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What Is Coralberry?

Analysis by Dr. Joseph Mercola | July 23, 2024

STORY AT-A-GLANCE

- While the ornamental plant coralberry has been virtually ignored until quite recently, a compound from the leaves has been found to prevent bronchial muscle contraction in animal studies
- Asthma sufferers often experience airway constriction from bronchial muscle contraction, which prevents adequate ventilation of the lungs and subsequent shortness of breath that could become life threatening if not controlled
- The coralberry leaf compound known as FR900359 has been described by researchers as even more effective in this capacity than the most common asthma drug, salbutamol

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A beautiful member of the huckleberry family of plants, the ornamental coralberry appears in many open wooded areas, sometimes by streams and riverbanks and often where post oak trees thrive. Rather than propagating through seeds, they grow in "colonies" as their roots form nodes under the ground, forming shrubs with arching branches that reach as high as 6 feet.

With its musical-sounding botanical name of Symphoricarpos orbiculatus, coralberry falls under a wide umbrella that encompasses other plants, including the Ardisia crenata. It also goes by the moniker of buckbrush, as well as Indian currant, wolfberry and waxberry.

Magenta-hued berries grow in sputnik-like clusters that can be collected in autumn and winter by shaking the branches so they fall onto drop cloths. Their tiny seeds can be extracted by macerating them in water. As a woodland plant, according to Wildflower.org:

> *"To keep it at a low height, cut it back to knee high every five to 10 years. If it gets too leggy, it can be cut back to the ground and it will come back bushier and with more berries the next year."*[1]

Birds love eating them and, as expected, research has found that a substance in the leaves of this plant, identified as FR900359 (FR), is very effective at preventing bronchial muscles from contracting, with great potential for treating asthma. Asthma is considered a chronic disease from lung inflammation, which narrows airways. Breathing can become difficult and symptoms are often severe and life threatening.

The National Heart, Lung and Blood Institute (NIH) advises sufferers to take an active role to control their asthma, in part, by avoiding triggers for long-term control and using quick-relief or "rescue" medicines when necessary.[2] According to the U.S. Centers for Disease Control and Prevention (CDC), around 8.7% of adults and 6.2% of children in the U.S. have been diagnosed with asthma.[3]

Up until very recently, coralberry plants were ignored as a medicinal source, which is interesting since they can be found growing prolifically in eastern parts of the U.S., as well as in Texas, Colorado and South Dakota, with some strains native to Asia.

Leaves From the Coralberry Effective as a Medicinal

Folklore has it that coralberries were used by Native Americans for treating eye problems, as well as for a mild sedative. There may be something to that, as the plant's dried roots, known as devil's shoestrings, came in handy for stunning fish to catch them. According to Science Daily, research at the University of Bonn, conducted in collaboration with asthma specialists from the U.K. and subsequently published in the journal Science Translational Medicine, found:

> *"FR900359 is very effective at preventing the bronchial muscles from contracting. Asthmatics regularly suffer from these pronounced contractions preventing adequate ventilation of the lungs. The resulting shortness of breath can be life-threatening."*[4]

The compound made from coralberry leaves was found to relieve such spasms more effectively than the common asthma drug salbutamol. In fact, study co-author Dr. Michaela Matthey commented that FR900359 achieved "a much greater effect" than traditional drugs,[5] and it lasted longer as well, Medical News Today[6] noted.

Researchers further noted that "chronic exposure to receptor-activating medications results in desensitization."[7] For people with severe asthma, there's a concern regarding **long-term usage of medications**, especially coupled with the fact that the disease is not really controlled and the fact that a sub-group of patients don't respond to current therapies to a meaningful degree.

How the Compounds Work to Alleviate Asthma Symptoms

Study leader Daniela Wenzel, Ph.D., explains that the mechanism is the inhibition of critical signaling molecules in cells, called G_q proteins — dependent signaling cascades — that are involved in numerous important processes in your body, including those that occur in the airway. As MedIndia explains:

> *"In the airways, G_q-coupled G protein coupled receptors (GPCRs) are thought to play an important role in controlling the tone of airway smooth muscle. FR works by specifically inhibiting G_q thereby inhibiting it from further triggering contractions."*[8]

When the mechanism is inhibited in this way, it doesn't, however, completely prevent contractions like those experienced by patients with severe asthma. Because various contracting signals "converge" on G_q proteins and trigger airway spasm, inhibiting the mechanism first results in greater effectiveness in preventing the contractions.

In mice studies, which went "exceptionally well" as there were no serious changes in their heart rate and blood pressure, the researchers were able to prevent asthmatic reactions to allergens such as dust mites, Wenzel explained.

There were hardly any side effects, as the active pharmaceutical ingredient could be applied via inhalation so only small quantities were absorbed into the bloodstream. However, it is not known whether the substance the scientists used is suitable to use in humans:

> *"Although the scientists have already been able to show that human bronchial muscle cells in a petri dish and isolated human airways react in a similarly promising manner, further tests, which could take years, are required prior to its application in people."*[9]

Asthma Causes and Possible Approaches to Improve Symptoms

It's interesting that, in children, eating more **fermented foods** and eggs, meat and raw (unpasteurized) milk is associated with lower rates of allergy incidence, including asthma. Researchers also noted that when pregnant women take **probiotics**, or include healthy bacteria in their diets, their children have a lower risk of developing asthma and allergies.[10]

What this may indicate is that when your gut microflora are unbalanced, allergies may be one of the results. Some fermented foods, such as raw, grass fed yogurt and fermented vegetables like sauerkraut and kefir, supply about 100 times more good bacteria than probiotic supplements, which is what makes eating them so beneficial for augmenting your gut flora.

Raw milk is another example of an unpasteurized food that contains beneficial bacteria, the reason being that it hasn't undergone pasteurization that kills off microbes indiscriminately. In fact, one study showed that among more than 8,000 school-aged children in Germany, Austria and Switzerland, those who drank raw milk were 41% less likely to develop asthma.[11]

The aforementioned dust mites happen to be one of the most common causes of asthmatic episodes, but one study showed that being exposed to them more often actually reduces incidence. In fact, young children's exposure to a little dust-mite activity reduced the allergy incidence by 63%.

Numerous studies indicate that rather than keeping everything your children touch 100% squeaky clean, being exposed to the dirt they might encounter by having a pet, for example, or playing outside, may make their immune systems stronger and their risk of allergies such as asthma dramatically lower.

Your Immune System and How It Protects You

Your immune system works in two ways to protect you from developing allergies. The first one is through white blood cells called Th1 lymphocyte. When your blood cells come under attack and become infected, T1 tackles them to take them out of commission.

The second ones, predictably known as Th2 lymphocytes, aka allergen-reactive type 2 helper T cells, are deployed into your system before infection has a chance to settle in by producing antibodies that effectively block undesirable microbes at the outset. It's a strategy that drives allergic responses to foreign organisms.

Studies suggest that at birth, babies' immune systems rely most on Th2 until their Th1 kicks in a little later. However, Th1 appears to require the "exercise" of fighting off infections and harmless microbes to stimulate the strength needed to react against allergic responses. It's known as the hygiene hypothesis, a premise based on the fact that allergies are exacerbated by a loss of healthy bacteria. One study notes:

> *"Interestingly, the Th1 cytokine interferon-gamma has been shown to act concurrently with Th2 cytokines in maintaining the chronic inflammatory response in allergic diseases, particularly in asthmatic airways.*
>
> *[E]vidence suggests that suppression of T-regulatory cells may contribute to the underlying immune mechanisms involved in allergy and asthma …*

Understanding early-life immune mechanisms responsible for atopic diseases, specifically how cytokines of T-regulatory cells act to balance the Th1 and Th2 immune response, continues to be a fruitful area of research."[12]

Natural Strategies for Treating Asthma

There are a number of side effects associated with drugs prescribed to treat asthma symptoms, many of them caused by inhaled **steroidal approaches**, which introduce a host of problems, including doubling your heart attack risk and raising your risk of blood clots, broken bones from reduced bone density and gastrointestinal bleeding. However, there are easy strategies to decrease your susceptibility to **asthma attacks** naturally:

- Increase you vitamin D3 levels, as there's a strong link between asthma and **vitamin D deficiency**.
- Exercise regularly to balance your insulin levels. It helps increase your insulin receptor sensitivity, and improves your oxygen intake, heart rate and work capacity.
- Reduce your consumption of omega-6 fats. Many people today are getting far more omega-6 fats, particularly **linoleic acid (LA)**, than they should, often through consumption of **processed foods like vegetable oils**, and the result often shows up as asthma symptoms.
- Reduce the lectins in your diet, as they promote inflammation, plus they're known to be immunotoxic, neurotoxic and cytotoxic. With all that going on, your immune system is quickly compromised. To help manage your lectin consumption, I recommend reading my article, "**How to Reduce Lectins in Your Diet**."
- Try butterbur. If you're interested in natural treatments like coralberry, another natural antihistamine is the herb butterbur. As far back as the 17th century, butterbur was used to treat coughs, asthma and skin wounds. Researchers have since identified the compounds in butterbur that help reduce symptoms in asthma by inhibiting leukotrienes and histamines, which are responsible for symptom aggravation in asthma.[13]

Scientists involved in the featured study on coralberry leaves say it could take years to complete human testing on its efficacy, but taking as many routes as possible to improve your gut health, eating more organic foods and avoiding lectins are excellent ways to support your immune system and reduce your risk of asthma.

In addition, asthmatics typically breathe through the mouth, which plays a critical role in bronchial asthma, especially exercise-induced asthma. In a study published in the American Review of Respiratory Disease, young asthma patients had virtually no exercise-induced asthma after exercising while **breathing through their noses**.[14]

Sources and References

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