your HEALTH

BIOFILM

Purpose - reduction of biofilm matrix hosting mixed microbes. Wait to start this until your doctor approves it. These can uncover more than your body is ready for, causing more symptoms.

Xylitol - antibiofilm, antibiotic

Brand - Xlear

Safe to use from 1-4 times daily. Well tolerated by kids.

Biocidin

Dose - start with 1 drop in a 100ml saline Neti and increase to tolerance. It should sting a little, as this is meant to be at the therapeutic level. 5-10 drops are typically tolerated.

Ozone - antimicrobial, antibiofilm

Reference Dr. Neil Nathan's book Mold and Mycotoxins for detailed instructions.

CHILDREN

Nasal treatments for children need to be milder and less invasive. Since kids often respond so vitally, there's no need to use the adult treatments. The following modifications are often quite effective.

Probiotic application - apply mixture by swabbing the inside of the nostrils with a cotton swab.

Propolis & Manuka honey - these are well tolerated by kids. Apply mixture by swabbing the inside of the nostrils with a cotton swab.

Xylitol and colloidal silver are well tolerated as nasal sprays for older children.

Essential oil applications for kids

Essential oil room diffuser

Essential oil inhalation stick

Best of luck as you BREAK THE MOLD!

This content is for health information only and not intended as personal medical advice. Reading or viewing it will not establish a doctor-patient relationship. It is not intended to diagnose, treat, cure or prevent any disease or medical condition. The information discussed is not intended to replace the advice of your healthcare provider. Reliance on information provided by Dr. Jill Crista, employees, or others appearing at the invitation of Dr. Crista is solely at your own risk.