

Get Control of Your Seasonal Allergies



LifeExtension[®]
Stay Healthy, Live Better



What causes seasonal allergies?

Every year, usually in the spring or fall, millions of people sneeze, sniffle, and cough as a result of seasonal allergies . . . but what's triggering these symptoms?



Target the cause with baker's yeast

EpiCor® is a novel compound that can benefit your immune health—but new research also indicates that it can inhibit discomfort caused by seasonal changes in environmental stimuli.



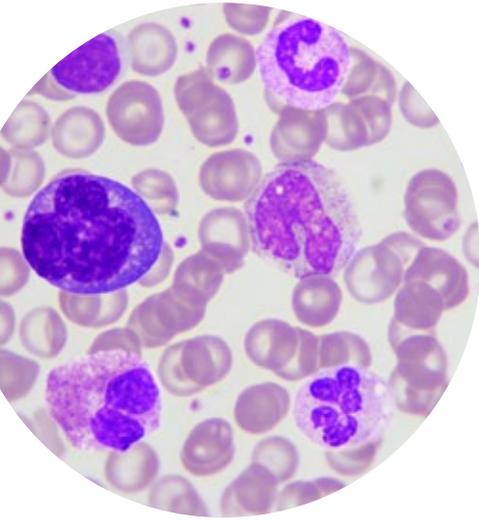
Lactobacillus acidophilus L-92®: The allergy probiotic

Scientists have discovered that a unique form of *Lactobacillus acidophilus* called L-92® reduces allergy symptoms.



#1

**What causes
seasonal allergies?**



IgE binds to immune cells called mast cells and basophils, which are loaded with inflammatory compounds like histamine, leukotrienes, and other mediators of inflammation. These compounds cause the allergy symptoms we're all familiar with: runny nose, dry itchy eyes, sinus congestion, sneezing, and headaches.

What causes seasonal allergies?

Every year, usually in the spring or fall, millions of people sneeze, sniffle, and cough as a result of seasonal allergies—but what's triggering these symptoms? As it turns out, allergens are simply tiny particles in our environment that your body *perceives* as a “foreign invader.”

When your body encounters a threat like dust or pollen, it doesn't matter that the particle is actually harmless: your immune system reacts the same way as it would when faced with a virus: watery eyes, runny nose, and other unpleasant symptoms.

The problem with this biological solution: it can actually unbalance your immune system.

Much Ado About Nothing: Triggering T-Cells

T-Cells are a type of immune cell that help regulate your immune response to pathogens.

Th1 T-cells target intracellular pathogens, like viruses.

Th2 T-cells target extracellular pathogens, like bacteria.

But Th2 T-cells also react to *allergens*. When this happens, your immune system releases activators that tell your body to produce **eosinophils**: white blood cells designed to destroy invading organisms by releasing pro-inflammatory compounds. Those same activators also cause a system-wide increase in IgE, an allergy antibody.

IgE: The solution nobody wanted

IgE binds to immune cells called mast cells and basophils, which are loaded with inflammatory compounds like histamine, leukotrienes, and other mediators of inflammation.

IgE triggers these cells to release those compounds, which is what causes the allergy symptoms we're all familiar with: runny nose, dry itchy eyes, sinus congestion, sneezing, and headaches.

So the “solution” to allergies may be to target the cause of these specific inflammatory reactions and restore balance between Th1 and Th2 T-Cells.

Allergy Medications: A Classic Cover-up

Antihistamines, steroids, and decongestants are formulated to alleviate the discomfort of your runny nose or stuffy head, which only occur after Th2 levels have already spiked.

This effectively means you have to suffer from allergies to relieve them — which makes no sense.

The goal of treatment is to solve the problem, not simply mask your symptoms. That means targeting overactive Th2 cells, inhibiting inflammation, and promoting immune system balance.



Most allergy drugs only treat allergy symptoms. They do nothing to address the underlying cause: an overreacting, unbalanced immune system and runaway inflammation.



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#2

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EpiCor® *S. cerevisiae*

EpiCor® is a novel compound derived from brewer's yeast (*S. cerevisiae*). Studies show that this unique compound can benefit your immune health—but new research also indicates that it can inhibit discomfort caused by seasonal changes in environmental stimuli.

How EpiCor® Works

A good balancing act – EpiCor® balances your immune system by increasing sIgA while reducing IgE.² It also reduced pro-inflammatory eosinophil levels in study participants.

Trapping pathogens – Secretory immunoglobulin A (sIgA) is an antibody found in our eyes, mouth, nose, and other mucus membranes. sIgA's trap pathogens before they cause problems.³ EpiCor® significantly increases sIgA levels, thereby strengthening mucosal immunity.

Natural killers – EpiCor® also increases natural killer (NK) cell activity. These white blood cells are one of your body's most powerful defenses against infections. They seek out and destroy cells that have been transformed by a viral infection.⁴

A quick antioxidant boost – Researchers have found that EpiCor® helps strengthen your immune system by increasing antioxidant protection in as little as two hours.



Taming the overactive immune system

Lessening allergy symptoms and reducing the number of days we suffer

96 people

with seasonal grass-pollen allergies

500mg EpiCor®

for 12 weeks

•••

Runny nose

EpiCor® users had less severe runny nose symptoms

•••

Nasal congestion

43% reduction in number of days with nasal congestion.¹

•••

Inflammation

Decrease in inflammatory cells in nasal mucus.

More than a nuisance: The high cost of seasonal allergies

OVER
50
million

adults affected by
seasonal allergies

Allergies are the
6th
leading cause
of chronic illness
in America

Allergies cost us
more than

\$18
billion

each year

Allergy medications
can have
serious
side effects
(including Alzheimer's)

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#3

**Lactobacillus
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Lactobacillus acidophilus L-92®: The allergy probiotic

Scientists have discovered that a unique form of *Lactobacillus acidophilus* called L-92® reduces allergy symptoms by lowering the allergic response and restoring normal Th2 balance.

Out of 12 strains of probiotics, heat-treated (HT) *Lactobacillus acidophilus* L-92® (HT L-92®) stood out for its impact on seasonal allergies.^{6,7}

Reduces IgE allergy antibodies

Pre-clinical studies indicate HT L-92® reduced inflammatory IgE antibodies, substantially reduced substances associated with Th2, and increased cells that improve immune balance.^{6,8} Three clinical studies further promote *Lactobacillus acidophilus* L-92® for seasonal allergy relief:

Cedar Pollen

People with seasonal allergies to Japanese cedar pollen were given L-92® and saw a 31% reduction in their eye symptom/medication score— meaning reduced itchy and watery eyes and fewer medications⁹ — as well as less swelling and healthier color of nostril membranes.¹⁰

Hay Fever

Forty-nine people with hay fever taking L-92® every day for eight weeks experienced an improvement in the color of nasal mucous membranes (week six) and reduction in nasal membrane swelling (week eight).¹⁰ There was also an improvement in eye symptoms like itchiness and redness.

Effective Treatment

L-92® also works on allergy symptoms after subjects were already exposed: In an eight-week study, 80 people with allergies were exposed to cedar pollen and then given L-92®.¹¹ Compared to placebo, L-92® was shown to improve nasal and eye symptoms.

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A new solution for an old problem

Conventional methods of fighting seasonal allergies focus on the wrong point in the timeline —symptoms are produced. Fortunately, a growing number of clinicians and scientists are espousing the approach of intervening much earlier in order to prevent symptoms in the first place.

This is achieved by restoring balance between immune system cells that promote reactions to allergens and those that suppress such reactions. EpiCor® and L-92® show promise for restoring that balance.

Based on these studies, 500 mg of EpiCor® and 21 mg of *Lactobacillus acidophilus* L-92® daily is ideal for seeing a significant improvement in seasonal allergy symptoms.



References

1. *Adv Ther.* 2009;26(8):795-804.
2. *Open Nutrition Journal*, 2008 v. 2, p. 68-75
3. *Microbiology and Molecular Biology Reviews*, 1998 March; 62(1): 71–109.
4. *Jornal de Pediatria*, 2008 Aug; Vol. 84 no.4 suppl.0
5. *JAMA Intern Med.* 2015;175(3):401-7.
6. *Biosci Biotechnol Biochem.* 2003;67(5):951-7.
7. Enomoto MI, T; Take, CR; et. al. . Effects of oral ingestion of *L. acidophilus* GRAS *L. acidophilus* L-92 strain on the cedar pollen allergy - Verification of preventive action in artificial exposure facility. The 56th Annual Meeting of the Japanese Society of Allergology, Tokyo, Japan. 2006.
8. *Allergol Int.* 2007;56(3):293-301.
9. *Biosci Biotechnol Biochem.* 2005;69(9):1652-60.
10. *J Dairy Sci.* 2005;88(2):527-33.
11. Enomoto MI, T; Take, CR; et. al. 2006