Wormwood: The Parasite-Killing, Cancer-Fighting Super Herb

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Published: June 12, 2017
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What do Edgar Degas, Vincent van Gogh and Pablo Picasso all have in common aside from their incredible painting abilities? These three artists all shared a love of <u>absinthe</u>, a botanical spirit made from wormwood, anise and fennel. Absinthe is currently illegal in the U.S. as well as many other countries, but it's still available in Europe. You may have heard of wormwood because of its inclusion in this famous European beverage, but did you know that it also holds an ability to aid many common and serious health concerns?

It's true. Wormwood is actually used to eliminate intestinal worms, especially roundworms and pinworms. This is exactly why I recommended it as part of my **parasite cleanse**. Just how powerful is wormwood? Well, it's owed thanks and praise for being the source of the key ingredient for the herbal drug <u>artemisinin</u>, which is the most powerful antimalarial on the market. (1)

And it doesn't stop there. Scientific research also shows that wormwood can even kills cancer cells. (2) It can also be used to treat anorexia, insomnia, anemia, a lack of appetite, flatulence, stomach aches, jaundice and indigestion. (3)

Wormwood herb is used in alcoholic beverages while the wormwood star is mentioned in the bible. Truly an intriguing plant to say the least, but can this herb really kill parasites and cancer? Studies say yes, and the positive medicinal effects keep on coming.

Of course, there is good reason for caution with wormwood products (like absinthe) as well, but once you learn about thujone, you'll see why not all wormwood products are created equally. What to watch out for and what to know — read on to get your full dose of wormwood education.

6 Wormwood Benefits

1. Beats Malaria

<u>Malaria</u> is a serious disease caused by a parasite that is transmitted by the bite of infected mosquitoes and invades human red blood cells. Artemisinin is an extract isolated from the plant *Artemisia annua*, or sweet wormwood. Artemisinin is an herbal drug that's the most powerful antimalarial on the market. It's known for quickly reducing the number of parasites in

the blood of patients with malaria. The World Health Organization recommends artemisinin-based combination therapies as first-line treatment for uncomplicated *P. falciparum* malaria. (4)

Recent experiments have shown that artemisinin is effective against the malaria parasite because it reacts with the high levels of iron in the parasite to produce free radicals. The free radicals then destroy the cell walls of the malaria parasite.

2. Fights Cancer Cells

According to recent studies, artemisinin can battle iron-enriched breast cancer cells similar to the way it eliminates malaria-causing parasites, making it a potential **natural cancer treatment** option for women with breast cancer.

Cancer cells can also be rich in iron since they commonly soak it up to facilitate cell division. Researchers in a 2012 study tested samples of breast cancer cells and normal breast cells that had first been treated to maximize their iron content. The cells were then treated with a water-soluble form of artemisinin, an extract of wormwood.

Results were quite impressive. The normal cells showed little change, but within 16 hours, almost all of the cancer cells were dead and only a few normal cells were killed. Bioengineer Henry Lai believes that because a breast cancer cell contains five to 15 more receptors than normal, it absorbs iron more readily and hence is more susceptible to artemisinin's attack. (5)

3. Gets Rid of Parasites

Wormwood is used to eliminate intestinal worms, especially <u>pinworms</u> and <u>roundworms</u>. Pinworms are the most common worm infection in the U.S. with pinworm eggs spread directly from person to person. Roundworms, or nematodes, are parasites that also infect human intestines. Pinworms can cause extreme itching in the anal region while roundworms can cause cough, shortness of breath, abdominal pain, nausea and diarrhea, blood in the stool, weight loss, and presence of the worm in vomit or **stool**.

Parasites are never a good thing, but thankfully they're treatable with natural remedies. Wormwood (*Artemisia absinthium*), black walnut (*Juglans nigra*), and clove (*Syzygium aromaticum*) are commonly used together to kill off a parasitic infection. It's said that when these three are taken at the same time, together they're able to break the parasite's life cycle. (6)

4. Treats Crohn's Disease

In Germany, a double-blind study examined the effectiveness of an herbal blend containing wormwood at a dose of 500 milligrams three times per day versus a placebo over 10 weeks in 40 patients suffering from Crohn's disease who were already on a steady daily dose of steroids. This initial stable dose of steroids was maintained until week 2, after that a defined tapering schedule was started so that by the beginning of week 10 all the patients were steroid-free.

Researchers found that there was a steady improvement in **Crohn's disease symptoms** in 18 patients (90 percent) who received wormwood in spite of the decrease of steroids. After eight weeks of treatment with wormwood, there was almost complete remission of symptoms in 13 (65 percent) patients in this group as compared to none in the placebo group. This remission lasted until the end of the observation period, which was 20 weeks (12 weeks later), and the addition of steroids was not necessary.

The results were truly impressive and suggestive of wormwood being able to decrease or eliminate the need for steroids in Crohn's disease patients. Additionally, results indicate that wormwood has positive effects on mood and quality of life, which is not achieved by other standard Crohn's disease medications. (7)

5. Contains Antimicrobial and Antifungal Abilities

In vitro studies have shown that the essential oils of wormwood have antimicrobial activity. Research published in the *Journal of Agricultural and Food Chemistry* showed that wormwood oil showed a broad spectrum of antimicrobial activity against several bacterial strains, including E. coli and salmonella. (8) Every year, <u>salmonella</u> is estimated to cause 1 million food-borne illnesses in the U.S. alone, with 19,000 hospitalizations and 380 deaths. <u>E. coli</u> is another concerning type of bacteria that can cause a range of issues from diarrhea to urinary tract infections to pneumonia and other illnesses.

Not only can wormwood kill bacteria, but it's also been shown to kill fungi. Essential oil distilled from the aerial parts of *Artemisia absinthium* inhibited the growth of a very broad spectrum of tested fungi (11 to be exact). The wormwood essential oil also showed antioxidant properties during testing. (9)

Another study published in *Planta Medica* showed that *A. absinthium* oil inhibited the growth of *Candida albicans*. (10) This is the most common type of yeast infection found in the mouth, intestinal tract and vagina, and it may affect skin and other mucous membranes. Candida albicans can cause all kinds of common yet highly unwanted **candida symptoms**.

6. Treats SIBO

Many people turn to natural and alternative treatments when it comes to problems with their gastrointestinal health, and for good reason. Studies show that herbal remedies like wormwood are as good or even better at fighting small intestinal bacterial overgrowth or SIBO symptoms.

Today's typical treatment of SIBO is limited to oral antibiotics with varying rates of effectiveness. A 2014 study had 104 patients who tested positive for newly diagnosed SIBO take either a high dose of <u>rifaximin</u> or an herbal therapy daily for four weeks. The herbal products were specifically chosen because they contained antimicrobial herbs like wormwood, **oregano** oil, thyme and berberine extracts, which have been shown to provide broad-spectrum coverage against the types of bacteria most commonly involved in SIBO.

Of the patients who received herbal therapy, 46 percent showed no evidence of SIBO on follow-up tests compared to 34 percent of rifaximin users. Adverse effects reported among those taking rifaximin included anaphylaxis, hives, diarrhea and *C. difficile* colitis, while only one case of diarrhea and no other side effects were reported in the herbal therapy group.

The study concluded that herbal therapies are at least as effective as rifaximin for eradication of SIBO. Additionally, the herbal therapy with wormwood appears to be just as effective as triple antibiotic therapy for individuals who don't respond to rifaximin. (11)

Wormwood Plant Origin and Chemical Components

What is wormwood exactly? *Artemisia absinthium* is an odorous, perennial that belongs to the *Asteraceae* or *Compositae* family, more commonly known as the daisy family. This artemisia plant releases an aromatic odor and has a spicy, bitter taste. Many species of the artemisia family tend to have medicinal properties. It's related to *Artemisia vulgaris*, or <u>mugwort</u>, another medicinal herb.

The wormwood plant is native to Europe and parts of Africa and Asia. Today, it also grows wild in the U.S., most commonly along roads or paths. Also called shrub wormwood, *Artemisia absinthium* is a shrubby plant that typically grows to be one to three feet tall. It has gray-green or white stems covered by fine hairs and yellowish-green leaves that are hairy and silky. The leaves of the plant have glands that contain resinous particles where the natural insecticide is stored.

Sweet wormwood (*Artemisia annua*), also known as sweet annie, sweet sagewort, annual mugwort or annual wormwood, is a common type of wormwood native to temperate Asia but naturalized in parts of North America.

Wormwood can be used either fresh or dried. All the aerial portions (stem, leaves and flowers) of the plant have medicinal uses. The essential oil is extracted from the leaves and flowering tops by steam distillation. One study of the essential oil of *Artemisia absinthium* found that it contains at least 28 components representing 93.3 percent of the oil. The main components are β - pinene (23.8 percent) and β - thujone (18.6 percent). (12)

Thujone is the potentially poisonous chemical found in wormwood. Distilling the herb in alcohol increases the thujone concentration, which is what makes absinthe such a debatable liquor of choice.

Wormwood's biologically active compounds include:

- acetylenes (trans-dehydromatricaria ester, C13 and C14 trans-spiroketalenol ethers, and others)
- ascorbic acid (vitamin C)

- azulenes (chamazulene, dihydrochamazulenes, bisabolene, camphene, cadinene, sabinene, trans-sabinylacetate, phellandrene, pinene and others)
- carotenoids
- **flavonoids** (quercitin 3-glucoside, quercitin 3-rhamnoglucoside, spinacetin 3-glucoside, spinacetin 3-rhamnoglucoside, and others)
- lignins (diayangambin and epiyangambin)
- phenolic acids (p-hydroxyphenylacetic, p-coumaric, chlorogenic, protocatechuic, vanillic, syringic and others)
- tannins
- thujone and isothujone
- sesquiterpene lactones (absinthin, artabsin, anabsinthin, artemetin, artemisinin, arabsin, artabin, artabsinolides, artemolin, matricin, isoabsinthin and others)

Wormwood History and Interesting Facts

The name wormwood is derived from ancient use of the plant and its extracts as an intestinal anthelmintic, antiparasitic drug that expels parasitic worms and other internal parasites from the body.

In ancient Egyptian times, it was a commonly used medicinal plant, specifically for anal pain, and as an additive to wine. Later on it was used in European folk medicine to induce labor. The plant, when steeped into a strong tea, has been used traditionally in Europe as well as a bitter stomach stabilizer to stave off indigestion.

A favorite alcoholic beverage in 19th century France, absinthe was said to be addictive and associated with a collection of serious side effects known as absinthism or irreversible damage to the central nervous system.

Absinthe was made popular by some very well-known writers and artists, such as Ernest Hemingway, Henri de Toulouse-Lautrec, Édouard Manet, Edgar Degas, Vincent van Gogh, Pablo Picasso and Oscar Wilde. The manic depressive painter Vincent van Gogh was addicted to absinthe, and some say his continual drinking of it led to many of his paintings having a green or yellowish tint (due to the thujuone's hallucinatory effects) — and that the wormwood actually enhanced his epilepsy.

Absinthe is an anise-flavored spirit derived from several botanicals. Absinthe ingredients include the flowers and leaves of wormwood, anise and **fennel**. It's illegal in the U.S. as well as many other countries. However, it's not banned in some European Union countries as long as the thujone content is less than 35 milligrams per kilogram.

Thujone is the potentially poisonous chemical found in wormwood. Distilling wormwood in alcohol increases the thujone concentration. Thujone-free wormwood extract is currently used as a flavoring in alcoholic beverages like vermouth.

Wormwood, or its derivative chemical components, have famously been mentioned in many a novel, play and in other art forms, from Bram Stoker's "Dracula" to John Locke essays to "Romeo and Juliet."

There are several **Bible references to this herb** as well. The word "wormwood" appears several times in the Old Testament, translated from the Hebrew term la'anah (which means "curse" in Arabic and Hebrew). It's also spoken of in the New Testament in the Book of Revelation: "The third angel sounded his trumpet, and a great star, blazing like a torch, fell from the sky on a third of the rivers and on the springs of water — the name of the star is Wormwood. A third of the waters turned bitter, and many people died from the waters that had become bitter." (Rev 8:10—11)

Final Thoughts on Wormwood

- Absinthe is a botanical spirit made from wormwood, anise and fennel, but that's not all wormwood is good for. It's used to eliminate intestinal worms, especially roundworms and pinworms, and it's the source of of the key ingredient for the herbal drug artemisinin, which is the most powerful antimalarial on the market.
- It's also been shown to kill cancer cells and treat anorexia, insomnia, anemia, a lack of appetite, flatulence, stomach aches, jaundice and indigestion.
- Specifically, this herb has been proven to beat malaria, kill breast cancer cells, get rid of
 parasites, treat Crohn's disease, contain antimicrobial and antifungal abilities, and treat
 SIBO.

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