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Amish Home Remedies and the Research Surrounding Them — Part 2

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This two-part report examines the composition and efficacy of "folk" remedies used by the Amish of Lancaster County. While not a complete list of the plants used, the report seeks to educate medical practitioners regarding Amish practices to help guide patient interviews and prescription recommendations.

Part 1, published in the Spring 2025 issue of this journal, included an introduction to illustrate the need to better understand the supplements and alternative treatments patients consume. Please see that introduction for further reference.[1]

METHOD

In this qualitative project, 22 members of the Amish community of Lancaster County were interviewed and the ingredients of these "natural remedies" were examined. Interviews took place from February 2022 to July 2024. Steps were taken to preserve interviewee anonymity.

The interviewer began by asking what common ailments and treatments families encounter and use. Ingredients were cataloged and the literature was consulted to determine which supported indications, contraindications, and adverse effects might concern the medical community.

Families were not included if they did not have their home church located in Lancaster County. This process ensured more consistent information was gathered, as the uses and ingredients of "home remedies" reported by the Lancaster Amish community can vary from those remedies used by others in other locations. This review is in no way comprehensive. Attempts have been made to describe the pertinent ingredients, along with adverse effects, method of action, contraindications, and indications for use.

DISCUSSION

Indian Snakeroot

Indian snakeroot, Devil's pepper, or serpentine root (*Rauwolfia serpentina*) is not native to Pennsylvania. Although it has several biologically active alkaloids, Amish respondents reported that it is used to treat high blood pressure; it may also improve blood circulation after a stroke.

This plant was studied as a treatment for hypertension as early as 1949. Alkaloids in the bark of this root probably act by depleting both catecholamine and serotonin stores, and preventing their reuptake.[2] However, this root has many active substances and associated side effects, so its reliability has been inconsistent. No correlation with cancer was found in a study in 2001.[3]

A 2015 study demonstrated that hypertension could indeed be treated appropriately with Indian snakeroot with relatively few side effects.[4] Yet Indian snakeroot has been shown to cause nasal congestion, sedation, gastrointestinal upset, angina-like symptoms, bradycardia, and extrapyramidal-like symptoms. These effects are dose dependent.[2]

Guidelines for its use have not been established in the United States. While Indian snakeroot may decrease blood pressure, it should be discontinued if side effects occur or hypertension is not properly controlled.

Fenugreek

Fenugreek (*Trigonella foenum-graecum*, see Fig. 1) has been used for various purposes for hundreds of years.[5] The Amish of Lancaster County use this plant mainly to treat individuals who have had strokes, suffer from dementia or age-related memory loss, or to prevent decline in memory. It is unclear if it has any demonstrable effect for any of these.

The pharmacologically active substances in this plant include saponins, steroidal compounds, alkaloids, flavonoids, phenolic acids, and styrylic acids.[6] These may act as antioxidant, anti-inflammatory, antimicrobial, antidiabetic, antihyperlipidemic, antitumor, and anti-obesity compounds.[4]

This study was found to be exempt by the ATSU-Kirksville IRB according to 45CFR46.104 (d)(2)(i). IRB Number: #JK20220314-001.

Additionally, the dosing of this substance has been extensively studied. Its suggested oral dose range of 3.16 g/60 kg to 48.64 g/60 kg is broad to allow for whether the seeds have been "debitterized," meaning there is great potential for dosing errors.[7]

Fenugreek may be toxic when it is used at a higher dose than prescribed. Fenugreek has been shown to decrease fertility and have abortifacient properties. In addition, allergy to any of the other legumes should be considered a contraindication to use.[5] Fenugreek can lower blood sugar, and due to its antidiabetic properties, patients should be monitored for hypoglycemia. Finally, it should be used with caution when patients are on medications such as warfarin or antiplatelet agents.[8]

Fig. 1. Fenugreek *(Trigonella foenum-graecum).*

Citicoline

Citicoline is a naturally occurring phospholipid frequently used by the Amish for memory, general brain health, and traumatic brain injury. This phospholipid may increase neurotransmitters, especially phosphatidylcholine, by interacting with the synthesis of certain cellular membrane phospholipids.[9] Interestingly, citicoline may have positive effects on numerous disease processes such as Alzheimer's disease, stroke, glaucoma, and amblyopia. It may modulate diseases by reducing infarct volume and generalized brain edema.[10] However, it has not been shown to be useful in patients who have traumatic brain injury.[11]

The safety profile of citicoline is considered to be very good, as few patients experience side effects. Drug interactions may be a concern, as citicoline has been shown to interact with several antipsychotic medications via an unknown mechanism of action.[12]

Water Hyssop

Water hyssop (*Bacopa monnieri*) is used by the Amish for general brain health. It may be included in many teas and supplements, and consumed regularly. Typically, it is not used as treatment after a brain injury or after onset of cognitive decline.

B. monnieri is thought to contain active compounds that inhibit acetylcholinesterase and activate choline acetyltransferase; these may result in decreased β-amyloid production, increased monoamine production, and promotion of cerebral blood flow.[13] Additionally, it may act as an antioxidant, hepatoprotective, analgesic, anti-inflammatory, antimicrobial, antiulcerogenic, anti-anxiolytic, antineoplastic, neuroprotective, and immunostimulatory agent.[14] Although *B. monnieri* contains nicotine, it may protect against nicotine-induced lipid peroxidation and mutagenicity in mice.[15]

In aggregate, *B. monnieri* is thought to reduce memory loss when individuals are learning new information.[11] The mechanism of action for side effects is not well understood, but a study with rats showed that it is very safe (LD50 was 2,400 mg/kg after oral ingestion and 500 mg/kg during intravenous administration).[16] Rare side effects include reduced gastric motility.[12]

Additionally, a study using mice showed that *B. monnieri* decreases the expression of CYP3A in the liver and intestine which may affect the bioavailability of certain medications; a careful medication review is indicated.[17] There are no long-term studies about its effect on human ingestion, thus caution is advised.

Fucoidan

Fucoidan is a long-chain sulfated polysaccharide found in several seaweed species, one of which is Devil's apron (*Laminaria japonica,* see Fig. 2 on page 48). It is used primarily within the community to treat headaches and in patients who have had concussions; it may prevent seizures and further brain injury. While the literature demonstrates some utility as an analgesic agent, there are limited studies showing fucoidan acting as an anticonvulsant.

Instead, fucoidan may suppress the toxicity of anticancer medications and reduce fatigue during chemotherapy.[18] It may activate caspase-8 in tumor cells but

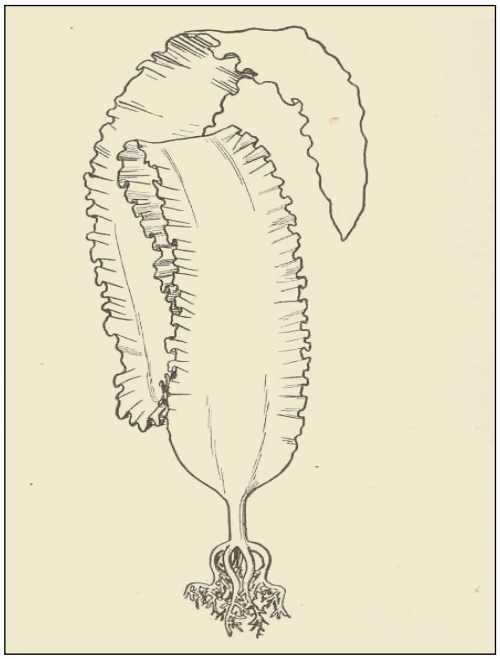

Fig. 2. Fucoidan (*Laminaria japonica).*

not in healthy cells, making it a powerful pro-apoptotic agent. Moreover, fucoidan targets neuraminidase and cellular epidermal growth factor receptor, which is a pathway utilized in treating upper respiratory infection.[19] Again, it does not appear to be widely used for these purposes in the Lancaster Amish community.

Fucoidan is generally safe. However, patients should be discouraged from taking fucoidan to treat symptoms of concussion, as it has been shown to have anti-coagulant activity that varies based on the molecular weight of the polysaccharide.[20] Further, the structure of the compounds varies based on when they are harvested from specific species.[21]

It is difficult to prepare this herbal to yield exact dosing without understanding the species variability, so it should not be recommended. Patients should be cautious if they don't understand the exact composition of their supplement.

Oregano

Oregano (*Origanum vulgare,* see Fig. 3) has been documented for its use in medicine for more than a millennium. It is mentioned in Greek medical texts of Hippocrates as well as the Chinese book of herbs, *Shen-nung Pen-ts'ao Ching.* In Aristophane's *The Frogs,* a comedy about Dionysus, the herb is used to bestow courage upon the protagonist so he may travel to the underworld.

Though historically used for a variety of ailments, today the Amish of Lancaster County nebulize it when treating asthma. Additionally, the oil is ingested orally for head colds and to treat dyspepsia. Like many of the other substances discussed, oregano has been shown to exert both antimicrobial and antioxidant effects.[22] However, the Amish community that was interviewed unanimously agreed that nebulized oregano works better than albuterol for acute symptoms associated with asthma.

Oregano inhibits the expression and secretion of IL-1-beta, IL-6, and TNF-alpha in RAW264.7 cells, which may cumulatively decrease inflammation.[23] Moreover, it may decrease alveolar macrophage activity and the symptoms of asthma. More studies must be conducted since the dosing when oregano is nebulized varies; there have been no studies on long-term effects of use on developing lungs. There is as yet insufficient information available to recommend this as a treatment option.

Fig. 3. Oregano (*Origanum vulgare).*

Hyperbaric Oxygen Therapy

Hyperbaric oxygen therapy (HBOT) chambers are currently being used by the Amish of Lancaster County. One member of the community may purchase a chamber and allow others to use it for various pathologies, including treating the effects of Lyme disease, flu, and even chronic pain exacerbated by heavy labor.

Research is evolving on the indications for HBOT. Animal studies suggest it may reduce chronic pain; it may work for this purpose in humans as well.[24] Further, HBOT has more frequently been used in the treatment of atypical wound healing.[25] Exposing the

tissues to higher levels of oxygen may promote neovascularization and encourage limb salvage.

The safety profile of HBOT is relatively favorable. The most common side effect is middle ear barotrauma, but more serious adverse effects such as myopia, dyspnea, and inspiratory pain can occur.[26] The majority of these adverse effects are reversible with cessation of therapy.

CONCLUSION

Often, patients will pursue what practitioners of Western medicine characterize as "alternative" therapies. To serve communities, indications for use and risks, as well as drug interactions for these "alternative" therapies, must be considered. Practitioners should try to understand these therapies and be prepared to offer recommendations based on the best available evidence.

Further study regarding what community members are using is warranted. If we can cite the latest evidence to establish standards regarding how and when to use herbal remedies, we may more appropriately advise patients regarding herbal remedies.

Occasionally during the interviews cited here, individuals described past encounters with physicians who prescribed medication without adequately explaining the risks and benefits. These conversations may have been better received if clinicians had presented a clear understanding of the evidence regarding commonly used herbals and supplements.

With knowledge comes understanding and an opportunity to build rapport. Further study of Amish home remedies is warranted to appropriately care for our patients and community and to continue building therapeutic alliances.

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