

Can This Popular Herb Help Stop Seizures?

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✓ Fact Checked

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STORY AT-A-GLANCE

- › Cilantro and coriander seed are names identifying the two stages of development of the plant genus *Coriandum sativum*. Cilantro refers to the initial leafy stage. Once it flowers and develops seeds, it becomes known as coriander
- › Recent research has found cilantro leaf contains a potent potassium channel-activating anticonvulsant, suggesting it may benefit those suffering epileptic seizures
- › Cilantro activates specific potassium channels responsible for regulating electrical activity in your brain, thereby reducing seizure activity
- › The primary active ingredient in coriander seed is linalool, which has been shown to prevent oxidative damage, inhibit microbial growth, enhance mood, improve cognition, alleviate anxiety, protect against neurological diseases and reduce pain
- › Medicinal use of *Coriandum sativum* – including both leaves and seeds – include treatment of stomachache and nausea, digestive complaints, upper abdominal complaints such as uncomfortable fullness, flatulence and griping (cramps or spasms in the bowel or stomach) and constipation

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Cilantro and coriander seed are names identifying the two stages of development of the plant genus *Coriandum sativum*. Cilantro refers to the initial leafy stage of the life cycle.

Once the plant goes through its flowering stage and seeds begin to develop, it becomes known as coriander seed.¹

So, coriander is unique in that it's both an herb (the leaves) and a spice (the seeds). In this article, the term *Coriandrum sativum* refers to both parts of the plant equally. When a specific part of the plant is discussed, the terms cilantro and coriander or coriander seed will be used.

Cilantro Leaf – A Potent Anticonvulsant

Cilantro is known to be rich in dietary folate and ascorbic acid (vitamin C),² and may help detoxify heavy metals like mercury, arsenic, cadmium and lead.³ Recent research^{4,5} has also found cilantro leaf contains a potent potassium channel-activating anticonvulsant, suggesting it may benefit those suffering epileptic seizures. As explained in this paper, published in the July 2019 issue of *The FASEB Journal*:⁶

"Neuronal voltage-gated potassium channel subfamily Q (KCNQ) dysfunction can cause severe epileptic encephalopathies that are resistant to modern anticonvulsants.

*Here we report that cilantro (*Coriandrum sativum*) ... is a highly potent KCNQ channel activator. Screening of cilantro leaf metabolites revealed that one, the long-chain fatty aldehyde (E)-2-dodecenal, activates multiple KCNQs, including the predominant neuronal isoform ... and the predominant cardiac isoform ...*

(E)-2-dodecenal also recapitulated the anticonvulsant action of cilantro, delaying pentylene tetrazole-induced seizures ... The results provide a molecular basis for the therapeutic actions of cilantro and indicate that this ubiquitous culinary herb is surprisingly influential upon clinically important KCNQ channels."

In other words, cilantro activates specific potassium channels responsible for regulating electrical activity in your brain, thereby reducing seizure activity. Lead investigator Geoff

Abbott, Ph.D., professor of physiology and biophysics at the UCI School of Medicine, told Newswise:⁷

"Specifically, we found one component of cilantro, called dodecenal, binds to a specific part of the potassium channels to open them, reducing cellular excitability.

This specific discovery is important as it may lead to more effective use of cilantro as an anticonvulsant, or to modifications of dodecenal to develop safer and more effective anticonvulsant drugs.

In addition to the anticonvulsant properties, cilantro also has reported anticancer, anti-inflammatory, antifungal, antibacterial, cardioprotective, gastric health and analgesic effects. And, the best part is it tastes good!"

Health Benefits of Coriander Seed

Coriander seed and coriander seed essential oil have also been linked to a wide range of health benefits. For example, as noted by the American Botanical Council, the seeds have been used to treat dysentery, bronchitis, anxiety and insomnia.⁸

A topical ointment made from coriander seed may also provide relief for arthritis and rheumatism pain, an effect attributed to its anti-inflammatory effects.⁹ The primary active ingredient in coriander seed is linalool, responsible for coriander's pleasant smell. Linalool, and thus coriander seed, have been shown to:¹⁰

Prevent oxidative damage in the liver, heart, kidneys and brain

Improve diabetes management by improving insulin response and protecting against pancreatic islet damage; lowering glucose levels and postprandial glycemia

Enhance mood

Improve memory and learning

Alleviate anxiety

Protect against neurological disease by reducing memory deficits and oxidative stress in the brain

Reduce pain by inhibiting pain response

Inhibit microbial growth, including fungal infections affecting the skin and infections caused by Escherichia coli, Staphylococcus aureus, S. haemolyticus, Pseudomonas aeruginosa and Listeria monocytogenes.¹¹ According to a review in Alternative and Complementary Therapies:¹²

"One study looked at the effect of coriander seed oil on Acinetobacter baumannii, a gram-negative bacteria [sic] developing increasing antibiotic resistance.

In a microdilution broth susceptibility assay, coriander oil synergistically potentiated the action of the drugs chloramphenicol, ciprofloxacin, gentamicin, and tetracycline against A. baumannii. The synergistic effect of coriander on chloramphenicol, to which the bacteria were resistant, was pronounced ..."

Topically, coriander seed essential oil has demonstrated effectiveness for the treatment of impetigo (a contagious skin infection caused by staph or strep bacteria), chronic wound care and acute outbreaks of herpes simplex¹³

In India, coriander seed is used in the treatment of rheumatic fever and reproductive problems such as spermatorrhea (spontaneous, involuntary ejaculation) and leucorrhea (vaginal infection).¹⁴ Studies have also found the seeds to have aphrodisiac properties.¹⁵

Coriander Seed Safety and Dosage Guidelines

According to a 2016 review in Nutrition Today,¹⁶ "Coriander oil and linalool lack toxicity, which has led to the assessment that the essential oil is considered safe as a food additive at levels currently approved for use."

The dosage used in traditional medicine is said to be 1 gram to 5 grams of coriander seed powder three times a day, or between 14 and 71 milligrams, three times a day, for a 154-pound person.¹⁷ Coriander seed tea can also be made using 4 grams to 30 grams of seed in about 3.5 ounces of boiling water (100 milliliters).¹⁸

According to Nutrition Today,¹⁹ "Adverse effects associated with any historical use of coriander seeds and leaves in traditional medicines have not been documented, although a case report from Iran described endocrinotoxicity in a woman who had taken approximately 200 mL of a 10% leaf extract for seven consecutive days."

General Benefits of Coriandum Sativum

According to one review of the medicinal benefits of Coriandum sativum:²⁰

"Coriander is used in the preparation of many household medicines to cure bed cold, seasonal fever, nausea, vomiting, stomach disorders and also used as a drug for indigestion, against worms, rheumatism and pain in the joints.

Many of [the] healing properties of coriander can be attributed to its exceptional phytonutrients and hence, it is often referred to as [a] storehouse for bioactive compounds."

Areas of use for Coriandum sativum listed by the American Botanical Council include:²¹

- Stomachache and nausea
- Dyspeptic (digestive) complaints
- Loss of appetite
- Upper abdominal complaints such as uncomfortable fullness, flatulence and griping (cramps or spasms in the bowel or stomach)

- Constipation

Yet another paper,²² "Cilantro — Culinary Herb or Miracle Medicinal Plant?" published in *Alternative and Complementary Therapies*, cite research showing *Coriander sativum* being useful in the treatment of:

"... digestive disorders, respiratory and urinary disorders, anxiety and insomnia, allergies, amoebic dysentery, burns, coughs, cystitis, dizziness, edema, hayfever, headaches, hemorrhoids, rashes, urethritis, urinary tract infections, urticarial, and vomiting. In Morocco, coriander is used to treat ... diabetes and dyslipidemia."

Why Some People Cannot Stand the Taste of Cilantro

Cilantro tends to be either loved or hated. Those who cannot stand it will often say it tastes like soap, and researchers investigating the matter have found there's a genetic component^{23,24} responsible for this divergent taste experience. I happen to be one of those who doesn't tolerate it.

As reported by HuffPost,²⁵ scientists have determined that cilantro haters have olfactory receptor and taste receptor genes that "pick up on the smell of aldehyde chemicals" found in both cilantro and soap.

Research²⁶ published in the journal *Flavor* claims 21% of east Asians, 17% of Caucasians, 14% of people of African descent, 7% of south Asians, 4% of Hispanics and 3% of Middle Easterners dislike cilantro.

Cilantro Purchase, Storage and Usage Guidelines

If you like the taste of cilantro, you're in luck, considering its many health benefits. For the richest flavor experience and to avoid pesticide residues, opt for organic cilantro. Look for fresh cilantro with vibrant green leaves, without indicators of spoilage or yellow discoloration.

Fresh cilantro can last for a week in the refrigerator, and maybe even longer if you follow the storage tips outlined by The Spruce:²⁷

- Place fresh stems in a glass of water, covering the opening loosely with a plastic bag; keep refrigerated.
- Change the water in the glass every two to three days.
- Wash the leaves right before using. Washing before storing will speed spoilage, causing the leaves to turn into a slimy green color.

To prepare cilantro for cooking, make sure the leaves have been thoroughly dried, and have a sharp ceramic knife ready. The book, "Rick Bayless Mexican Kitchen," suggests the following steps for chopping cilantro:²⁸

Procedure

1. Bunch the leafy ends of the herb together.
2. Fold under the top portion of leaves.
3. Slice across the cilantro very thinly, including the stems. Continue until there are no more leaves left and you only have stems.
4. Using your fingertips, "fluff" the thinly sliced cilantro multiple times so the stems fall to the bottom of the pile.
5. Separate the fluffed and sliced leaves and transfer them onto a small dish.

Avoid using a dull knife or over-chopping cilantro as this can "bruise" the herb and cause its flavor to spill onto the chopping board. Ideally, try adding cilantro raw or near the end of the cooking process. The leaves are very fragile, so adding the cilantro last will retain its delicate flavor and texture. Cilantro can hold its own ground in terms of flavor and does not need additional flavoring.

Sources and References

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