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Black Seed Oil — A Natural Ally in Maintaining Disease-Free Living

Analysis by Dr. Joseph Mercola | May 15, 2024

STORY AT-A-GLANCE

- Studies have shown black seed oil's impressive potential to help protect against cancer, as well as other disorders like diabetes, asthma and even respiratory ailments
- Thymoquinone (TQ), black seed oil's main bioactive component, is the primary compound responsible for its many benefits. This monoterpene molecule helps alter certain molecular and signaling pathways related to cancer and other inflammatory and degenerative diseases
- Thymoquinone helps reduce the risk of cancer by inhibiting cell proliferation, triggering apoptosis (cancer cell death) and preventing cancer cell migration, but without harming healthy cells
- Black seed oil contains 1.7 grams of linoleic acid per teaspoon, so only take it as a supplement

Herbal oils have a long history of use in traditional medicine, and one particular example that has stood the test of time is black seed oil. Not to be confused with black cumin (Bunium bulbocastanum),[1] black seed oil comes from the Nigella sativa (N. sativa) plant, which grows in Southern Europe, Southwest Asia and the Middle East.[2] The seeds are shaped like tiny Brazil nuts and coal-black (as their name implies).

Black seed oil is regarded for its potential to help protect against diseases and heal ailments — it has antidiabetic, analgesic, anti-inflammatory, antimicrobial and

antioxidant properties, to name a few.[3] Studies have also shown its impressive potential to help protect against cancer.

Studies Demonstrate Black Seed Oil's Anticancer Effects

In his COVID Intel[4] Substack article, Canadian physician William Makis posted a summary of five papers that focus on the anticancer potential of black seed oil. According to the studies,[5,6,7,8,9] N. sativa may help protect against different types of cancer in humans, including:

- **Breast cancer —** A study in Fitoterapia[10] found that the combination of phytochemicals thymoquinone (TQ), carvacrol and trans-anethole in black seed oil, even in small doses, was more efficient in preventing breast cancer cells from spreading, as opposed to using individual but higher concentrations of these chemicals.
- **Pancreatic cancer —** Published in the Frontiers of Oncology journal, the study[11] notes that thymoquinone "regulates the occurrence and development of pancreatic cancer at multiple levels and through multiple targets that communicate with each other."
- **Colorectal cancer —** The researchers noted[12] that TQ-LNCs (thymoquinone lipid nanocapsules) helped reduce tumor size in mice with colorectal cancer.
- **Prostate and colon cancers —** According to the study,[13] N. sativa oil helped slow down the growth of prostate and colon cancer cells, especially when higher doses of thymoquinone were administered.
- **Hepatic cancer, cervical cancer, leukemia and more —** Using nanotechnology, the researchers[14] observed the anticancer efficacy of TQ on its own or when combined with other cancer treatments.

The five studies highlight black seed oil's main bioactive component, thymoquinone (TQ), as the primary compound responsible for its anticancer benefits.

Thymoquinone's Mechanism of Action

Chemically known as 2-methyl-5-isopropyl-1, 4-benzoquinone, thymoquinone is a monoterpene molecule that's been found to alter certain molecular and signaling pathways related to cancer and other inflammatory and degenerative diseases.[15]

According to the featured research,[16] thymoquinone helps reduce the risk of cancer by inhibiting cell proliferation, triggering apoptosis (cancer cell death) and preventing cancer cell migration, but without harming healthy cells. One study notes:[17]

> *"TQ [thymoquinone] is the main bioactive constituent in N. sativa that has been intensively investigated in vitro and in vivo and shown to have several therapeutic properties, including anticancer activity. Its effectiveness on cancers is demonstrated in murine model studies in which TQ enhances higher survival rates, reduced tumor volume, reduced pro-cancerous molecules and elevated anti-tumorigenesis biomarkers.*
>
> *Meanwhile, in in vitro studies, TQ has shown the ability to inhibit cancer staging such as migration, proliferation, and invasion or apoptosis induction by repressing the activation of vital pathways, such as JAK/STAT and PI3K/AKT/mTOR."*

In the featured article,[18] Makis summarizes the mechanisms of action of thymoquinone, explaining that this phytochemical's unique feature is its ability to activate certain proteins that prevent tumors from forming. It also turns off oncogenes, which are genes that promote cancer growth.

Considering that cancer is now the leading cause of death worldwide — with 10 million people dying in 2020 from this illness, according to the World Health Organization (WHO)[19] — the rise of natural interventions like black seed oil is certainly an advantage, especially since conventional cancer treatments today are rife with side effects.

> *"Cancer continues to threat [sic] mortal alongside scientific community with burgeoning grasp. Most efforts directed to tame Cancer such as radiotherapy or*

chemotherapy, all came at a cost of severe side effects.

The plant derived bioactive compounds on the other hand carries an inevitable advantage of being safer, bioavailable & less toxic compared to contemporary chemotherapeutics," one of the studies reports.[20]

Black Seed Oil May Also Protect Against COVID-19

During the height of the COVID-19 pandemic, N. sativa was found to be one of the natural remedies that may be potentially beneficial against the viral infection. One study[21] published in 2021 reviewed the active ingredients in black seed oil, mainly thymoquinone, α-hederin, and nigellidine, and found that they may help combat COVID-19.[22]

Aside from having significant antihistamine effects, these black seed oil compounds help downregulate interferon regulatory factor-3 activation, which is essential in innate bacterial and viral immune responses.[23]

Thymoquinone may also help promote autophagy, which is the body's mechanism of eliminating damaged cells. A 2018 study[24] found that thymoquinone can help promote autophagy in the heart muscle. This is crucial, as COVID-19 was found to suppress autophagy; therefore, thymoquinone's effects on autophagy are indicative of its antiviral potential.

In addition, the researchers noted that thymoquinone may help inhibit enzymes that can produce leukotriene and prostaglandins,[25] which are both inflammatory agents.

"Considering the anti-inflammatory actions of N. sativa seed and its different extracts, these might be potentially used for the prevention as well as cure of SARS-CoV-2 viral infection," the researchers report.[26]

Black seed oil is listed as one of the Front Line COVID-19 Critical Care Alliance's (FLCCC) recommended first-line treatments for COVID-19,[27] along with ivermectin, hydroxychloroquine (HCQ) and zinc.

What Else Can Black Seed Oil Do for You?

In different cultures, N. sativa has been used for centuries to help ease ailments. The Indians consider it an important element in their Unani and Ayurvedic traditional systems of medicine. Meanwhile, the Muslims value it as one of the "greatest forms of healing medicine." In fact, the Prophetic Hadith — the compilations of the teachings of Muhammad — refer to black seed as "the remedy for all diseases except death."[28]

To give you an idea of just how useful black seed oil is, here's a list of ways it can benefit your health:

- **Helps ease asthma and other respiratory problems —** Diffusing the oil may help ease asthma attacks. A 2019 study noted its potential for treating allergies as well as obstructive lung disorders.[29]

- **Promotes normal blood pressure levels —** A double-blind, randomized experiment published in the Phytotherapy Research[30] found that participants who were given black seed oil daily had decreased systolic and diastolic blood pressure levels compared to those who were only given a placebo.

- **May help in diabetes management —** A Malaysian study[31] looked at N. sativa's ability to repair pancreatic damage related to Type 1 diabetes in animal subjects. They found that those that were given the oil had increased serum insulin levels and reduced blood glucose levels.

- **Helps protect against the toxic effects of aflatoxins —** These are substances produced by certain types of mold, particularly Aspergillus flavus and Aspergillus parasiticus. Aflatoxin exposure may lead to an increased risk of liver cancer.[32]

  In a study published in the International Journal of Health Sciences, animal subjects that were exposed to aflatoxins and given black seed oil had reduced effects on their kidneys and liver, showing its cytoprotective effects.[33]

Black Seed Oil May Also Help With Dermatological Conditions

N. sativa oil may also help with skin ailments and promote a healthier complexion. In one review of the literature published in the Journal of Dermatology and Dermatologic Surgery,[34] black seed oil was found to help promote wound healing in farm animals as well as reduced the effects of vitiligo in lizards.

> *"In a randomized double blind clinical study, patients applied N. sativa oil to lesions of vitiligo twice daily for 6 months had a significant decrease in the vitiligo area scoring index with no significant side effects,"* the researchers noted.[35]

Another clinical study,[36] this time on humans, found that a 10% black seed oil lotion reduced acne vulgaris after two months of use, mainly due to its anti-inflammatory, immunomodulatory and antimicrobial properties. The study says 67% of patients were "fully satisfied" and 28% were "partially satisfied" with the treatment.

> *"The 10% Nigella sativa oil lotion showed no side effects, and can be considered very safe when compared with other topical therapies like tretinoin and benzoyl peroxide that are commonly associated with local and systemic side effect such as local irritation, burning sensation, dryness of skin, peeling and teratogenic effects.*
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> *The present study recommends the use of 10% Nigella sativa oil lotion as a topical therapy for acne vulgaris, as it is a natural plant extract,"* the researchers conclude.[37]

However, remember that black seed oil may still have certain side effects on sensitive individuals when applied topically. One study notes that the oil caused contact dermatitis in two persons.[38] No adverse effects were reported when the oil was used internally, though. To be safe, dilute pure black seed oil with a safe carrier oil and apply a small amount on your skin to check for any adverse reactions.

Black Seed Oil Contains Linoleic Acid, So Be Mindful of Dosage

Since it is a seed oil, N. sativa contains unsaturated fatty acids, with linoleic acid (LA) as the primary constituent, making up 50% to 60%. Other fatty acids include oleic acid (20%), eicosadienoic acid (3%) and dihomolinoleic acid (10%).[39]

Although it's advisable to avoid omega-6 fats, particularly LA, you shouldn't be too worried if you're only using black seed oil as a supplement (as opposed to consuming ultraprocessed foods or deep-fry foods in seed oils, which exposes you to excessively high amounts of LA).

Each teaspoon of black seed oil contains about 1.7 grams of LA, so avoid taking higher amounts than that. Ideally, you'll want to limit your LA intake to 5 grams a day or less, which is closer to what our ancestors used to get. Black seed oil also contains oleic acid, which is nearly as damaging as LA.

Use an online tool like Cronometer.com to help you track your food and LA intake. The key is to use a digital scale to carefully weigh your food, so you can enter the exact amount to the nearest gram.

Once you've entered your food for the day, go to the "Lipid" section on the lower left side. You just need to look at how many grams of omega-6 are present to find out how much LA is in your diet for that day. Roughly 90% of the omega-6 you eat is LA. To learn more about the dangers of excessive linoleic acid, I advise you to read my article, "**Linoleic Acid — The Most Destructive Ingredient in Your Diet**."

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