

# Essential Oil Compounds Show Blood Sugar and Antifungal Benefits

Analysis by [Dr. Joseph Mercola](#)

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## STORY AT-A-GLANCE

- › Compounds in the essential oil of the Vicks plant act on the same enzyme targeted by Type 2 diabetes drugs, helping your body maintain steadier blood sugar and improve insulin sensitivity naturally
- › The plant's essential oil contains more than 30 bioactive compounds that work together to support metabolic balance, immune defense, and cellular protection against oxidative stress
- › Studies show that essential oil from Vicks plant effectively inhibits drug-resistant fungi responsible for stubborn skin, nail, and lung infections, offering a safe, natural alternative to synthetic antifungal medications
- › Beyond personal health, Vicks plant supports ecological wellness by improving soil quality, repelling pests, and helping clean polluted environments through a process called phytoremediation
- › Simple ways to use Vicks plant include diffusing its essential oil, applying diluted blends for skin support, and growing it at home for ongoing access to a natural remedy that promotes whole-body balance

Few plants bridge the worlds of folk wisdom and modern science as elegantly as *Plectranthus neochilus* – better known as Vicks plant, lobster flower, or in Brazil, boldo-rasteiro. This aromatic member of the mint family, instantly recognizable by its pungent,

menthol-like scent and fleshy leaves, has long been part of traditional healing practices across Brazil and southern Africa.

Healers once relied on it to calm the stomach, ease headaches, and clear the liver – but scientists are now uncovering a much broader spectrum of benefits hidden in its essential oil. Research is revealing that this resilient herb is far more than a household digestive aid. Its complex blend of bioactive compounds interacts with key biological pathways that influence metabolic balance, immunity, and microbial defense.

Studies show that what was once used to soothe the gut could also support blood sugar regulation and protect against fungal infections. What makes this discovery remarkable is that a simple, time-honored garden plant – the same one many grow for its mosquito-repelling aroma – holds measurable therapeutic power.

The new evidence doesn't replace its traditional uses; it expands them, showing how deeply nature's chemistry aligns with human biology. This growing body of research has opened a new chapter for *Plectranthus neochilus*, one that invites a closer look at how its essential oils work within your body to restore strength and balance.

## **Essential Oils Act Like Natural Blood Sugar Balancers**

A study in *Current Pharmaceutical Analysis* found that compounds from the essential oil of Vicks plant help regulate blood sugar in a way similar to prescription medications for [Type 2 diabetes](#).<sup>1</sup> Using advanced computer models, researchers showed that these natural molecules interact with an enzyme that breaks down hormones responsible for insulin release. When this enzyme is blocked, your body keeps more of these hormones active, allowing for steadier blood sugar control after meals.

- **One compound stood out as especially powerful** – Citronellyl butyrate, one of the main components in the plant's oil, was the strongest at blocking the enzyme – performing almost as well as several diabetes drugs currently on the market. Other natural compounds, like citronellol and linalool, also showed strong effects and were found to be easily absorbed, well-tolerated, and safe for further development.

- **The compounds act like a key fitting perfectly into a lock** – Researchers described how these plant molecules attach tightly to the enzyme, forming stable bonds that block its activity. By doing so, they stop the breakdown of beneficial hormones that control both insulin release and appetite – two major factors in healthy metabolism.
- **The plant's oils are easily absorbed by your body** – Because these compounds dissolve in fats, they pass through cell membranes quickly and reach the tissues involved in blood sugar regulation. This helps explain why essential oils produce effects relatively fast when used properly – either inhaled or taken in small, safe doses.
- **Natural compounds could offer a safer way to support healthy metabolism** – In the study's simulations, citronellyl butyrate showed activity nearly identical to a class of diabetes drugs known as gliptins.

That means this simple herb could become a natural option for maintaining blood sugar without the common side effects linked to synthetic drugs. By helping your body use insulin more efficiently and keeping blood sugar stable, Vicks plant shows that ancient herbal remedies still have much to teach modern medicine.

## **Plant-Based Essential Oil Shows Strong Action Against Drug-Resistant Fungi**

The same essential oil that shows promise for balancing blood sugar also demonstrates impressive power in another area of health – fighting fungal infections that resist conventional treatment. Research published in the *International Journal of Complementary & Alternative Medicine* tested the antifungal strength of essential oils from Vicks plant and *Tagetes erecta* (marigold).<sup>2</sup>

The study targeted fungi responsible for common but stubborn skin, nail, and lung infections that are increasingly resistant to conventional antifungal drugs. These infections are especially dangerous for people with weakened immune systems, such as

those undergoing cancer treatment, living with HIV, or recovering from organ transplants.

- **The essential oil of *Plectranthus neochilus* showed strong antifungal power, while marigold oil did not** – The researchers measured the smallest amount of oil needed to stop fungal growth. Vicks plant oil stopped the fungi *Rhizopus stolonifer* at just 125 micrograms per milliliter, a level considered "promising" for antifungal activity.

In contrast, marigold oil showed no significant activity, even at much higher concentrations above 1,000 micrograms per milliliter. This makes Vicks plant a clear standout for natural antifungal applications.

- **The plant's antifungal strength comes from its unique blend of compounds** – The essential oil contained more than 30 natural compounds known for their antimicrobial and cell-protective properties. Caryophyllene oxide, in particular, has been widely studied for use in antifungal creams, foods, and cosmetics because it damages fungal membranes and prevents their growth.
- **The oil's compounds appear to work together to boost their effectiveness** – Instead of acting alone, these molecules interact synergistically – meaning they reinforce one another's effects. This teamwork allows the oil to punch holes in the fungal cell wall, causing the cells to lose their structure and die. Unlike synthetic drugs that target only one pathway, this multi-targeted attack makes resistance far less likely, providing a major advantage for long-term use.
- **Researchers believe this oil could replace or enhance current antifungal drugs** – Modern antifungals are losing effectiveness and often cause serious side effects, including liver toxicity and nausea. By contrast, Vicks plant essential oil was described as both safe and effective at low concentrations. Its ability to fight fungus that causes skin and respiratory infections, as well as food spoilage, positions it as a sustainable, natural alternative for both medical and agricultural use.

- **This study was the first to document antifungal activity in Vicks plant oil** – The authors emphasized its potential as a dual-purpose tool – for protecting human health and preventing fungal damage in crops and stored foods. This familiar aromatic plant – often grown for its mosquito-repelling scent – could also be one of the most promising natural defenses against fungal infections in a world facing rising drug resistance.

## **Vicks Plant Shown to Support Both Human and Environmental Health**

Researchers in Brazil reviewed decades of research to understand how the same plant that fights infection and balances metabolism also strengthens ecosystems and supports sustainable agriculture.<sup>3</sup>

Published in *Ciência e Natura*, this review examined prior studies on the plant's chemical composition, pharmacological benefits, and ecological importance. The authors aimed to consolidate what is known about its active compounds, its medicinal uses in traditional practices, and its applications in agriculture and environmental restoration.

- **The plant contains powerful antioxidant, antiparasitic, and antimicrobial compounds** – Vicks plant is rich in natural chemicals that protect cells from oxidative stress. Oxidative stress refers to damage caused by free radicals, unstable molecules that harm tissues and accelerate aging.

These compounds neutralize free radicals and also inhibit the growth of harmful bacteria and fungi, explaining why the plant has been used traditionally to treat infections and promote liver and digestive health. The review noted its activity against a parasite responsible for schistosomiasis, a parasitic disease caused by blood flukes that live in freshwater snails and infect humans through the skin.

- **Beyond medicine, the review revealed ecological and agricultural applications** – Vicks plant proved valuable for pest management, natural soil improvement, and even urban landscaping. The plant also adapts easily to poor soil and drought

conditions, suggesting it could be used for reforestation or pollution control through phytoremediation – a process where plants absorb and detoxify environmental pollutants.

- **Vicks plant is a sustainable economic resource** – Its combination of resilience, medicinal potency, and environmental benefits makes it suitable for small-scale farmers, herbal product manufacturers, and natural health practitioners. The researchers noted that industrial-scale extraction of its essential oil could support both health and ecological industries without harming the environment.

By validating folk remedies through chemical and pharmacological evidence, the review demonstrates that this plant offers more than symptom relief – it represents a holistic approach to health that integrates body, environment, and sustainability.

## How to Use Vicks Plant for Whole-Body Balance

If you've been struggling with blood sugar swings, stubborn fungal issues, or sluggish energy, the first thing to focus on is balance – inside and out. The studies above show that Vicks plant works by targeting the same biological roots that cause metabolic stress and immune weakness. You can use this information in real life to strengthen your system naturally and safely. Here are five practical ways to start:

1. **Support your metabolic balance through a healthy lifestyle** – Essential oils from Vicks plant are just one supportive tool in a much larger strategy to support long-term metabolic health. To truly lower your diabetes risk, you need to focus on **restoring mitochondrial function** – your cells' ability to make energy efficiently. That means eliminating **processed foods**, especially those made with vegetable oils high in **linoleic acid (LA)**, which damage mitochondria and reduce cellular energy.

You also need to eat enough healthy carbohydrates – aim for about 250 grams per day from sources like root vegetables, fruit, and white rice – to fuel your mitochondria properly. Environmental factors like **endocrine-disrupting chemicals**

in plastics and **electromagnetic fields (EMFs)** interfere with mitochondrial repair, so reducing your exposure to these hidden stressors is just as important as what you eat.

**Essential oils** help, but only when your broader lifestyle supports energy production at the cellular level.

## **2. Use essential oils strategically to support overall balance and resilience –**

Essential oils are concentrated plant extracts that work through both scent and skin absorption to influence your body's stress response, immune activity, and energy metabolism. The key is consistency and moderation – just a few drops diffused in your home or blended with a carrier oil like coconut have measurable effects on mood, focus, and relaxation.

Essential oil compounds from Vicks plant, lavender, rosemary, and citrus each offer unique benefits, from **promoting calm** to supporting immune defense. When used intentionally, essential oils help create an environment that keeps your body's natural systems – including blood sugar control, digestion, and immune health – functioning in harmony.

## **3. Target fungal issues at the source – not just the symptoms –** Chronic **yeast** or fungal infections, whether on your skin, nails, or in your gut, often signal deeper imbalance. You can support healing by keeping your internal terrain less hospitable to fungal growth: limit ultraprocessed foods, include fermented foods like sauerkraut or kefir, and apply diluted essential oil blends topically to affected areas.

This approach helps your body correct the underlying imbalance rather than relying solely on synthetic antifungal creams that lose effectiveness over time.

## **4. Grow your own healing garden –** You don't need a tropical climate to cultivate Vicks plant – it thrives in poor soil and sunlight. Keeping the plant at home gives you easy access to its leaves for teas and tinctures while adding a natural air purifier to your environment. Growing it also builds the confidence that you can take control of your own health through simple, daily choices.

**5. Adopt natural daily rhythms to restore your body's balance** – Stress throws your blood sugar, hormones, and immunity off track. Build simple rhythms into your day – wake with sunlight exposure, eat at consistent times, and unplug from screens at night. Pair this with five minutes of breathing, stretching, or gratitude journaling to calm your nervous system.

Just as Vicks plant compounds help restore internal balance at the cellular level, your routines restore harmony at the system level. When you focus on building strength at the root – your metabolism, gut, and immune system – the rest of your health follows naturally.

## **FAQs About Vicks Plant for Health**

**Q: What is Vicks plant, and why is it gaining attention in modern research?**

**A:** Vicks plant (*Plectranthus neochilus*), also known as lobster flower or boldo-rasteiro in Brazil, is a fragrant herb from the mint family long used in traditional medicine for digestion, headaches, and liver support. Modern studies show that its essential oils contain compounds with measurable effects on blood sugar regulation, antifungal defense, and antioxidant protection, making it important for both medicinal and ecological uses.

**Q: How does Vicks plant support healthy blood sugar levels?**

**A:** Research published in *Current Pharmaceutical Analysis* found that compounds in the plant's essential oil – especially citronellyl butyrate – work similarly to prescription diabetes drugs by blocking an enzyme that breaks down hormones involved in insulin release.<sup>4</sup> This helps your body maintain steadier blood sugar after meals and improves insulin sensitivity naturally.

**Q: What makes essential oil from Vicks plant effective against fungal infections?**

**A:** A study in the International Journal of Complementary & Alternative Medicine showed that the oil was highly effective at stopping the growth of a fungus responsible for skin and lung infections.<sup>5</sup> Its antifungal strength comes from a mix of natural compounds. Because these compounds work together through multiple mechanisms, the fungus is less likely to develop resistance compared with synthetic antifungal drugs.

**Q: Does Vicks plant offer benefits beyond medicine?**

**A:** Yes. A review published in *Ciência e Natura* found that Vicks plant contributes to environmental health as well as human wellness. It improves soil quality, repels pests naturally, tolerates drought, and helps clean polluted environments through phytoremediation – a process where plants absorb and detoxify contaminants. This makes it valuable not only for herbal medicine but also for sustainable agriculture and ecological restoration.

**Q: How can I safely use Vicks plant and its essential oil at home?**

**A:** You can grow Vicks plant easily in sunny areas or containers, then use its leaves to make teas, tinctures, or infused oils. The essential oil can be diffused for stress relief or diluted with a carrier oil for topical use to support skin and immune health. Like all concentrated plant extracts, essential oils should be used in moderation and not ingested directly unless under expert guidance.

Regular, consistent use as part of a balanced lifestyle – alongside a nutrient-rich diet and stress management – helps reinforce the plant's benefits for metabolism, immunity, and overall resilience.

## Sources and References

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- <sup>1, 4</sup> [Current Pharmaceutical Analysis March 2025, Volume 21, Issue 3, Pages 169-178](#)
- <sup>2, 5</sup> [International Journal of Complementary & Alternative Medicine](#)
- <sup>3</sup> [Ciência e Natura September 2020, 42:e12](#)