

AMISH HOME REMEDIES AND THE RESEARCH SURROUNDING THEM — PART 1

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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.

INTRODUCTION

An Amish patient with a history of cirrhosis presents to the emergency department with fatigue, shortness of breath, and weight gain. The patient is admitted to the ICU for sepsis complicated by cirrhosis. However, he continues to decline; the patient’s wife believes this is because of antibiotics and gives the patient an extract used by members of the community to aid in liver health.

Soon, the extract bottle is examined by the team, who notes the tincture contains 90% alcohol and may be implicated in the patient’s decline. Once the extract is discontinued, the patient’s liver function tests begin to trend downward, and he can be safely discharged to home health.

This anecdotal story is all too common in Lancaster, Pennsylvania. It illuminates the need to better understand what supplements and alternative treatments patients are taking. The U.S. supplement market generates \$30 billion in yearly revenue, contributing to our community’s health. Exploring alternative therapies may provide opportunities for research.¹

With the ever-changing landscape of modern medicine, it is our duty as practitioners to understand the effects alternative therapies and underutilized treatment options have on our patients. This

review is meant to promote understanding of the home remedies of the Lancaster County Amish community.

METHOD

In this qualitative research, 22 members of the Amish community of Lancaster County were interviewed and ingredients of “natural remedies” were examined to better illuminate home medical practices, especially the composition of some remedies. The interviews took place from February 2022 to July 2024. The individuals interviewed were not asked to provide their names and were assigned an arbitrary number at the beginning of the interview to ensure anonymity.

The interviews were conducted at individuals’ farms, and interviewers began by asking what common ailments were experienced by family members and how ailments are treated at home. Additionally, if known, the active ingredients were cataloged; the literature was subsequently consulted to establish what the scientific community has determined to be the supported indications, contraindications, and adverse effects to consider.

Families were not included if they did not have their home church located in Lancaster County. This was done to ensure consistent information was gathered, as the uses and ingredients of “home remedies” reported by the Lancaster Amish community might 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 (if known), contraindications, and indications for use.

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

DISCUSSION

Yarrow Root

Among those interviewed, yarrow root (*Achillea millefolium*, see Fig. 1) was one of the most frequently mentioned plants, noted in 16 of 20 interviews. The genus name is derived from Homer's mention that Achilles used this plant among his troops to stop bleeding.



Fig. 1. Yarrow root (*Achillea millefolium*).

Yarrow contains a pyrrolizidine alkaloid called *achilleine*, which acts as a hemostatic.² It is used by patients in Amish communities for pain, bleeding, and digestion. While clinical studies are sparse, it may decrease perineal pain, edema, and ecchymosis in women undergoing an episiotomy.³

The Amish community uses an ointment containing this extract applied topically. The plant contains caffeoylquinic acid derivatives, which are phytochemicals responsible for antioxidative actions, as well as other chemicals with antibacterial, antiplasmodial, anti-inflammatory, and pain-relieving properties.⁴

It should be noted that yarrow contains the ketone and monoterpene thujone, which can act as a GABA receptor antagonist. This substance has been known to cause a mild, short-lived dermatitis, but is perhaps best known as the component of absinthe once thought to be responsible for causing psychoactive effects; this attribute is no longer thought to be accurate.

When yarrow is used topically, the levels of these substances are not thought to be high enough to cause toxicity.⁴ While more human studies are needed, patients should be educated about the possibility of dermatitis and advised against oral ingestion.

Complete Tissue

Topical creams and balms containing herbals and plant derivatives may be employed by Lancaster County community members to treat infections, back pain, and other ailments. One of these is “complete tissue” or “complete bone and tissue,” which contains white oak bark, marshmallow, black walnut, grave root, skullcap, slippery elm bark, aloe vera, lobelia, vitamin E, beeswax, and wormwood. Black walnut and wormwood are discussed in detail below.

Black Walnut

Black walnut (*Juglans nigra*, see Fig. 2) may also be used for several different problems, including back pain and inflammation, as well as promoting wound healing.

Included in most topical compounds that were identified during this study, black walnut contains many chemicals that appear to be anti-inflammatory and may act as antitumor, antiviral, antioxidant, anti-allergic, antiatherogenic, and antinociceptive; it is thought to reduce cholesterol absorption and work as an antimicrobial against gram-positive bacteria.⁵



Fig. 2. Black walnut (*Juglans nigra*).

Its antimicrobial effects vary by the geographic location from which the black walnut is procured, so it is impossible to make formal recommendations about its use as an antimicrobial unless local procurement is extensively studied.

The *Juglans* genus has also been identified as the most common cause of allergic reactions among those who are sensitive to tree nuts in the United States and Japan.⁶ It is thus imperative to educate patients about what to look for when considering an allergic reaction.

If a patient is known to have a tree nut allergy, it would be best practice to provide a prescription for epinephrine, as the ingredients in many emollients are known to contain *Juglans* derivative, despite it not always being listed as an ingredient. Overall, its safety and recommended dosing have not been well studied.

Wormwood

Wormwood (*Artemisia absinthium*, see Fig. 3) has been employed in many cultures and was mentioned as a stomach reliever in Pedanius Dioscorides' first-century text, *De Materia Medica*.

In 2007 the crusade against absinthe concluded — in the United States it had been banned since 1912 — and in the years since, this plant has been under research for treatment in inflammatory-based gastrointestinal conditions such as Crohn's disease.⁷ The increase in interest may have been revitalized after the 2015 Nobel Prize in Medicine was awarded for the discovery of the chemical compound artemisinin in wormwood's close relative *Artemisia annua*, also known as mugwort.

Wormwood has antiparasitic properties, affecting both the larvae and egg stages of development. It is believed to bind iron and break down peroxide bridges, creating free radicals; these, in turn, disrupt parasitic proteins. Additionally, like yarrow, it contains the GABA antagonist thujone.

This plant has been shown to have procognitive effects and antidepressive actions in animal studies, and it can eliminate *Staphylococcus aureus* and *Pseudomonas aeruginosa* in vitro.⁸ Interestingly, the essential oils made from this plant have been found to act as a sort of insect repellent, a possible organic alternative to DEET-containing repellents.⁹

Regarding safety, neither internal nor external therapeutic ranges have been established. The adverse effects associated with wormwood are thought to be

due to the thujone toxicity; it can antagonize chloride channel GABA receptors and thereby potentiate both tremors and seizures.¹⁰ Since α -thujone is more potent than β -thujone, ingestion of an improperly prepared tincture can increase these risks.



Fig. 3. Wormwood (*Artemisia absinthium*).

The results of the largest study on this plant suggest that wormwood should not be taken by a patient with a history of gastrointestinal ulcers or liver disease, or who is nursing or pregnant.¹⁰ Due to the risk of seizures, a patient with a history of seizures should be advised to avoid ingestion. Skin irritation does not appear to be common, so patients may use it topically.¹¹

St. John's Wort

St. John's wort (*Hypericum perforatum*, see Fig. 4 on page 14) — named for its tendency to bloom on John the Baptist's birthday, June 24 — is used by many to treat depression, insomnia, and attention-deficit hyperactivity disorder (ADHD). It is thought to inhibit the reuptake of serotonin, norepinephrine, and dopamine, and may even act as a weak monoamine oxidase inhibitor.

While the prevalence of mental health diagnoses in the communities interviewed is unknown, some Amish family members stated that depression or anxiety would be treated with St. John's wort before

assistance would be sought from a licensed physician.

A classic inducer of cytochrome P450 (CYP) enzymes — mainly 1A2, 2D6, and 3A4 — this agent is superior to placebo for the treatment of depression in some trials; it may have a smaller side effect profile than selective serotonin reuptake inhibitors (SSRIs).¹²

Despite some studies showing its efficacy, a systematic review acknowledges that we do not have a full understanding of St. John's wort's side effect profile.¹³ Additionally, although it may be used more frequently in European countries, we do not yet know the optimal daily dosing regimen; long-term studies are lacking.



Fig. 4. St. John's wort (*Hypericum perforatum*).

As noted above, St. John's wort induces CYP enzymes, which can alter the metabolism of drugs like warfarin or digoxin; opiates may also be converted into a more potent form when CYP enzymes are induced. Yet, St. John's wort is well tolerated. A study in 1994 involving 3,250 patients found that only 2.4% had side effects, of which gastrointestinal issues, fatigue, restlessness, and allergic reactions were the most common.¹⁴ St. John's wort is not safe in pregnancy or during lactation.¹⁵

Burdock

Burdock (*Arctium*, see Fig. 5) has been used since ancient times for its potent antioxidant effects. The Amish commonly pick this plant in the spring and dry it to have on hand throughout the year.

It is used topically for wounds, unless there is an accompanying infection, or it can be taken as a tea for gastrointestinal issues, circulation issues, as a diuretic, and for generalized body pain. Although said to be well tolerated, burdock may cause dermatitis, so it is appropriate to watch for erythema.



Fig. 5. Burdock (*Arctium*).

Burdock has many active ingredients, the majority of which act as free radical scavengers.¹⁶ Research suggests it may promote blood circulation to the skin and act as an antidiabetic. It may also act as an inhibitor of pancreatic carcinoma; however, none of these effects have been well studied in humans.¹⁷

Aqueous burdock may treat osteoarthritis by increasing the cellular proliferation of human mesenchymal stem cells, which can, in turn, induce chondrogenesis.¹⁸ Generally, this plant is considered safe, making the risk of misuse and adverse effects extremely low.¹⁷

Horsetail

Horsetail (*Equisetum arvense*, see Fig. 6) is collected and taken for both pain and generalized inflammation. It is a part of many compounds for aches and pains commonly used by members of the Amish community.

This plant has an extremely potent anti-inflammatory action, inhibiting T-cell proliferation and decreasing CD69 and IL-2 surface receptor expression, which in turn decreases production of interferon gamma and tumor necrosis factor alpha.¹⁹

Horsetail should be used cautiously, as it may cause profound hyponatremia.²⁰ Lab work may be indicated if a patient is using horsetail continuously and has abnormal signs and symptoms.

Additionally, case reports implicate horsetail in transient liver function test elevation; horsetail should be avoided in patients with preexisting liver injury or cirrhosis.

CONCLUSION

Often, patients will pursue alternative therapies. To serve communities such as the Amish, drug interactions and proper dosing should be established, with the goal of preventing harm and giving accurate recommendations regarding risks and benefits.

Practitioners should understand these therapies and be prepared to offer recommendations based on the best available evidence. In part 2, we will continue to discuss the compounds introduced in these interviews.

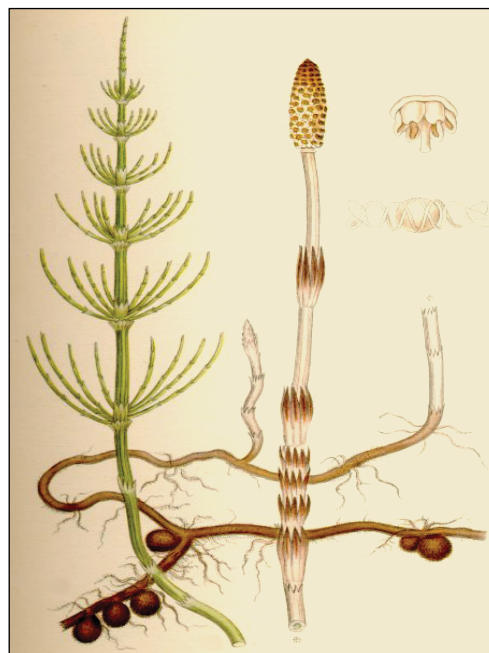


Fig. 6. Horsetail (*Equisetum arvense*).

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