

Journal of the American

Herbalists Guild

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Volume 15 | Number 1 | Spring 2017

On Digestion

Formulation, Probiotics
Crohn's Disease, Yellowroot

Hippocrates'
Nature Cure Diet

The Spleen in
Traditional Medicine

SPECIAL FEATURE:

Tagetes lucida in
English y en español

Video Interview
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Cover: Doña Maria Evelina Díaz ("La Abuelita") at the door to her healing kitchen in Jocotenango, Guatemala.
 Photo credit: Jaime Trujillo

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For a quarter century, the American Herbalists Guild (AHG) has influenced the way herbalism is understood and practiced throughout North America and beyond. For 14 of those years, the *Journal of the American Herbalists Guild* has presented cutting-edge, peer-reviewed articles documenting the use of herbs in clinical practice. This is your invitation to let our diverse and professional readership know about you, your company, your products, and your events. With an ad in the *JAHG*, news about you and your business will be delivered directly into the hands of 3,000+ potential customers. With our new digital platform, all ads are full color with a clickable link. To learn more about our reasonable advertising rates or to reserve your ad space, please see the *JAHG* Advertising Packet at

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The American Herbalists Guild was founded in 1989 as a non-profit, educational organization to promote a high level of professionalism and education in the study and practice of therapeutic herbalism. Members at all levels receive a subscription to the biannual *Journal of the American Herbalists Guild*, which delivers issues relevant to those studying or using herbal medicines in the clinical setting, as well as to those manufacturing, marketing, and dispensing botanical medicines. Members receive our monthly member newsletter, discounts to the annual AHG Symposium, access to the Professional Herbalist Training Webinars (live and recorded), unlimited online access to past issues of the *JAHG*, unlimited online access to hundreds of recorded lectures from AHG Symposium, discounts and services from many suppliers and schools, and a number of other benefits. For a complete list of benefits and membership levels, please visit

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The *Journal of the American Herbalists Guild* invites authors to contribute manuscripts on all aspects of herbalism with an emphasis on the clinical and professional application of botanical medicines. *JAHG* especially encourages herbalists of all persuasions to write. It is vital that our clinical tradition, skills and knowledge of herbal wisdom are broadcast with a strong and effective voice in the current period. Herbalists without prior experience of presenting for publication should request *JAHG* editorial assistance in getting their manuscripts to publishable standards.

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President's Message

Our Commitment and Values

Bevin Clare, President, American Herbalists Guild

It is spring (here in the Northern Hemisphere) and the plants are bursting forth with an intensity to match what most of us are feeling this time of year. This past weekend at the United Plant Savers Botanical Sanctuary in Rutland, Ohio, I stood in a patch of goldenseal containing thousands, if not tens of thousands, of plants. To see this threatened and rare botanical appear with such vigor reminds me that our strength is in numbers, and that even a small population can be a force. It would be comfortable to think of the plants rising up along with us to meet the intensity we experience, yet I am not foolish enough to think that they are at the whim of human happenings.

The American Herbalists Guild is meeting today's intensity with our own passion, by clearly affirming our commitment and values, and by dedicating our Symposium this year to exploring "Herbalism in Action." We believe that herbs, and herbalists, are much needed catalysts for positive change in today's world. Whether in the forest, at the clinic, or on the streets, herbalism is offering new models and materials of healing to communities everywhere. We intend to dedicate

our time together at this year's Symposium to not just further our knowledge and connections, but to put our collective energy together to create change within our own communities.

One of the many ways we intend to become stronger is by reaching out to form partnerships with more communities. I'm incredibly excited to see our first article published in a language other than English, and I hope it is the first of many. Our intention is to make these translations available as open-access articles – as part of the bridge we build – and we would be grateful for your help in sharing "La Abuelita" with anyone you know in the Spanish-speaking herbal medicine community who might be interested. We intend to publish more articles in languages other than English, so if you are an author who can write about herbal medicine in another language or have an article you want to write and think would it be especially appropriate for translation, please let us know.

Today, I feel the need for our solid and loving community of plant people more than ever. The roots and branches of all of us, intertwined, are some of the things which give me the most energy to burst forth into a new and better place. Let's do this together.



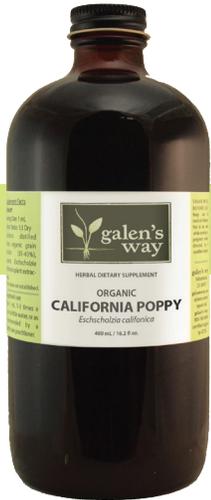
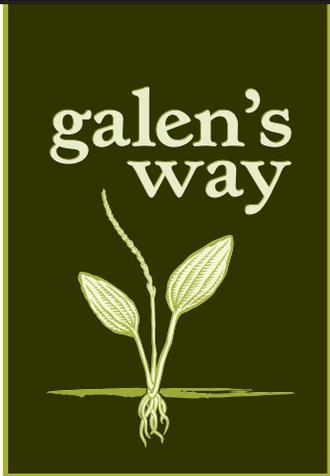
Bevin Clare MS RH CNS LDN is a clinical herbalist and nutritionist and an Associate Professor at the Maryland University of Integrative Health. Bevin has studied herbal medicine around the world and blends her knowledge of traditional uses of plants with modern science and contemporary healthcare strategies to bring the art, science, and tradition of herbalism into greater visibility. She holds a Master's of Science degree in Infectious Disease from the London School of Hygiene and Tropical Medicine and is an Adjunct Associate Professor at the New York Chiropractic College and the Massachusetts College of Pharmacy. She is a board member of the United Plant Savers, a conservation group dedicated to medicinal plants, as well as being the mother of budding herbalists Alexander and Cassia.

An Important Affirmation from the AHG

The American Herbalists Guild is a community rooted in the healing arts. We are committed to inclusion and sharing values of diversity. We firmly believe in providing a welcoming, safe and respectful space for all people, including practitioners, students, and all who seek an herbalist's support. We encourage viewpoints from all herbal backgrounds

by offering a spectrum of educational scholarships, opportunities, and experiences. We strive to address inequities and support discourse that enables us to grow together, while acknowledging and approaching with humility the work we still need to do within our own circles. www.americanherbalistsguild.com/important-affirmation-ahg

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A Bowl of Wellbeing and Comfort

Susan Marynowski, MS, Editor



Susan Marynowski is an herbalist engaged in editing, writing, teaching, and consulting. She teaches at the Florida Herbal Conference, UF Health Integrative Medicine program, Florida School of Traditional Midwifery, Academy for Five Element Acupuncture, and other venues. She holds an M.S. in Wildlife Ecology and Public Education and also works as an environmental scientist specializing in education and evaluation. She lives on a farm in North Florida. She can be reached at jahgeditor@gmail.com.

You could say this is the most boring and unsexy issue ever of the Journal of the American Herbalists Guild. But I would rather see this issue as a call for us to return to basics, to put ourselves into repairing our food and medicine systems.

As herbalists, we know that healing the gut is a good first step in many a healing journey. We often quip, “You are what you eat!” (...even if we are misquoting Hippocrates, see article).

So alongside of fancy herbal pills and products, let’s not forget to offer our clients and communities what they are seeking from the core of their beings. Let’s offer them well-spiced soups

and gruels to fill the emptiness inside. Let’s offer them our attention and compassion to soothe their aching hearts. Let’s offer them chamomile and mint and pericón tea. Let’s offer them ways to cultivate the inner microbial garden.

It is a simple and radical thing to embrace nourishment in an over-fed-but-under-nourished culture. Tricia McCauley would have wanted to connect us more closely with our food in this way (see the memorial tribute).

By doing this thing with our herbs and our attention, perhaps we can begin to heal a broken world and a broken medical system. Because it’s not just soup or tea...it’s a handcrafted bowl of wellbeing and comfort that we herbalists have to offer.



8th Annual Product Contest Winners

American Herbalists Guild Symposium
October 1, 2016

From the entries at the 2016 Symposium, first and second place winners were chosen in five herbal product categories. We celebrate the creative genius of our product makers!

Best Overall Product or Product Line

- #1 Hot Love Potion by CoreyPine Shane, Blue Ridge School of Herbal Medicine, Asheville, NC
- #2 Hit Medicine Product Line by Miles Coleman, Black Belt Herbs and Hsin Fa School of Herbal Medicine, Omaha, NE

Most Creative Product Name

- #1 No Fly Zone Insect Repellent by Tricia McCauley, Leafyhead Lotions and Potions, Washington, DC
- #2 Hack Attack Syrup by Stephen Brown, Great Cape Herbs, Brewster, MA

Best Topical

- #1 Arnica Capsicum Botanical Liniment by Jane Stevens, Four Elements Organic Herbals, North Freedom, WI
- #2 Itchy Bitchy Skin Spray by Stephen Brown, Great Cape Herbs, Brewster, MA

Greenest Product

- #1 DIY Bitters Kit by Ashley Davis, Tonic Therapeutic Herb Shop, Shepherdstown, WV
- #2 Hot Love Potion by CoreyPine Shane, Blue Ridge School of Herbal Medicine, Asheville, NC

Most Promising or Innovative Formula

- #1 Coffee Bitters by Betsy Miller, Balanced Life Wellness Clinic and Apothecary, Reston, VA
- #2 Tulsi Rose Chai by Ashley Davis, Tonic Therapeutic Herb Shop, Shepherdstown, WV



Best Overall Product or Product Line
#1 Hot Love Potion



Most Creative Product Name
#1 No Fly Zone Insect Repellent



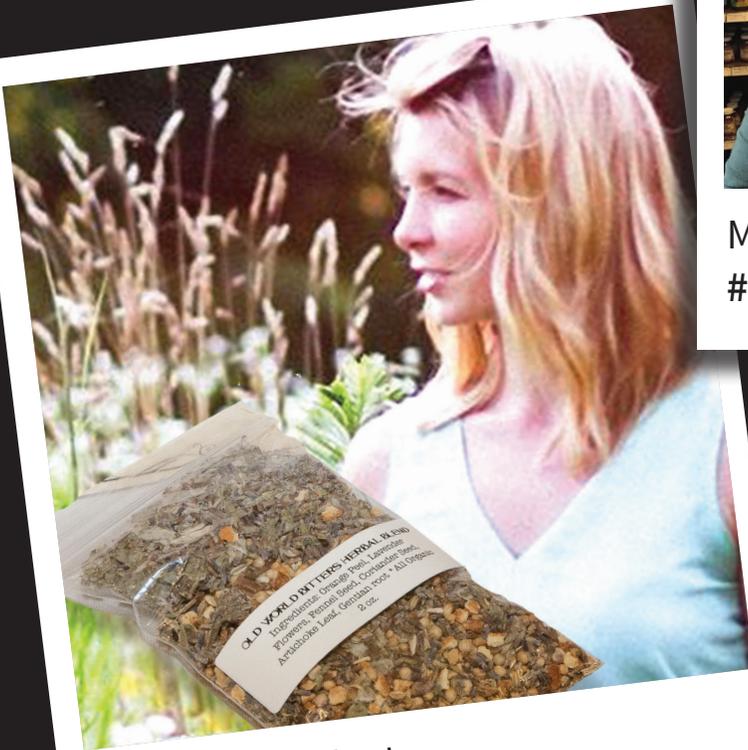
Best Topical

#1 Arnica Capsicum Botanical Liniment



Most Promising or Innovative Formula

#1 Coffee Bitters



Greenest Product

#1 DIY Bitters Kit

“My deepest joy is introducing plants to people!”



Common Good City Farm

In Memoriam: Tricia McCauley, M.S., Herbalist and Nutritionist (February 25, 1970 – December 25, 2016)

Tara Thomas

On a Monday in late December, herbalist and nutritionist Tricia McCauley stepped inside the dispensary at the Maryland University of Integrative Health (MUIH). Radiant and bright-eyed, she looked up at the jars of medicinal herbs lining the shelves. She and dispensary manager Nicole Rubin spent a few minutes musing on the stinkiness of Valerian root, and Tricia picked up an order for a client that she planned to hand deliver.

She was there that day, mentoring graduate students in the MUIH’s Nutrition and Integrative Health Student Clinic – there for the last time, it would turn out, in the same clinic where in 2009 she herself stepped into clinical practice en route to earning her Masters in Herbal Medicine and becoming a licensed nutritionist.

Reflections on Tricia’s time as a student clinician and mentor were consistent. Her colleagues and students at MUIH, and in her D.C. community, were unanimous that she was kind, poised, articulate, organized, passionate, forthright and witty...oh so delightfully witty.

Tricia was adept at offering ancient wisdom at just the right moment, like this line from her hero, the 14th century Persian poet Hafiz: “When all your desires are distilled, you will cast just two votes: to love more, and be happy.” Not one to let things get too serious, she was famous for her one-liners: “What’s a pirate’s favorite herb? Arrrrrrnica!”

“She embodied a vital energy you don’t see in most people,” said Amy Walker Keen, MUIH classmate. “She had this amazing energy that

radiated.” In clinic, Walker Keen remembers that Tricia was organized and quick and could incorporate science and energetics with grace.

“Tricia was like a planet with its own gravitational field. Anyone that came into her orbit was just naturally drawn closer to her,” said Tom Balles, MUIH professor and acupuncturist. “In the role of student she gave me pause: maybe she should have been the one standing in the front of room teaching, and I should have sat in the back in order to continue my learning?”

Tricia was an actress by training. A personal health challenge led her to train in nutrition at the Institute for Integrative Nutrition and to follow with studies in herbal medicine. The demanding scientific nature of MUIH’s Master’s program pushed her.

When the time came to pick a commencement speaker, only Tricia was surprised when she was chosen. Her speech beautifully combined her artistry with her new love of plant science. She quoted the Rig Veda’s “HYMN XCVII: Praise of Herbs,” described adorning herself with a crown of cleavers at the United Plant Savers sanctuary in Ohio, and proclaimed herself a “plant translator.” “My deepest joy is introducing plants to people,”

she said. (The full speech can be seen at <https://www.youtube.com/watch?v=2ZkBkF-iAQM>.)

And from 2010-2016, she found many creative and delightful ways to do that. Nutricia Consulting, a clever twist on her own name, was the home base for her clinical practice and group wellness programs, and the inspiration to write a practical guidebook to gentle detoxification, “Cleansing and Detox Made Simple.” Next came Leafyhead, a small line of “farm-to-face” handcrafted topical creations, including inventive formulas like fennel, cilantro, and coffee lip balms and the insect repellent, “No Fly Zone,” which won an AHG award for Most Creative Product Name.

“Every product had a story. Someone she knew personally needed it and so she made it,” said Olivia Ivey, one of Tricia’s “helper elves” at Leafyhead. Tricia’s proudest moment was when a salve crafted for her mother brought relief when nothing else had.

When the chance came to help turn an old ball field into an urban educational farm, Tricia jumped right in. She planted and tended the herb gardens at Common Good City Farm, making it her mission to incorporate medicinal and

The spring garden at
Common Good City Farm in
Washington, DC.

Common Good City Farm





.....
An herb mandala was created by friends attending Tricia McCauley's memorial service.

Bevin Clare

culinary plants in the farm's offerings, and leading a popular year-long herbal apprenticeship at the farm. When Prince Charles visited, she was asked to speak to him about medicinal plants.

"She was a good ambassador of herbal medicine to a lot of people who might not have given it a whirl. She made it accessible and wasn't afraid to talk to people," said Ann Mezger, one of the old friends in Tricia's close-knit theatre community.

Tricia became known as the go-to person in her neighborhood, for all things green and herbal. She taught EMTs at the firehouse about herbal first aid, created a line of teas for a local teahouse, and got her calamus root extract into old-timey cocktails at a nearby bar. The Washington Post listed her latest creation for bearded hipsters - District Devil Beard Oil and 'Stache Wax - in an article of top 5 coolest, locally made gifts. It's no wonder, that she was invited back to MUIH as guest faculty shortly after graduating, and later went on to be hired as a lead clinical supervisor.

Tricia McCauley was taken from this world on December 25, 2016, in an act of unspeakable criminal violence, near her home in Washington, DC. But her love of people and plants lives on. Some people still have little pots and tins of her magical products. Leafyhead Legacy, an Etsy shop, was formed to sell her

inventory in a fundraiser for Common Good City Farm. Soon her plants will begin to emerge at the farm, where the staff is looking for new teachers to carry on the apprenticeship program. Her many herb and nutrition students and colleagues will carry seeds of her teachings into their own lives, like the new teaching garden being planted in her name at SkyHouse Yoga. An entire season is being dedicated to her at the Venus Theatre, where the director is inviting patrons to share stories of Tricia.

A sudden death can take a toll on those who remain, but it is easy to imagine Tricia would keep it all in perspective, advising the disheartened to carry on. Perhaps she would make the grief-stricken a supportive tincture, then beam brightly, and call on Hafez again to offer some healing words: "This sky. This sky where we live is no place to lose your wings, so love, love, love."

Donations in Tricia McCauley's memory can be made to: The Fund for Theatre Professionals, created to provide health insurance to the many self-employed professionals who cannot afford this protection. <https://www.youcaring.com/triciamcauley-725490> or to Common Good City Farm at commongoodcityfarm.org. ■

Tara Thomas, M.S., Herbal Medicine, Maryland University of Integrative Health, is a clinical herbalist in Seattle, WA.

An Experience with La Abuelita's Favorite Remedy: The Uses of *Tagetes lucida* (pericón)

Jaime Trujillo

In March 2015, I visited Guatemala. There are some negative aspects of international travel. For example, if you have a weak stomach, you may suffer from gastrointestinal issues. As I have lived in Guatemala and visit this beautiful country regularly, gastrointestinal upset is an expected occurrence. This time was no exception – I got sick with gastrointestinal troubles.

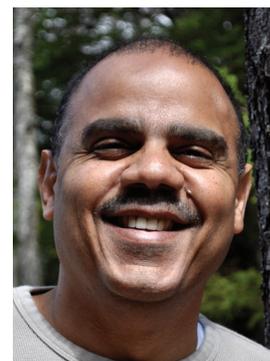
A couple of days later, my family and I were invited to dinner at the home of some friends. The table had a spread of Guatemalan cuisine for us to devour. La Abuelita had heard of my gastrointestinal complaints. Doña Maria Evelina Díaz (La Abuelita) is lanky, with snow white hair and raisin skin that has been damaged by the strong altiplano sun. She quickly ordered her grandson, Luis Pedro, to make some pericón tea for me. “Pericón?” I asked. La Abuelita explained that pericón was good for the stomach – that it would reduce my cramps and settle the stomach. As we had dinner, I sipped my tea.

Soon after arriving back at our hotel, I became curious to learn more about pericón. This curiosity led me to perform a basic internet search. The first link was from *Biblioteca Digital de la Medicina Tradicional Mexicana* or *Digital Library of Mexican Traditional Medicine*. This website has a professional monograph on pericón. This information was helpful and insightful as it cemented my belief in the ancient wisdom and practices that La Abuelita was sharing with

me. This is why I wanted to write a monograph on *Tagetes lucida* (pericón). [Editor’s Note: With respect for the tradition of La Abuelita, we will use the regionally appropriate common name “pericón” throughout the article.]

Pericón is native of the altiplano (highlands) of Mexico and Guatemala, but this herb grows from the United States to Argentina (Lim 2014). The Aztecs and Mayas had multiple uses for pericón, mostly for medicinal, culinary, and ceremonial purposes (Davidow 1999). In 1552, an Aztec doctor recorded the use of pericón in Mexico (Mexicolore 2012). Later, the Spanish commissioned Frair Bernadino de Sahagún to record everything he saw in La Nueva España (New Spain; Kilian 2010). Sahagún began to write *Historia General de las Cosas de la Nueva España* in 1558 (Kilian 2010). In this book, Sahagún first wrote about the use of pericón, where he described and classified it as a medicinal plant used by the indigenous population in Mexico (Mexicolore 2012). Pericón arrived in Europe in 1798 (Bown 2003).

Lim (2014), described pericón as an “aromatic herb” that grows at an altitude of 1,000 to 2,000 meters, describing it as a “half-hardy semi-woody herb to subshrub that grows 46-76 cm high and 48 cm spread...the plant is bushy with many smooth, upright, unbranched stems. The leaves are opposite, linear to oblong, about 7.6 cm long, and shiny.” Pericón blossoms in the summer with a yellow-orange bisexual flower that measures 1.5 cm in diameter (Liam 2014).



Jaime Trujillo's passion for herbalism grew from watching his grandparents use herbs that grew in their yard, where he was raised in Rio Piedras, Puerto Rico. After earning a Master's in Library Information Science from Long Island University, Jaime embarked on a journey that brought him to La Antigua, Guatemala, where he learned about the indigenous culture and healing practices. While later working in the library at Maryland University of Integrative Health, the herbalism seed germinated and Jaime earned the post bachelor certificate in herbal studies. Jaime's passion is centered on medicine making – he often spends weekends making soaps, shaving butter, body butter and lotions, deodorant, and other personal products. Jaime lives in Concord, New Hampshire, where he works for EBSCO Information Services.



.....
La Abeulita at the
entrance to her home
in Jocotenango,
Guatemala.

Jaime Trujillo

The Aztecs had several names for pericón: *yauhtli*, *cuauhiyauhtli*, *iyauhtli*, and *tepepapaloquitl* (Davidow 1999). *Cempoalxochitl* was another name that the Aztecs used to name pericón or closely related *Tagetes* (Mexicolore 2012). The Aztecs used pericón to treat “cold diseases” associated with dampness or excess fluid in the body (Mexicolore 2012). Ortiz de Montellano (cited in Mexicolore 2012) noted that the Aztecs used pericón to treat several general types of illness: those caused by “phlegm” (e.g., intermittent fevers), those with “divine” causes (e.g., gout, stiffness, spitting of blood), and those with “natural” causes (e.g., swellings, blisters, gastrointestinal ailments).

The Mayan civilization used pericón for similar purposes, but the names varied by the different indigenous nations. Living in Guatemala, you quickly learn that there are multiple languages that represent the different Maya nations that are scattered throughout Guatemala and Southern Mexico. The different languages show the diversity, but most importantly, the idiosyncrasies of each nation or tribe. Barillas Aragon (1995) said that the indigenous populations in Guatemala have multiple names for pericón, for instance, in *Liyá* it is called *totonicapán*; in *Iyá* it is called *jolomocox*; in *Ucá* it is called *quetzaltenango*; and in *Ey Yá* it is called

cackchiquel. Casagrande (2000) said that the Tzeltal Mayas in Chiapas called the herb tzitz ak.

The Mayas in Guatemala used pericón for the treatment of various ailments such as malaria and the common cold, but mostly to treat gastrointestinal illness (Barillas Aragon 1995).

Berlin et al. (1996) conducted a survey of the medical ethnobiological uses of medicinal herbs of the Mayas of Chiapas, where they found that the indigenous population used pericón to treat abdominal pain. Clearly, two great civilizations used pericón mainly for gastrointestinal illnesses.

The Aztecs used the energetic properties of pericón to treat diseases. Mexicolore (2012) mentions that the Aztecs classified illness into two categories, hot and cold – when there was an excess of cold and/or dampness, pericón was the herb the Aztecs used to treat these conditions. Mexicolore (2012) describes these symptoms as to be phlegmy, rheumy, and feverish with chills. These illnesses may have also caused the swelling of limbs. The Aztecs classified pericón as a “heat” herb that would remove the excess cold from the body (Mexicolore 2012).

In Mesoamerica, The Aztecs and Mayas used pericón as a flavoring herb. The Aztecs used pericón to flavor *Theobroma cacao* (chocolate) drinks (Wyatt 2002). The Aztecs also added pericón in containers where the dried legumes were stored to flavor them (Wyatt 2002). In Guatemala, the whole herb was used to season the water for boiling corn (Barillas Aragon 1995). Additionally, the indigenous population in Guatemala used pericón as a dye to color different types of fabrics and textiles (Guirola 2010). The yellow-red color comes from the carotenoid lutein that is a constituent of pericón (Dweck 2009).

The Aztecs and the Mayas also used pericón in their religious ceremonies. The Aztecs used pericón as a lucky charm when crossing streams and rivers (Gates 2000). During religious ceremonies, the flowers decorated Aztec temples and burned as incense (Davidow 1999). The Aztecs believed that pericón cleansed the spirit (Davidow 1999). Similarly, the Mayas used pericón for religious purposes. The Mayas believed that it had magical properties and could even save lives. The Mayas also used the flowers

The Aztecs used pericón to treat “cold diseases” associated with dampness or excess fluid in the body.

and leaves cooked in a casserole to make a decoction. This decoction was consumed during the religious ceremonies (Barillas Aragon 1995). The Q'eqchi' (Quiché) people used pericón in the preparation of their incense, among other herbs and barks (Cano 2008). In 1973, Siegel et al. (1977) found that “the Huichols smoke another substance they call tumutsali or yahutli” – the mysterious smoking blend was found to be *Nicotiana rustica* (tobacco) mixed with pericón. This blend was smoked for shamanic rituals, but the authors were unable to prove that it could cause hallucinogenic episodes (Siegel et al. 1977). Schultes (1981) wrote that “Huichol Indians ceremonially smoke a mixture of pericón and *Nicotiana rustica* – a preparation called ye-tumutsali – for introducing visions.” The Huichol smoked these herbs in combination with drinks of *Lophophora williamsii* (peyote) and tesgüino, a beer made from *Zea mays* (corn). It is this mixture of herbal smokes and alcoholic drinks that would cause what the authors called “clearer hallucinations” (Schultes 1981).

Today, in Mesoamerica and other parts of the world, pericón is one of many herbs used to treat multiple conditions and ailments. Cases of harmful side effects of pericón to the general population are undocumented. Pericón extract is proven effective for a number of different health concerns at a dose of 100 mg/kg (where the LD₅₀ is greater than 50,000 mg/kg; Duke 2009). In the United States, pericón is commonly known as sweet-scented marigold, Mexican marigold, Mexican mint marigold, Mexican tarragon, sweet marigold, Texas tarragon, and pericón (Duke 2015).

Some of the conditions for which pericón is potentially effective are: anemia, asthma, bacterial infection, bleeding, cardiomyopathy, cholera, colds, colic, dermatosis, diarrhea, dysmenorrhea, fever, fungus, gastrostis, influenza, gonorrhoea, malaria, nausea, neurosis,

pain, pneumonia, rheumatism, salmonella, and stomachache (Duke 2009). Pericón also is used as a substitute for the spice *Artemisia dracunculus* (tarragon; Bown 2003).

Depression and anxiety are two major mental health conditions that affect large portions of our population. In 2012, a group of scientists found positive effects of pericón tea on depression and the serotonergic system at a dose of 50 mg/kg in an animal model (Guadarrama-Cruz et al. 2012) [Editor's Note: We will not further elaborate on animal research.]

Pericón has had positive results in treating gastrointestinal disorders. Caceres et al. (1993) found that pericón was effective in treating cholera. A study conducted by Ortiz (1989) concluded that an n-hexane extract of pericón has good antispasmodic action. Caceres et al. (1993) confirmed these findings, showing

that an n-hexane extract of pericón had the strongest antispasmodic action, thus helpful in treating spasmodic (crampy) diarrhea.

Tellez-Lopez et al. (2013) looked at the effectiveness of pericón in increasing testicular function and quality of sperm in an animal model. This was the first study to find that pericón improved sperm quality and testicular structure and helped in the release of the gonadotropin hormone that signals for the production of testosterone (Tellez-Lopez et al. 2013).

Despite the understanding of pericón's benefits and pharmacology and the long record of safe traditional use, some commercial preparations have been banned from the United States. On July 20, 1998, the U.S. Food and Drug Administration (FDA 1998) sent a memorandum to the Malabar Productos Naturales LLC

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Tagetes lucida (pericón)

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denying the sale and distribution of five of their products, including “Jointaid,” which contained the essential oils of pericón. In response, Malabar submitted new literature to support their claims and the recommended dosage for their product. As with many herbal products, at issue were the medicinal claims made by the manufacturer that were not supported by evidence-based research. In 1998, the FDA denied the claim and banned the product from the United States.

...the pericón tea was spicy, sweet, earthy, and smooth...it had an anise-like flavor that gave it a warming sensation as it went down...

Tasting the pericón tea that La Abuelita made for me was an adventure. As we sat at the table, the kettle started to scream. Luis Pedro poured boiling water in a cup with dried shoots of

The Phytopharmacology of Pericón Essential Oil

Dr. Duke’s Phytochemical and Ethnobotanical Database (2015) finds that pericón has 30 different constituents in the leaf or shoot of the plant, with three main compounds in high concentration: estragole (2,035 ppm), methyl-eugenol (1,460 ppm), and (anethole 1,425 ppm). Regalado et al. (2011) found 40 different constituents in pericón, with the two main aromatic constituents being methyl-eugenol and estragole. The overall concentration of essential oils in pericón is 6,000 ppm. In Italy, Marotti et al. (2004) conducted a study where they extracted the essential oils from different plants of the *Tagetes* genus; they found that pericón’s flower has a high concentration of essential oils at 2.5%, even though the flower is much smaller than those of the rest in the *Tagetes* genus. Contrary to previous research, Marotti et al.’s (2004) research found that pericón had methylchavicol as a main compound. All of these phytochemicals are found in the above-ground shoots of the plant.

In Latin America and India, the essential oil of pericón has been extensively researched. Most of the research finds that the essential oil of pericón can be used to combat bacterial and fungal overgrowth. Céspedes et al. (2006) arrived at the conclusion that the essential oil of pericón has antifungal and antibacterial properties. Regalado et al. (2011) found that “*T. lucida* essential oil exhibited a moderate antimalarial activity.”

To understand the actions and potential side effects of the essential oil of pericón, it was necessary to broaden the search to the entire *Tagetes* genus. According to Cropwatch (2006), there have been claims that said that the essential oils of *Tagetes* may cause dermatitis if used in aromatherapy, and that the essential oil can be toxic in large quantities, yet the watchdog group concludes that the *Tagetes* genus essential oils are safe for human use.

Pericón has three main essential oil constituents: methyl-eugenol, anethole, and estragole. Methyl-eugenol is effective in treating inflammation in the respiratory system caused by allergies (Tang et al. 2015). Manufacturers use methyl-eugenol as a flavoring substance in the United States (WHO 1991). Methyl-eugenol is also used for cosmetic products like perfumes, lotions, and soaps (NTP 2000). While pericón whole herb has not been shown to cause cancer, the NTP (2000) found that the use of methyl-eugenol has the potential to cause cancer in excessive doses.

Anethole exhibits anti-inflammatory and chemopreventive properties (Choo et al. 2011). Zahid et al. (2015) conducted research on the effectiveness of anethole as an antibacterial, finding that “anethole did not show significant growth inhibitory effect...but anethole showed potent antibacterial activity against all of the tested strains.”

Like methyl-eugenol, estragole is a flavoring agent commonly used in the United States (WHO 1991). According to WHO (1991), estragole has the potential to cause cancer at very high doses of over 10mg/kg, but not at lower doses. Silva-Comar et al. (2014) concluded that estragole “showed anti-inflammatory activity as demonstrated by the inhibition in the leukocyte recruitment and stimulation of phagocytic activity in macrophages.”

Pericón essential oil can also be used as an insect repellent or larvicide. Narayanaswamy et al. (2014) concluded that pericón essential oil can be used eradicate larvae of *Aedes aegypti*, the mosquito species that is commonly known to carry dengue fever and the zika virus. Caballero-Gallardo et al. (2011) found that the essential oil of pericón was effective in repelling insects, but when the components of the essential oil were isolated, the insects were partially attracted. This finding correlates to the results of another study, where components of pericón were used to attract male fruit flies for research purposes (Haq et al. 2014).



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La Abuelita shows the author the pericón in her healing kitchen.

Jaime Trujillo

pericón. Luis Pedro placed the steamy cup right in front of me and I wondered if it was going to taste horrible. Could this tea relieve my symptoms or would it make matters worse? As I allowed the tea to cool down a bit, La Abuelita encouraged me to take the first sip. I brought the cup to my lips, and with a bit of courage, I took the first sip of tea. It was tasty! I dislike bitter tastes, so this possibly was part of my hesitation. I was happily wrong – the pericón tea was spicy, sweet, earthy, and smooth. The pericón tea had an anise- or licorice-like flavor that gave it a warming

sensation as it went down to my stomach. I sipped this tea for the entire evening, much to the benefit of my gastrointestinal system.

In conclusion, I am grateful to La Abuelita for sharing her herbal knowledge with me. I have learned that the wisdom of pericón has been passed down through the generations for centuries, and I am so lucky to now be part of this lineage. After drinking the pericón tea, I was able to eat my dinner without further negative effect. The stomach cramping ceased and I was able to have some normalcy for several hours. I think that if I had used pericón at the early stages of the condition, it would have helped me by stopping the stomach cramps and killing the pathogens that were causing the diarrhea.

I find it fascinating how Guatemalans have used herbal medicine to treat common maladies like gastrointestinal diseases, coughs, nervous system to mention just a few, and how faith still such an integral part of their herbal wisdom. Listening to La Abuelita, it is evident to me that herbal medicine is very important in Guatemalan culture and traditions. Because of the lack of resources and access to medical treatment, the people have used herbal medicine for centuries to heal their ailments. It is through these hardships that herbal medicine has survived and been passed down to the younger generations. ■

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Pericón is readily available from the herb vendors in the local markets of Guatemala.

Jaime Trujillo



Un encuentro con el remedio preferido de La Abuelita: Usos de *Tagetes lucida* (pericón)

Jaime Trujillo

En marzo de 2015, visité Guatemala. Hay algunos aspectos negativos de los viajes internacionales. Por ejemplo, si uno ya padece de síntomas digestivos, puede aumentar los problemas gastrointestinales como resultado de los cambios dietéticos que acompañan a los viajes. Como he vivido en Guatemala y visito a este hermoso país con frecuencia, los trastornos gastrointestinales es una ocurrencia esperada. Esta vez no fue la excepción – me enfermé con problemas gastrointestinales.

Unos días después, mi familia y yo fuimos invitados a cenar en la casa de unos amigos. La mesa estaba repleta de varios platos típicos de la cocina guatemalteca para devorar. La Abuelita sabía de mis quejas gastrointestinales. Doña María Evelina Díaz (La Abuelita) es larguirucha, con pelo blanco como la nieve y piel como las pasas que ha sido dañada por el fuerte sol del altiplano. Rápidamente ordenó a su nieto, Luis Pedro, que me hiciera un té de pericón. ¿Pericón? pregunté. La Abuelita explicó que el pericón era bueno para el estómago, que reduciría mis calambres y tranquilizaría el estómago. Cuando cenamos, tomé sorbos de mi té.

Poco después de regresar a nuestro hotel, estuve curioso por aprender más sobre el pericón. Esta curiosidad me llevó a realizar una búsqueda básica en el Internet. El primer enlace fue de *Biblioteca Digital de Medicina*

Tradicional Mexicana. Este sitio Web cuenta con una monografía profesional sobre el pericón. Esta información fue útil y perspicaz, ya que cimentó mi creencia en la antigua sabiduría y prácticas que La Abuelita estaba compartiendo conmigo. Por eso quería escribir una monografía sobre *Tagetes lucida* (pericón).

Pericón es nativa del altiplano de México y Guatemala, pero esta hierba crece desde los Estados Unidos hasta Argentina (Lim 2014). Los aztecas y mayas tenían usos múltiples para el pericón, principalmente para propósitos medicinales, culinarios, y ceremoniales (Davidow 1999). En 1552, un médico azteca registró el uso del pericón en México (Mexicolore 2012). Posteriormente, los españoles encargaron a Fraile Bernardino de Sahagún que registrara todo lo que vio en La Nueva España (Kilian 2010). Sahagún comenzó a escribir *Historia General de las Cosas de la Nueva España* en 1558 (Kilian 2010). En este libro, Sahagún escribió primero sobre el uso del pericón, donde lo describió y clasificó como una planta medicinal utilizada por la población indígena en México (Mexicolore 2012). Pericón llegó a Europa en 1798 (Bown 2001).

Lim (2014) describió el pericón como una “hierba aromática” que crece a una altitud de 1.000 a 2.000 metros, describiéndola como algo entre una “hierba semi-arbolada (y) semi-arbustiva (y) un arbusto enano que crece entre 46 y 76 cm de altura y 48 cm extendido...la planta es espesa con muchos tallos lisos, verticales, no ramificados.

Los aztecas utilizaron el pericón para tratar “enfermedades frías” asociadas con humedad o exceso de líquido en el cuerpo.

Las hojas son opuestas, lineales, a oblongas, de unos 7.6 cm de largo y brillantes.” Pericón florece en el verano con una flor bisexual amarillo-naranja que mide 1,5 cm de diámetro (Lim 2014).

Los aztecas tenían varios nombres para el pericón: yauhtli, cuaubiyauhtli, iyauhtli y tepepaloquilitl entre otros (Davidow 1999). Cempoalxochitl era otro nombre que los aztecas usaban para nombrar el pericón o *Tagetes*, estrechamente relacionados (Mexicolore 2012). Los aztecas utilizaron el pericón para tratar “enfermedades frías” asociadas con humedad o exceso de líquido en el cuerpo (Mexicolore 2012). Ortiz de Montellano (citado en Mexicolore 2012) señaló que los aztecas usaban el pericón para tratar varios tipos de enfermedades generales: las causadas por “flema” (por ejemplo, las fiebres intermitentes), aquellas con causas “divinas” (gota, rigidez en el cuerpo, escupir sangre) y aquellos con causas “naturales” (por ejemplo, hinchazones, ampollas, dolencias gastrointestinales).

La civilización maya usaba el pericón para propósitos similares, pero los nombres variaban según las diferentes naciones indígenas. Viviendo en Guatemala, uno se da cuenta rápidamente que hay múltiples lenguas que representan a las

diversas naciones mayas que están esparcidas por Guatemala y el sur de México. Las distintas lenguas muestran no solo la diversidad, pero aun más importante, las idiosincrasias de cada nación o tribu. Barillas-Aragón (1995) dice que las poblaciones indígenas en Guatemala tienen múltiples nombres para el pericón. Por ejemplo, en Liyá se llama totonicapán; en Iyá se llama jolomocox; en Ucí se llama quetzaltenango; y en Ey Yá se llama cachiquel. CasaGrande (2000) dijo que los mayas Tzeltal en Chiapas llamaban la hierba tzitz ak.

Los mayas en Guatemala usaron pericón para el tratamiento de diversas enfermedades como la malaria y el resfriado común, pero sobretodo para tratar enfermedades gastrointestinales (Barillas-Aragón 1995). Berlin et al. (1996) realizaron un estudio de los usos etnobiológicos médicos de las hierbas medicinales de los mayas de Chiapas, donde encontraron que la población indígena usaba pericón para tratar el dolor abdominal. Es claro que dos grandes civilizaciones usaban pericón principalmente para tratar enfermedades gastrointestinales.

Los aztecas utilizaron las propiedades energéticas del pericón para tratar enfermedades. Mexicolore (2012) menciona que los aztecas clasificaron la enfermedad en dos categorías,

La fitofarmacología del aceite esencial de pericón

La Base de Datos Fitoquímicos y Etnobotánicas del Dr. Duke (2015) encuentra que el pericón tiene 30 componentes diferentes en la hoja o brote de la planta, con tres compuestos principales en alta concentración: estragole (2.035 ppm), metil-eugenol (1.460 ppm) y anetol (1.425 ppm). Regalado et al. (2011) encontró 40 constituyentes diferentes en pericón, siendo los dos principales constituyentes aromáticos metil-eugenol y estragole. La concentración total de aceites esenciales en el pericón es de 6.000 ppm. En Italia, Marotti et al. (2004) realizaron un estudio donde extrajeron los aceites esenciales de diferentes plantas del género *Tagetes*; encontraron que la flor del pericón tiene una alta concentración de aceites esenciales en el 2.5%, aunque la flor es mucho más pequeña que el resto del género *Tagetes*. Al contrario a la investigación anterior de Regalado, la investigación de Marotti et al. (2004) encontró que el pericón tenía metilchavicol como

componente principal. Todos estos fitoquímicos se encuentran en los brotes sobre el suelo de la planta.

En América Latina y en la India, el aceite esencial de pericón ha sido ampliamente investigado. La mayor parte de la investigación encuentra que el aceite esencial del pericón se puede utilizar para combatir el crecimiento excesivo bacteriano y fúngico. Céspedes et al. (2006) llegaron a la conclusión de que el aceite esencial de pericón tiene propiedades antifúngicas y antibacterianas. Regalado et al. (2011) encontraron que el aceite esencial de “*T. lucida*” presentó una actividad antipalúdica moderada.”

Para comprender las acciones y efectos secundarios potenciales del aceite esencial de pericón, fue necesario ampliar la búsqueda a todo el género *Tagetes*. Según Cropwatch (2006), se han afirmado que los aceites esenciales de *Tagetes* pueden causar dermatitis si se utilizan en aromaterapia, y que el aceite esencial puede ser tóxico en grandes cantidades, sin embargo, el grupo de control concluye que los aceites esenciales del género *Tagetes* son seguros para el uso humano.

caliente y fría – cuando había un exceso de frío y / o humedad, el pericón era la hierba que usaban los aztecas para tratar estas condiciones. Mexicolore (2012) describe estos síntomas como flema, legañoso, y fiebre con escalofríos. Estas enfermedades pueden también haber causado la hinchazón de las extremidades. Los aztecas clasificaron el pericón como una hierba “de calor” que eliminaría el exceso de frío del cuerpo (Mexicolore 2012).

En Mesoamérica, los aztecas y mayas utilizaron el pericón como hierba saborizante. Los aztecas utilizaron pericón para dar sabor a las bebidas de *Theobroma cacao* (chocolate, Wyatt 2002). Los aztecas también agregaron pericón en envases donde se almacenaron las legumbres secas para darles sabor (Wyatt 2002). En Guatemala, la hierba entera se utilizó para sazonar el agua para hervir maíz (Barillas-Aragón 1995). Adicionalmente, la población indígena en Guatemala utilizó el pericón como un tinte para colorear diferentes tipos de tejidos y textiles (Guirola 2010). El color amarillo-rojo proviene de la luteína carotenóide que es un componente del pericón (Dweck 2009).

Los aztecas y los mayas también usaban el pericón en sus ceremonias religiosas. Los Aztecas usaban el pericón como un encanto afortunado al cruzar arroyos y ríos (Gates 2000). Durante



las ceremonias religiosas, las flores decoraron templos aztecas y se quemaron como incienso (Davidow 1999). Los aztecas creían que el pericón limpiaba el espíritu (Davidow 1999). Del mismo modo, los mayas usaban el pericón con fines religiosos. Los mayas creían que tenía propiedades mágicas e incluso podría salvar vidas. Los mayas también utilizaron las flores y las hojas cocinadas en una cazuela para hacer una decocción. Esta

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Tagetes lucida (pericón).

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Pericón tiene tres componentes principales del aceite esencial: metil-eugenol, anetol, y estragole. Metil-eugenol es eficaz en el tratamiento de la inflamación en el sistema respiratorio causada por alergias (Tang et al. 2015). Los fabricantes utilizan metil-eugenol como sustancia saborizante en los Estados Unidos (OMS 1991). Metil-eugenol también se utiliza para productos cosméticos como perfumes, lociones y jabones (NTP 2000). Mientras que la hierba entera de pericón no ha demostrado causar cáncer, el NTP (2000) encontró que el uso de metil-eugenol tiene el potencial de causar cáncer en dosis excesivas.

Anethole exhibe propiedades antiinflamatorias y quimio-preventivas (Choo et al. 2011). Zahid et al. (2015) realizó una investigación sobre la eficacia del anetol como antibacteriano, encontrando que “el anetol no mostró un efecto inhibitorio significativo del crecimiento...pero el anetol si mostró una potente actividad antibacteriana contra todas las cepas sometidas a prueba.”

Al igual que el metil-eugenol, el estragole es un agente saborizante comúnmente utilizado en los Estados Unidos (Organización Mundial de la

Salud 1991). Según la OMS (1991), el estragole tiene el potencial de causar cáncer a dosis muy altas de más de 10 mg/kg, pero no a dosis más bajas. Silva-Comar et al. (2014) concluyeron que el estragole “mostró actividad antiinflamatoria como lo demuestra la inhibición en el reclutamiento de leucocitos y la estimulación de la actividad fagocítica en los macrófagos.”

El aceite esencial de pericón también se puede usar como repelente de insectos o larvicida. Narayanaswamy et al. (2014) concluyeron que el aceite esencial de pericón puede ser usado para erradicar las larvas de *Aedes aegypti*, la especie de mosquito que comúnmente se conoce como portador del dengue y el virus zika. Caballero-Gallardo et al. (2011) encontraron que el aceite esencial de pericón era efectivo para repeler insectos, pero cuando los componentes del aceite esencial fueron aislados, los insectos fueron atraídos parcialmente. Este hallazgo se correlaciona con los resultados de otro estudio, en el que se utilizaron componentes del pericón para atraer machos de la especie moscas de la fruta con fines de investigación (Haq et al. 2014).

decocción fue consumida durante las ceremonias religiosas (Barillas-Aragón 1995). Los q'eqchí (Quiché) usaron pericón en la preparación de su incienso, entre otras hierbas y cortezas (Cano 2008). En 1973, Siegel et al. (1977) encontraron que “los huicholes fuman otra sustancia que llaman tumutsali o yahutli” – se encontró que la misteriosa mezcla de tabaco era *Nicotiana rustica* (tabaco) mezclado con pericón. Esta mezcla se fumaron en rituales chamánicos, pero los autores no pudieron probar que pudiera causar episodios alucinógenos (Siegel et al. 1977). Schultes (1981) escribió que “los huicholes fuman ceremonialmente una mezcla de pericón y *Nicotiana rustica* – una preparación llamada yatumutsali – para introducir visiones.” El huichol fumaba estas hierbas en combinación con bebidas de *Lophophora williamsii* (peyote) y tesgüino, una cerveza hecha de *Zea mays* (maíz). Es esta mezcla de fumar hierbas y bebidas alcohólicas lo que causaría lo que los autores llamaron “alucinaciones más claras” (Schultes 1981).

Hoy en día, en Mesoamérica y otras partes del mundo, el pericón es una de las muchas hierbas utilizadas para tratar múltiples enfermedades y condiciones. Los casos de efectos perjudiciales del pericón para la población general no se han documentado. El extracto de pericón se ha demostrado eficaz para tratar a varias problemas de salud a una dosis de 100 mg/kg (donde la DL₅₀ es superior a 50.000 mg/kg, Duke 2009). En los Estados Unidos, el pericón se conoce comúnmente como caléndula mexicana de la menta, estragón-mexicano, caléndula dulce, caléndula del dulce-olor, caléndula mexicana del dulce-olor, estragón de Tejas y pericón (Duke 2015).

Pericón es potencialmente eficaz para algunas de las siguientes condiciones: anemia, asma, infección bacteriana, sangrado, cardiomiopatía, el cólera, resfriados, cólicos, dermatosis, diarrea, dismenorrea, fiebre, hongos, gastritis, la gripe, la gonorrea, la malaria, las náuseas, la neurosis, el dolor, la neumonía, el reumatismo, la salmonella, y el dolor de estómago (Duke 2009). También pericón se utiliza como un sustituto para el especia *Artemisia dracuncululus* (estragón, Bown 2001).

La depresión y la ansiedad son dos de los

principales problemas de salud mental que afectan a grandes segmentos de nuestra población. En 2012, un grupo de científicos encontró efectos positivos del té de pericón sobre la depresión y el sistema serotoninérgico con una dosis de 50 mg/kg en un modelo animal (Guadarrama-Cross et al. 2012). [Nota del editor: No vamos a elaborar más sobre la investigación animal].

Pericón ha tenido resultados positivos en el tratamiento de trastornos gastrointestinales. Cáceres et al. (1993) encontraron que pericón fue eficaz en el tratamiento del cólera. Un estudio realizado por Ortiz (1989) concluyó que un extracto de n-hexano de pericón tiene buena acción antiespasmódica. Cáceres et al. (1993) confirmaron estos resultados, mostrando que un extracto de n-hexano de pericón tenía la acción antiespasmódica más fuerte, lo que es útil en el tratamiento de la diarrea espasmódica (calambres).

Téllez-López et al. (2013) estudiaron la eficacia de aumento de pericón en la función testicular y la calidad de los espermatozoides en un modelo animal. Este fue el primer estudio para encontrar que el pericón mejoró la calidad del esperma y la estructura testicular y ayudó en la liberación de las señales de la hormona gonadotropina que facilita la producción de testosterona (Téllez-López et al. 2013).

A pesar de la comprensión de los beneficios del pericón y la farmacología y su larga historia de uso seguro tradicional, el uso de algunas preparaciones comerciales han sido prohibidos en los Estados Unidos. El 20 de julio de 1998, la Administración de Alimentos y Medicamentos (Food and Drug Administration/FDA) de los Estados Unidos se mandó un memorándum al Malabar Natural Products, LLC, negando el permiso para la venta y distribución de cinco de sus productos, incluyendo “Jointaid,” que contenía los aceites esenciales de pericón. Malabar respondió con la presentación de nueva literatura para apoyar su posición y la dosis recomendada de su producto. Como es el caso con muchas hierbas medicinales, en cuestión eran las afirmaciones hechas por el fabricante que no fueron apoyadas por la investigación científica. En 1998, la FDA negó la petición de la compañía y prohibió la

entrada del producto a los Estados Unidos.

Era una aventura a probar el té de pericón que La Abuelita hizo para mí. Cuando nos sentamos a la mesa, la tetera empezó a silbar. Luis Pedro vertió agua hirviendo en una taza con brotes secos de pericón. Luis Pedro colocó la taza humeante justo a mi frente y yo me pregunté si iba a tener un sabor horrible. ¿Podría este té aliviar mis síntomas o sería empeorar las cosas? Dejé que el té se enfriara un poco, y La Abuelita me animó a tomar el primer sorbo. Llevé la copa a mis labios, y sintiendo un poco valiente, tomé el primer sorbo de té. Estaba sabroso! No me gusta los sabores amargos, así que posiblemente eso era parte de la razón por mi vacilación. Estaba felizmente equivocado – el té de pericón era picante, dulce, terroso, y suave. El té de pericón tenía un sabor de anís o regaliz que le dio una sensación de calor, ya que bajó a mi estómago. Tomé sorbos de este té durante toda la noche, para el beneficio de mi sistema gastrointestinal.

En conclusión, estoy agradecido a La Abuelita por compartir sus conocimientos sobre las hierbas conmigo. He aprendido la sabiduría de pericón que se ha transmitido de generación a generación durante siglos, y por suerte ahora

soy parte de este linaje. Después de beber el té de pericón, pude comer mi cena sin ningún efecto negativo. Los calambres de estómago dejó de suceder y yo era capaz de tener algo de normalidad durante varias horas. Yo si creo que si hubiese utilizado el pericón en las primeras etapas de la enfermedad, me hubiese ayudado a parar los calambres en el estómago y matar los patógenos que estaban causando la diarrea.

Me resulta fascinante como los guatemaltecos han utilizado la medicina herbal para tratar enfermedades gastrointestinales comunes, más otras enfermedades como la tos, y el malestar del sistema nervioso, por mencionar sólo unos pocos, y como la fe sigue siendo una parte integral de su sabiduría a base de hierbas. Escuchando a La Abuelita, es evidente para mí que la medicina herbal es muy importante en la cultura y las tradiciones de Guatemala. Debido a la falta de recursos y el acceso a tratamiento médico, las personas han utilizado la medicina herbal durante siglos para curar sus dolencias. Es a través de las penurias que estas hierbas medicinales han sobrevivido y ha sido transmitido a las generaciones más jóvenes. ■

Un pórtico de hotel está decorado con franjas de *Tagetes lucida* (pericón).

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Jaime Trujillo



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to view the January 2016 interview with Doña Maria Evelina Díaz (La Abuelita), recorded at her home in Jocotenango, Guatemala, where she lives with her daughter and three grandchildren. The young man conducting the interview is her grandson, Luis Pedro Díaz. Luis Pedro works for the municipality of La Antigua and is an architecture student at Universidad Mariano Galvez.

La Abuelita Speaks: Video Interview and English Summary

La Abuelita's grandson, Luis Pedro Díaz, opens the conversation by asking what medicinal plants she remembers. La Abuelita first mentions manzanilla (*Matricaria chamomilla*, chamomile). She says that manzanilla is like pericón because it helps with an upset stomach. [EDITOR'S NOTE: We have used the local common names for the plants discussed in the video out of respect for La Abuelita's healing tradition.]

Luis Pedro asks her how she was treated when she was young and got sick. La Abuelita responds that she was given pericón (*Tagetes lucida*, sweet-scented marigold or Mexican marigold). She explains that the most common herbs used were pericón and manzanilla and that they had similar properties. Pericón is also used as a flavor enhancer for instance, when making "atol blanco" (white atole), which is a creamy drink made with corn flour. La Abuelita explains that the atol is heavy to the stomach and it gives you a stomachache, so by adding the pericón to the atol you will not get that stomachache. La Abuelita begins to describe that making the pericón tea is very simple, just grab some of the leaves and stems, put them in water, and bring the concoction to a boil. Once it comes to a boil, the water is going to turn yellow - turn off the stove, strain the tea, and drink. You have to drink it warm.

Luis Pedro asks what they used instead of Alka-Seltzer® or aspirin when she was growing up. La Abuelita says that they used sal de uvas (literally "salt of grapes," an over-the-counter bicarbonate antacid). La Abuelita mentions that they also used mejorana (*Origanum majorana*, sweet marjoram). People walked into the "monte" or mountain forest to harvest mejorana to eradicate stomach worms. She recalls when she had some worms as a girl and her father went into the forest and harvested mejorana. When he returned, he cooked the herb and used the water for her bath. Another application was as a poultice. La Abuelita's father would mash the mejorana leaves while adding some alcohol, and then wrap the poultice around the belly with a cloth. This would eliminate the stomach worms and discomfort.

Luis Pedro asks if she remembers any other herbs that she used. La Abuelita mentions that they made a relaxation bath using chilca (*Baccharis salicifolia*, mulefat or seepwillow) and white rose petals (*Rosa* spp.). La Abuelita also recalls using hollos de naranjo, the young, tender leaves and flowers of orange trees (*Citrus* spp.). They made a tea of orange flowers and young leaves to calm the nerves. (The author notes that his Puerto Rican grandmother made the same herbal tea for similar purposes.)

La Abuelita says that yerba buena (*Mentha* spp., Bergamot mint, peppermint, or spearmint)

is good for coughs. She says she knows this because her daughter gave it to her grandson. “He had a bad case of asthma and she was told to grab a large amount of yerba buena, add as much sugar she could, and boil it until she had a syrup.” She also reminds Pedro that you can use yerba buena for cooking.

Pedro asked La Abuelita how she learned to use herbs. She responds that she learned from her own grandmother. La Abuelita remembers, “My grandmother always had pericón in the house. She would divide the pericón and keep some in the kitchen inside a brown bag. We also had manzanilla. Manzanilla was all over our yard. As soon as the manzanilla was ready to be harvested, my grandmother would cut them and put them to dry. Once dry, the manzanilla was kept inside a tusa (corn husk) in order to maintain the aroma of the manzanilla.”

Luis Pedro asks his grandmother if these herbs are easy to find today. She replies, “Yes, in the market.” The conversation shifts. La Abuelita mentions llantén (*Plantago major*, broadleaf plantain). Llantén is good for the kidneys and as a bath for your feet, La Abuelita says. She adds that malva (*Malva sylvestris*, common mallow) was also use in baths. La Abuelita also mentions apazote (*Dysphania ambrosioides*, wormseed). She recalls, “When we had lice, my dad would go and get some apazote and cook it. He will take the apazote tea and he would bath us with it to kill the lice.” She continues, “They would make a compress of apazote and place it in the stomach area to eliminate the stomach worms.” She says that apazote also is good for treating and healing wounds. Another herb that La Abuelita mentions is chicha fuerte (*Oxalis stricta*, common yellow woodsorrel). This herb is available throughout the area and is used for treating gum problems, for example, for babies when they are teething or for any other gum discomfort in adults. To apply, you mash the chicha fuerte and smear it on the affected gum area.

After this conversation ends, Luis Pedro brings out the manzanita fruit (*Crataegus mexicana*, Mexican hawthorn, sometimes also called manzanilla or tejocote). These round and colorful fruits are traditionally strung as

Christmas wreaths. Pedro explains that most families keep the wreath after the holiday because the fruits have the same medicinal properties and uses as the manzanilla flower. La Abuelita remembers an anecdote of a neighbor who came to their home one Christmas Eve and asked her father if they had “manzanilla in fruit.” She recollects that her father took the wreath from the nacimiento (Christmas nativity scene) and gave it to the neighbor for tea.

La Abuelita and Luis Pedro then talk about the medicinal and culinary uses of fig leaves. They explain that we know the sweet and delicious fig fruit, but that the leaves can be used to make a cough syrup. In addition, you can use fig leaves as a flavoring in fruit marmalades, like mango (*Mangifera indica*) or jocote (*Spondias purpurea*, red mombin or hog plum), and it is delicious.

Then La Abuelita shows us the dried manzanilla and pericón herbs. She explains that if you shake the dried manzanilla, the seeds will fall out and you can plant the seeds. La Abuelita explains that chamomile is sweeter than pericón. During the conversation, she remembers that you can boil young avocado leaves and use it as a footbath. She then talks about the hibiscus calyx or “la Rosa de Jamaica” (*Hibiscus sabdarifa*, roselle). La Rosa de Jamaica is dried and made into a “fresco” (refreshing cooler) during Christmas and Easter.

La Abuelita remembers that when she was working as a nanny and the family’s toddler was crying and unable to fall asleep, the mother usually placed some chipilín (*Crotalaria longirostrata*, longbeak rattlebox) under the child’s pillow so he could fall asleep. “If you cannot sleep, you can put chipilín under your pillow and you will have a good night’s sleep.” She adds that chipilín is delicious and high in iron. [Editor’s Note: The edible portions of the plant are the leaves and shoots, which are cooked and served as a leafy green vegetable or dried as an herb. *Crotalaria* seeds and roots are considerably toxic.]

The conversation shifts because La Abuelita wants to share about “el árbol del Hermano Pedro.” Hermano Pedro (Brother Peter) was a Franciscan Friar in La Antigua in the 17th century. John Paul II beatified “Hermano Pedro” in the



Dried manzanilla (chamomile, on left) and pericón in La Abuelita's kitchen.

Luis Pedro Díaz

1980s. If you lived or have visited La Antigua, Guatemala, especially during Lent and Easter, you have learned of el árbol del Hermano Pedro. The tree is in the courtyard of the Church of Calvario in La Antigua, Guatemala. The people of La Antigua believe that the tree has healing properties. La Abuelita reports, "After mass, many of the parishioners will walk under the tree to take the fallen flowers and make tea. The faithful will drink the tea because they feel that the tree has miraculous properties and, if they have faith, their pain or disease will vanish." The tree is esquisúchil (*Bourreria huanita*, jazmín de palo or popcorn flower), a tree native to Central America in the Boraginaceae family. La Abuelita shows us the dried flowers of "el árbol del Hermano Pedro" and mentions that the tree is respected and no one harms the tree.

Luis Pedro and La Abuelita then demonstrate how to finish making the pericón tea. La Abuelita says that there are vendors in the local market that sell many dried herbs, including pericón. The market days are Thursday and Saturday. A bunch of dried pericón costs 3 to 5 Quetzals (less than US\$1). Luis Pedro then pours and tastes the pericón tea. ■

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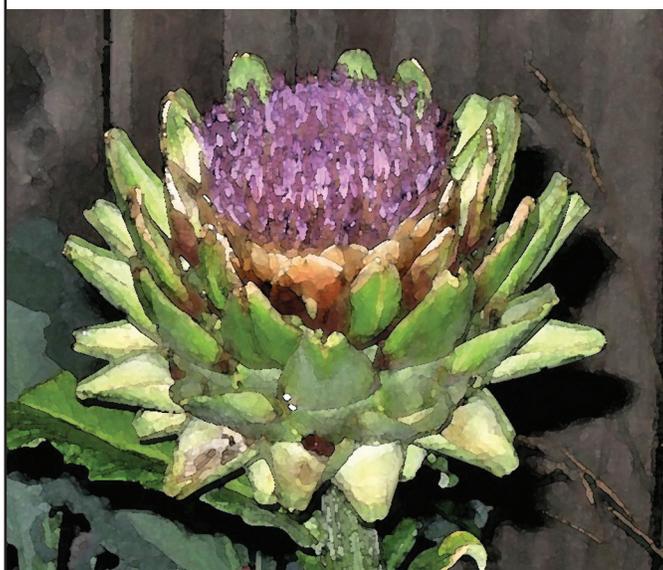


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Hippocrates and the Original Nature Cure Diet

Laurence Layne



The default position on diet in Western natural healing is a cleansing diet based on raw foods, juicing, and fasting. This might be called a naturopathic diet, though many herbalists, chiropractors, osteopaths, massage therapists, midwives, and lay healers learned versions of this. Another term for this “naturopathic” diet is the nature cure diet.

Before Eastern alternative systems such as Ayurveda, Traditional Chinese Medicine, and the macrobiotic diet became popular in the West, the nature cure diet was pervasive in the consciousness of healers and those seeking healing. It was the standard philosophy encountered in literature, in lectures, and in health food stores.

The rationale and reasons for a light or fasting diet are multiple and can be expressed in numerous ways, but the key word to describe the process is “removal.” Removing toxins (detoxification), removing encumbrances, removing detritus, removing morbid matter; removal or removing of roadblocks to health; removing stagnation or stasis in the physiology, particularly in the digestive tract, and with a special focus on the colon.

The ancient Chinese also used the word “removing” to describe therapy for repletion, a state of “too much” that needed to be reduced. The modern Functional Medicine movement has a “Four Rs” model, the first R being Remove,

followed by Replace, Repair, and Reinoculate. This rationale of removing excess accumulations of faulty metabolism has been used to dictate therapies such as colonic hydrotherapy, enemas, fasting, and various cleansing regimens.

Not always apparent in the scheme of detoxification and removing therapies is the “faulty metabolism” component. This faulty metabolism is fundamentally poor assimilation and elimination in the digestive tract. Digestion has become diluted and sluggish, as in reduced hydrochloric acid in the stomach, inhibited peristalsis, reduced enzyme production, stagnant bile or sludge in the gall bladder, and the medically defined “gastritis,” or gut inflammation due to impairment of absorptive surfaces.

German and Swiss Roots

The current modern phase or school of natural healing dedicated to elimination is primarily credited to German-Swiss origins, which is the predominant influence, but also has some deep American roots. The German version of nature cure hearkens back to the ideal of

“Even now some people, the barbarians and some Greeks, who have no knowledge of medicine, go on behaving when they are ill just as they do in health.”

~Hippocrates, *On Ancient Medicine*, c. 410 BCE

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The American nature cure diet often includes juicing of raw foods.

Rob Bertholf CC BY 2.0 flickr

a primeval Garden of Eden and what was conceived of as a “pure” diet, uncooked and natural, which bestowed perfect health on the original humans. It also was a product of the romantic ideals of the 19th Century which viewed aboriginal people or natives living close to the Earth as being in harmony with their surroundings and food sources. These world views, or “Weltanschauung,” looked at ancient or primitive peoples as hunter-gatherers who did not cook their foods or used simple principles of preparation.

Some of the major and most familiar figures in German nature cure were Father Sebastian Kneipp, Henry Lindlahr, Louis Kuhne, and Maximilian Bircher-Benner. Their methods were eventually taught in America by Benedict Lust, a patient of Father Kneipp’s, who became the founder of modern naturopathy. Hydrotherapy was central to the nature cure approach, which also featured a pure/unrefined diet, sunshine, breathing, and exercise.

American Branches

The American version of the nature cure diet originated with Reverend Sylvester Graham (1794-1851). Graham recommended a natural, semi-vegetarian diet consisting of whole grain bread, vegetables, fruits, and some proteins, such as milk and eggs, but no meat. White, processed bread was considered to have no nutritive value. He did not invent graham flour,

but those products were inspired by his preaching.

Other figures who followed and contributed to the American version of nature cure were John Harvey Kellogg (1852-1943), John Henry Tilden (1851-1940), Herbert M. Shelton (1895-1985), and Norman W. Walker (1886-1985). The emphasis of these practitioners was removing toxins from the tissues. They created the language of natural hygiene and “blood cleansing.”

Arnold Ehret’s 1922 book, *The Mucusless Diet Healing System*, was a raw foods manifesto published just two weeks before his death. It reads, “The Mucusless Diet consists of all kinds of raw and cooked fruits, starchless vegetables, and mostly cooked or raw, green-leaf vegetables.” Other components included “long or short” fasts, and “progressively changing menus of non-mucus-forming foods.” He also said “Disease is an effort of the body to eliminate waste, mucus, and toxemias, and this system assists Nature in the most perfect and natural way.” Ehret also recommended colonic irrigation. Interestingly enough, Ehret had tried a vegetarian diet before settling on the Mucusless Diet. His observation was that many vegetarians looked “sickly and pale,” and he himself became sick eating like them (Ehret 1922).

Edmund Bordeaux Szekely (1905-1979) wrote *The Essene Gospel of Peace, Treasury of Raw Foods*, and other books promoting vegetarianism and raw foods. *The Essene Gospel of Peace* was first published in 1937. He was the founder of the Biogenic Society, which believed in “the Fatherhood of God, the Motherhood of Nature, and the Brotherhood of Man” (IBS 2017).

Examining the treatment methods of a few well-known practitioners of the 1960s and 1970s reinforces the universality of the nature cure approach. The following examples we can call “gateway practitioners,” as they influenced thousands of people interested in natural health, and many of whom we now think of as senior herbalists and teachers.

Jethro Kloss wrote *Back to Eden* in 1939, a manual on herbs, health, and healing that was widely adopted by the counterculture of the 1970s and was the first herbal owned by many herbalists. Jethro Kloss used a fresh

fruit and vegetable diet with emphasis on cleansing the colon and his regimen probably influenced similar diets that followed.

Dr. John Christopher (1909-1983) was a major figure in the herbal renaissance of the late 20th Century. He took what he had learned from his herbal teachers, combining it with a naturopathic diet (he was a traditional naturopath), and developed an eliminative diet he called the Mucusless Diet in the 1950s (presumably influenced by Ehret). He also recommended juicing and light eating. Although it is not often examined, a diet that reduces mucous reduces the phlegm humor, according to traditional Greek medicine, what was later called catarrh in 19th Century herbal medicine. Besides the mucous that gathered in the nose, throat, and lungs, an excess of mucous was thought to gather around different organs like the kidneys and stomach (Christopher 1976).

For Dr. Christopher the Mucusless Diet consisted of “Any whole, live, raw foods. Fruits, vegetables, whole grains, nuts, seeds, and a small amount of fresh fish or chemical free chicken.” Foods that should be avoided: “Salt, eggs, all refined sugars, meat, all milk products, flours, and flour products.” The Mucusless Diet advocated by Dr. Christopher is more accurately categorized as a maintenance or lifestyle diet. He also taught a three-day mucusless cleanse and a juice cleanse (Christopher 1976).

Bernard Jensen was an influential chiropractor and naturopath who advocated whole foods and elimination diets. He was a health educator, who, according to his literature, taught in 50 countries. He used very straight-forward juicing and simple foods along with bowel cleansing as means to heal the body. After cleansing, he advocated a balanced diet of whole foods with emphasis on pH balance to maintain health. He also believed 60% of the diet should be raw, with low protein, and low starch. Jensen was also concerned with catarrh production as an impediment in the digestive tract, as he believed that disease began in the colon. While he used herbs in healing, he was most known for iridology diagnosis and colon cleansing, which he promoted in the U.S. from the 1950s onward (Jensen 1993).

Ann Wigmore (1909-1994) was a raw foods advocate who established the Hippocrates Institute in Boston, Massachusetts, in the early 1960s. The focus of her Living Foods diet consisted of wheatgrass juice, sprouts, and raw foods. The inspiration for this project were the words attributed to Hippocrates of Kos, that “food should be our medicine.” Other coworkers in that endeavor were Victorias Kulvaniskas and Brian Clement, who continued teaching and promoting raw foods teachings after Wigmore’s death. Clement moved the Institute to West Palm Beach, Florida, where it thrived and grew, becoming a raw foods icon and a major clearinghouse for the raw foods philosophy. A visit to the Institute would bring one into contact with a “tantalizing daily buffet of enzyme-rich, organic meals” (HHI 2017). Victorias Kulvaniskas’ 1975 book, entitled *Survival in the 21st Century: Planetary Healer’s Manual*, was an influential statement of holistic themes alongside the raw foods, wheatgrass, and sprouting philosophy.

Both the German and American ideas became widely disseminated in the modern lay natural healing movement. A whole generation of people learned the many facets of the nature cure diet from visiting health food stores, sharing information, reading books or booklets, home juicing, eating a vegetarian or raw foods diet, getting colonics, and using folk remedies. Many herbalists started out by working in a health food stores, cooperatives, or herb shops, and learned their natural healing principles based on nature cure of the eliminative sort.

The Appeal of Antiquity

Many of the 20th century teachers promoted diets and practices that were “pure,” closer to godliness, or supposedly representative of a diet from pre-Christian (Essene or Roman) times. Pictures in *Back to Eden* show Kloss dressed in toga-like clothing, an image that referenced the ancient schools of healing such as those of Ancient Greece and Rome. The appeal of antiquity acted as verification of what these 19th and 20th Century nature cure healers thought they were rediscovering.

Their ideas were based on the belief that the ancients ate pure, unrefined foods, and they applied these beliefs in their healing regimens. A modern equivalent world view would be the Paleo diet, in which fitness enthusiasts try to replicate the diet eaten by “caveman,” meaning, non-processed foods, fruits, nuts, and meat.

The most ancient authority of all, following the Western tradition all the way back, was Hippocrates. This was a lineage worth belonging to. The Hippocrates Institute was named for the “Father of Medicine” because Hippocrates was known to be an advocate of nature cure with water, fasting, and pure foods – presumably simple, unprocessed, and uncooked.

Hippocrates (460–370 BCE) lived on Kos, an island in the Western Mediterranean near the present day country of Turkey. He was the titular head of a school of healing, which started with his grandfather and involved his family, descendants, and students. Hippocrates is renowned as the “Father of Medicine.” This epithet has been repeated so often it has become a literary truism, as Hippocrates “is universally recognized as the father of modern medicine, which is based on observation of clinical signs and rational conclusions, and does not rely on religious or magical beliefs” (Yapijakis 2009).

It is true that a number of precepts written about and observed in the Hippocratic corpus form the foundations of modern regular medicine. But it is also true that Ancient Greek medicine often used simple natural means of cure, was vitalist in nature, and is also the predecessor of modern “alternative” medicine.

The Nature Cure Diet of Hippocrates

But what did Hippocrates and the ancient Greeks actually use as a healing diet? Hippocrates’ views on diet are readily accessible in the treatise *On Ancient Medicine*, also known as *Tradition in Medicine*. This text is part of what has come to be called the Hippocratic Corpus, a group of some sixty writings, which by tradition are attributed to Hippocrates but have been found by scholars to be authored by numerous practitioners in the Hippocratic School.

The old adage that one should “let food

be thy medicine and medicine be thy food” is incorrectly attributed to Hippocrates. This has been called a “literary invention,” as no reference to the phrase can be found in the Hippocratic writings (Cardenas 2013). The sentiment of the “food is medicine” statement has been adopted by countless natural practitioners and, indeed, by many mainstream nutritionists and health writers.

The fact that Hippocrates did not say it does not mean the sentiment is not true, or that food does not impact our health. Hippocrates was quite clear that food was a factor in healing. There are several ideas about food which one could say are part of the Hippocratic teachings:

- A limited diet should be taken when a patient is sick.
- Food should be eaten according to individual needs and humoral imbalances.
- The same food eaten by a well person should not be eaten by a sick person.

There is a good bit of information on Ancient Greek dietary regimens in *On Ancient Medicine*. In this treatise, Hippocrates appeals to reason and, like his contemporary Plato, breaks down his subject into logical, component parts. First, he says medicine has the potential of becoming a science. But this is only possible if the practitioner or inquirer uses as his or her starting point past discoveries or observations that have proven true over time. Eschew too much theorizing, he tells us, and avoid explanations that cannot be put in common sense terms.

Here is a paraphrase of his thoughts from the Hippocratic writings (adapted from Chadwick et al. 1983):

- We need medicine because we get sick. If sick people could get better by eating, drinking, and doing the same things healthy people did, then there would be no need for health-repairing regimens.
- He extrapolates this into an overall understanding of human diet by saying that humans would not be eating as they do now if the past experience had not proven their current food habits adequate and nutritious.

Simple foods like cooked grains, especially barley, held a central place in the Hippocratic healing philosophy.

- Humans need different foods than animals. Animals do just fine on fruit, vegetables, and grass. Ancient man ate many of the same things, but discovered some of them to be indigestible, and ill-suited for his diet. When mankind ate animal-like food, that is raw and uncooked, he found it hard to digest. This led to experimentation and discovery, and resulted in the modern diet. If man had to go back to the food and ways of his ancestors, Hippocrates says he “would suffer now from such a diet, being liable to violent pain and sickness and a speedy death.” In primitive times, mankind suffered from eating animal-like foods, the weaker succumbing faster than those with stronger constitutions. This experience and observation led people to discover what kind of food was most suitable for humans. This led to processing of foods so that they were more digestible – various ways of processing like grinding, wetting, boiling, baking, mixing, and diluting rendered foods digestible so they would not bring about pain and suffering. Applying heat and cooking was one of the processes they discovered. Hippocrates determines that this evolution of diet and food preparation is a type of medicine, because it was “founded for the health, preservation, and nourishment of man” and to “rid him of that diet which caused pain, sickness, and death” (Chadwick et al. 1983).

Timeline

By “modern,” Hippocrates is referring to his own times circa 400 BCE. For the Greeks of that classical era, “ancient” meant the time of the Trojan War, some eight hundred years before (c. 1200 BCE). The primitive ancestors that Hippocrates refers to may have even been thousands of years before the Trojan War.

- Hippocrates continues his rationale for medicinal foods by stating that no one would have looked for healing foods if the same diet was good for sick people as well as for healthy people. Those who made it their business to ask questions about sickness and health – the doctors and healers – thought to reduce or limit the diet of sick people. They observed that this helped a quite a number of (but not all) people, which suggested to them that different types of food were necessary when people were sick, particularly food that was easily digestible and did not stress the system.
- This conclusion generated the concept of strong and weak foods. “Strong foods” were harder to digest and negatively affected people whether they were healthy or sick. “Weak foods” were easier to take and easier to digest. An example of a strong food was meat. An example of a weak food was gruel, which Hippocrates says was created by mixing a strong food, like a grain, with lots of water and cooking it. This diluted and drew off its strength.
- For patients who found even gruel problematic, “they substituted liquid nourishment, taking care that this should be of moderate dilution and quantity, neither too weak nor too strong.” This may be the first example in Western healing literature of the liquid fast for natural cure. However, this passage does not specify whether the liquids were broths, simple soups, expressed juices of vegetables, or fermented grain drinks like the modern Rejuvelac (water from fermented sprouted grains) advocated by Ann Wigmore. In Hippocrates’ treatise, *Regimen in Acute Diseases*, more detail is recorded regarding liquid drinks, especially barley water made from soaking barley grain, along with vinegar, honey, and water drinks.
- Hippocrates also suggests that dry foods are stronger than wet foods and that wet foods are probably more beneficial due to their digestibility and mildness. This process of discovery of raw/cooked, strong/weak, and dry/wet continua suggested to Hippocrates that the experience of the physician who studied dietary therapy was no different than that of his primitive predecessors who discovered which foods were “savage” and “animal-like” and which were nourishing to humans. This emphasis on food as medicine and food as human history seems to reflect the ideals of the



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A traditional Chinese congee
(healing porridge)

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modern macrobiotic movement, in which the cook is a healer, indeed, a doctor-teacher.

- Hippocrates notes that it would be easy if strong foods were harmful and weak foods were beneficial in all cases. But some people are undernourished and must have supplemental diets because the cause of their illness is too little food or poor assimilation. The course of diet should be worked out for the individual based on feeling and how the patient reacts. Excessive fasting can be as dangerous as overeating. Hippocrates made it clear that everyone did not thrive on gruel, a liquid diet or even light eating or fasting, and that a depleted patient might be in need of “strong” food. Constitutions play a role in diet and health. People who are quickly affected by changes in dietary habits are weak. By contrast, those who are little affected by dietary changes and indiscretions have stronger constitutions.
- Hippocrates refers to an early form of sports nutrition, noting that trainers in athletics use the same experiential method to find what is best for a man to eat or drink to “gain mastery over their bodies and to achieve the maximum strength.”
- Finally, it is inevitable that small errors and misjudgments will creep in on the doctor’s part due to the variability of patient’s needs in regards to diet. No doctor is infallible, he says.

These basic rules seem to cover much of what Hippocrates thought about a healing diet. Simple foods like cooked grains, especially barley, held a central place in the Hippocratic healing philosophy. In the Hippocratic corpus, we see a spectrum from bread and barley cakes (strong/dry foods) to gruel and barley water (weak/wet foods) being recommended as part of a graduated healing regimen. Dietary therapy was not given in isolation, of course – it was used along with nursing, herbs, and other treatments in both acute and chronic conditions. The use of abstract energetic qualities such as hot, cold, wet, and dry, was criticized in *On Ancient Medicine*, but the empirical uses suggested by Hippocrates for a healing diet clearly take into account the qualities or temperatures of food as we now think about those pairs of opposites in traditional healing.

Dietary Therapies in Traditional Herbal Medicine Systems

In comparison with the dietary therapies of other systems of ancient healing, the Greek methods used at the time of Hippocrates are very similar. Traditional Chinese Medicine would recommend congee or jook (healing porridge) – sometimes mixed with decocted herbs – to accompany a healing regimen. Ayurveda would use grain dishes like kitchari, a warm and moist bean and rice porridge, as a simple healing food. What these approaches have in common is grain-based porridges or gruels that are easily digestible. In addition, other food-like beverages were used, like honey and vinegar drink (oxymel) and cooked or fermented honey and water (hydromel).

The Greek medical system that originated with the Hippocratic school of Kos formed the basis of Western medicine until the 19th Century. Even the writings of Samuel Thomson, essentially the founder of the American system of herbal healing, referenced principles of healing first discussed by Hippocrates. Thomson believed that overeating, and incomplete digestion clogged the system and created disease. The clogging of the system would ultimately lead to canker, or catarrhal build up in the digestive tract. Lobelia was one of Thomson’s agents in cleansing the system through emesis.

The instructions for administering the herbal program found in his 1822 *New Guide to Health* include dietetic recommendations that follow Hippocratic theories. For eating while sick, the patient could take a milk porridge made with hot water, flour, and milk; this was “good food for the sick, at any other time, especially while the stomach is weak.” He also used chicken broth in place of the milk porridge. Finally, he suggested that once the herbal therapy was complete, the patient could eat any nourishing food he or she desired, but the best was boiled salt pork or beef steak with pepper sauce (Haller 2001)!

Conclusion

Western traditional medicine has given rise to a full range of regular and alternative schools of healing, many of which are still with us. Nature cure is just one of those schools, like many others found around the world. It is fair to say that the original Hippocratic nature cure diet in Western medicine was comprised of simple, mostly cooked foods, and not raw foods as proposed by 19th and 20th Century healers and philosophers of Europe and America. Yet despite the errors and assumptions of the nature cure philosophy, the raw food approach has helped and continues to help many people.

All foods have their place in the spectrum of healing methods, even raw foods of the nature cure movement. The constitution of the patient, their underlying condition, and their innate ability to heal – i.e., the strength of their vital force – combined with the types of food and methods of preparation, are what determine the regimen for healing of any individual.

Regardless of which regimen we suggest for our patients, there is one maxim attributed to Hippocrates we can all agree on: First, do no harm. Naturopaths quote the Latin version of this: *primum non nocere*. While scholars have surprisingly found no exact version of those words written by Hippocrates, a sentence in the Hippocratic Oath seems most appropriate in regards to food: “I will use those dietary regimens which will benefit my patients according to my greatest ability and judgement, and I will do no harm or injustice to them” (North 2002). ■

It is fair to say that the original Hippocratic nature cure diet in Western medicine was comprised of simple, mostly cooked foods, and not raw foods as proposed by 19th and 20th Century healers and philosophers of Europe and America.

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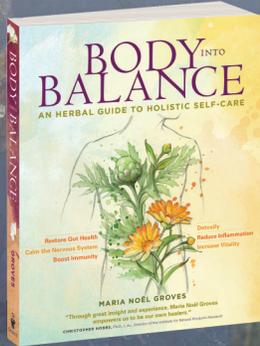
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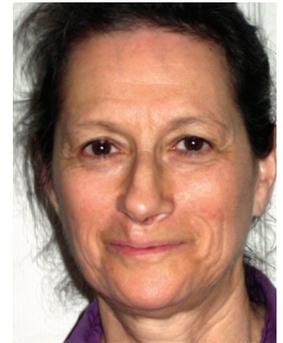
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The Spleen: A Cross-Cultural View of the Central Organ of Digestion

Janna Weiss, PhD



The Spleen is a central organ in traditions around the world, responsible for healthy digestion and assimilation and often associated with dysfunction involving cold and dampness.

There are examples of understanding the energetics of the Spleen from Chinese, Tibetan, Ayurvedic, Mexican, and Arabic medicine. The Spleen in traditional medicine is most often prone to disorders of cold, phlegm, and damp, leading to a variety of digestive symptoms. We also will see that traditional concepts of heat, cold, and wind are found in diverse cultures around the world.

Chinese Medicine

The Spleen and Liver are both centrally situated in the Middle Burner, between the diaphragm and the umbilicus, hence are both related to digestion. (The Upper Burner, the chest cavity, contains the Heart, and Lungs; the Lower Burner below the umbilicus houses the Kidneys.) In Chinese medicine, the digestive tract is associated primarily with the Spleen (O'Connor and Bensky 1981). Li Dong-yuan established the centrality of the Spleen in Chinese medicine in his 1249 Chinese classic *Treatise on the Spleen and Stomach (Pi Wei Lun)* (Unschuld 1985). Li considered the Spleen to be the source of all postnatal Qi (energy) and Blood, hence of foremost importance in both disease causation and treatment; he wrote, "When the digestive system and stomach in the body sustain damage, all kinds of illnesses can

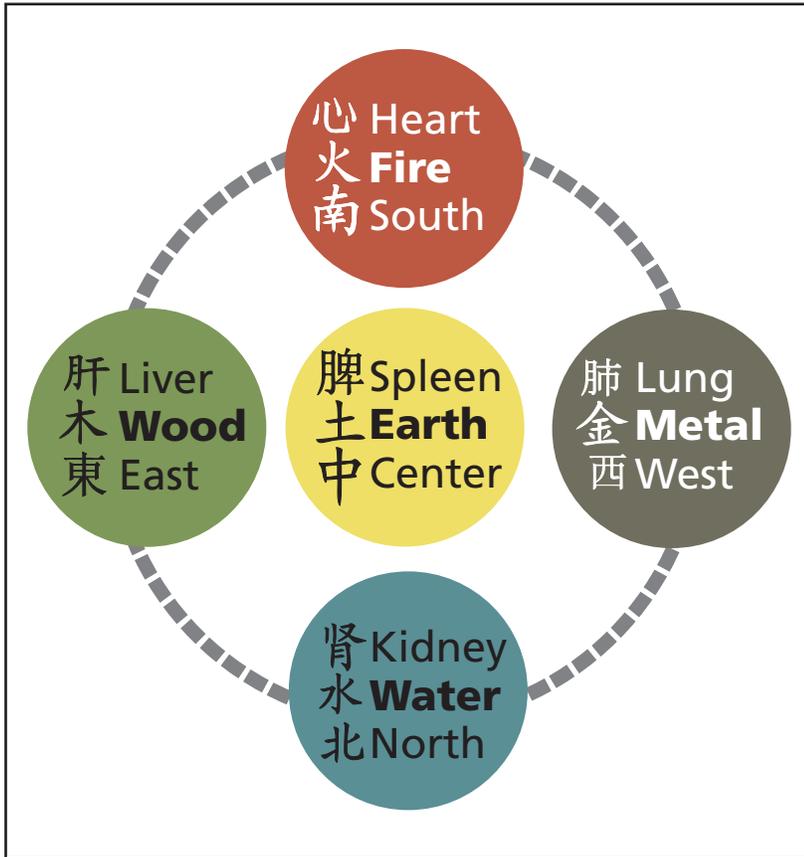
occur!" (Li et al. 1993, Unschuld 1985). According to Li, factors that damage the Spleen and Stomach are irregular food and drink, overwork, and excessive emotions (Unschuld 1985).

Chinese medicine classifies symptoms and signs under five primary yin or solid (zang) organs. These primary Chinese organs can be considered analogous to the modern concept of a body system (e.g., reproductive, hormonal, immune) in the sense that each organ incorporates a wide range of functions and symptoms that are spatially scattered throughout the body, and that relate to the traditional physiological purpose of each organ (Kaptchuk 1983, O'Connor and Bensky 1981). In English-language Chinese medical texts, it is customary to capitalize Chinese organ names, in order to distinguish this much broader "systemic" organ concept from the narrower Western medical definition of an organ.

Five minor yang or hollow (fu) organs are paired with each of the five primary yin organs. Four of the five yang organs are affiliated with digestion: Stomach (paired with the Spleen), Gallbladder (paired with the Liver), Large Intestine (paired with Lungs) and Small Intestine (paired with Heart). The fifth is the Bladder, paired with

"When the digestive system and stomach in the body sustain damage, all kinds of illnesses can occur!" ~Li Dong-yuan, *Treatise on the Spleen and Stomach (Pi Wei Lun)*, 1249 CE

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The Spleen/Earth is envisioned at the center in some models of Chinese medicine.

the Kidneys. Of these minor organs, the Stomach is the most important, and tends to suffer when there is a dysfunction involving stagnant or constrained Liver Qi. Symptoms of Stomach disharmony may include excessive hunger, bleeding gums, halitosis, frontal headaches, constipation, hemorrhoids, and acid reflux.

The Spleen's primary traditional Chinese functions and associated body parts are fourfold. The Spleen is responsible for: (1) transforming and transporting foods and fluids, i.e., the digestion and absorption of metabolites, their transportation to the various organs, and from them to the whole body, thereby producing Blood and Qi (energy); (2) "governing or controlling the blood," keeping the blood properly flowing within the vessels; (3) building and maintaining the muscles, flesh, and extremities, including the function of holding the organs in their respective places; (4) manifesting in the mouth and lips.

1. The "transformation and transportation" of foods and fluids is a major responsibility of the Spleen, which, if compromised, may deleteriously affect all the other organs. Hence the Spleen has a central position in relation to the other organs. In one variation of the depiction of the five elements, the Spleen is situated in the center, surrounded by the

remaining four yin organs. If a deficiency in the "transformation and transportation" function of the Spleen arises, digestive symptoms such as abdominal distention, diarrhea, chronic loose and frequent stools, or anorexia may arise.

2. When a dysfunction in "governing the blood" arises, symptoms such as vomiting blood, blood in the stool, "black-and-blue" bruised spots, excessive menstrual bleeding (menorrhagia), or abnormal uterine bleeding (metrorrhagia) may occur. Hormonal functions in Chinese medicine are distributed among the Spleen, Liver, and Kidneys. Scanty periods or lack of menstruation (amenorrhea) or pale menstrual blood are most often due to insufficient production of Blood because of the inability of the Spleen to carry out its transformation and transportation function. Craving sweets, the flavor associated with the spleen, may also be considered an imbalance of the Spleen (Lee 1992).

3. Organ prolapse – such as uterine, rectal, or gastric prolapse – is associated with a loss of muscle tone and a loss of the organ-holding function of the Spleen. Weak, cold, painful, or swollen extremities also are a sign of Spleen weakness.

4. Each organ in Chinese medicine is related to a facial orifice. The Spleen is responsible for the mouth and the health of the Spleen system is reflected in the health of the mouth and lips. Hence, by extension, the health of the gums is related to the health of the Stomach, the Spleen's paired organ.

Each organ is also associated with a color, element, flavor, and emotion. For the Spleen these are: yellow, earth, sweet, and overthinking or worry (Kaptchuk 1983, O'Connor and Bensky 1981). For an extensive discussion of the Chinese Spleen, see Heiner Fruehauf's (n.d.) online article.

Abnormal or excessive weight loss or gain, loss of appetite, shortness of breath (dyspnea), fatigue, and pale or yellow skin color are all symptoms primarily associated with the Spleen. The Spleen prefers warmth and dislikes cold. In order to preserve the metabolic digestive "fire" of the spleen that "cooks" the food after ingestion, the Chinese prefer cooked foods and foods that are warming in nature. *Zingiber officinale* (ginger, sheng jiang) is a major culinary ingredient that

warms and strengthens Spleen function and can be used on a regular basis. [Editor's Note: For all herbs, we list the common English name followed by the traditional common name.]

A Spleen injured by cold produces mucus that is stored in the Lungs, hence respiratory symptoms are often associated with the Spleen as well as the Lungs. Asthma, bronchitis, and recurrent acute upper respiratory tract infections, such as sore throats and ear infections in children, are therefore also associated with the Spleen. Treatment is directed to relieve both "branch" (secondary) symptoms of the Lungs and "root" problems in the Spleen. Many Chinese herbal tonics simultaneously support the Lungs and Spleen. Examples are ginger, *Atractylodes macrocephala* (atractylodes, bai zhu), *Astragalus membranaceus* (astragalus, huang qi), *Panax ginseng* (ginseng, ren shen), and *Glycyrrhiza glabra* (licorice, gan cao) (Bensky and Gamble 1993).

The Spleen is also easily injured by dampness, with symptoms such as loose stools and vaginal discharge. If the vaginal discharge is due to heat-dampness, the discharge is yellow, and if due to cold-dampness, then it is white. Chronic fatigue syndrome and dysbiosis most often fit a picture of deficient Spleen function. Edema, an abnormal accumulation of fluid in the body, is a symptom classically associated with the Spleen's propensity for dampness. Other Spleen symptoms usually associated with dampness include a feeling of heaviness, a slippery pulse (called hua mai, like pearls rolling on a tray, also translated as a rolling pulse), borborygmus (intestinal gurgling), thick/moist/sticky tongue fur, and a tongue with distinct tooth marks along the sides (Kaptchuk 1983). For a discussion of the less common Spleen heat-dampness symptoms, see Kaptchuk (1983).

Pancreas and thyroid functions, though not specifically mentioned in Chinese medicine, are often associated with the Spleen and Stomach. For instance, the "Three Excesses" of diabetes (pancreas related), include symptoms for each of the Triple Burners and their associated organs: excessive thirst associated with the Upper Burner and Lungs, excessive hunger associated with the Middle Burner and Stomach (Stomach Heat), and

excessive urination, associated with Lower Burner and Kidneys (Kaptchuk 1983). The sluggish metabolism of hypothyroidism could correspond to a Chinese symptom pattern of Spleen Qi deficiency. While Kaptchuk (1983) offers Kidney Yang Deficiency in association with hypothyroidism, Lee (1992) considers both diabetes and hypothyroidism to be Spleen/Stomach deficiency disorders.

Tibetan Medicine

Due to Tibet's geographic location between India and China, Tibetan medicine bears similarities to both Ayurvedic and Chinese medicine. Tibetan medicine closely resembles Ayurvedic medicine in that both systems are based on three main bodily humors (Ayurvedic doshas) among which imbalances may develop: wind, bile, and phlegm (Donden 1986). Wind corresponds with breath and life force (energy); bile corresponds with fire and heat; and phlegm corresponds with earth, water, cold, and dampness (Baker 1997). The Tibetan spleen and stomach are associated with the earth element and with

Spleen prefers warmth and dislikes cold. In order to preserve the digestive "fire," the Chinese prefer cooked foods and foods that are warming in nature.

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Zingiber officinale (ginger)
rhizome

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The “three poisons” – represented as a bird (attachment), a snake (aversion), and a pig (delusion) – are symbolically drawn at the center of the Buddhist wheel of life.

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phlegm (Donden 1986). (Lungs, kidneys, and urinary bladder are also phlegm related.) With phlegm disorders, digestive symptoms predominate, including: loss of appetite, indigestion, frequent vomiting, loss of sense of taste, distention of the stomach, frequent belching with the smell/taste of food eaten, heaviness of mind and body, laziness, coldness of body, and discomfort after eating (Clifford 1984).

The three basic afflictive emotions that give rise to all suffering are called the “three poisons,” a fundamental Buddhist concepts that forms the foundation of Tibetan medicine. According to Tibetan medicine and Buddhist philosophy, we are all “sick,” in that we remain within the cycle of existence. Our true healing ultimately entails liberation from cyclic existence and attainment of enlightenment. The three poisons – attachment, hatred, and ignorance (delusion, obscurator) – are the three causes of rebirth into another cycle of existence.

Wind disorders arise from attachment, namely our desires, passions, likes, attractions, wants, cravings, and affections (the consideration

of some as close and dear to us). Bile or heat disorders arise from hatred and anger (a single word in Tibetan, also called aversion), dislikes, disgusts, rejections, and the holding of some people as distant from us, as “enemies.” Ignorance or delusion – the root of the three poisons and the main obstacle to enlightenment – gives rise to phlegm disorders. In order to be released from perpetual attachment and hatred, ignorance must be dispelled. Ignorance is our mistaken view of self, our mistaken belief in an inherently existing “I.” Realization of the true nature of the self as non-inherently existing (in other words, the realization of emptiness or selflessness) coupled with a compassionate altruistic intention towards all living beings liberates us from cyclic existence and leads to full enlightenment (Baker 1997, Clifford 1984, Donden 1986).

According to Yeshe Donden (1986), personal physician to His Holiness the Dalai Lama for over twenty years, “the most important point concerns ignorance, for the entities and causes of all illness derive from ignorance. From ignorance there is obscurator, due to which we do not recognize unsalutary states of mind as faulty and instead generate desire that leads to many ill-deeds and the accumulation of bad karma... From obscurator, which is heavy, dull, and cloudy, phlegm disorders increase, phlegm being heavy and viscous... The root is beginningless ignorance. Due to its force we are caught in cyclic existence, in the round of repeated birth, aging, sickness, and death. Ignorance is with us like our own shadow; thus, even if we think that there is no reason to be ill, even if we think that we are in very good health, actually we have had the basic cause of illness since beginningless time.”

Ayurvedic Medicine

In Ayurvedic medicine, the phlegm humor is called kapha. Kapha mucus is best relieved by emetic therapy, the induction of vomiting. Herbs that are prescribed for kapha disorders are warm, dry, light and stimulating in nature, pungent, bitter, astringent, and strengthening to the digestive fire. While diuretic, diaphoretic, and expectorant herbs may assist in expelling

moisture (which includes edema and fat), carminative herbs that promote digestion are the primary means of dispelling kapha imbalance. Many carminative digestives that relieve kapha are also diaphoretic and expectorant, such as ginger, *Cinnamomum* spp. (cinnamon, twak), and *Syzygium aromaticum* (cloves, lavanga) (Frawley and Lad 1986). Examples of pungent, hot, restorative tonic herbs (rasayana herbs) for kapha are *Piper longum* (Indian long pepper, pippali) and *Commiphora mukul* (guggul, guggulu), a resin of the same genus as *C. myrrha* (myrrh, bola) (Frawley and Lad 1986). Cold-natured foods – such as ice cream, sour cream, and yogurt – increase kapha. Additional examples of kapha-relieving herbs are *Cuminum cyminum* (cumin, jiraka), *Coriandrum sativum* (coriander, dhanyaka), and *Elettaria cardamomum* (cardamom, ela) (Lad 1984).

Mexican Traditional Medicine

With 54 indigenous groups, Mexico is rich in both culture and botanical biodiversity. The indigenous groups and the majority mestizo culture vary with regard to medical beliefs and use of herbs. Nevertheless, some medical practices are widely shared. For example, in Mexico and throughout Latin America, warming herbs that protect the digestive function, such as non-native *Matricaria chamomilla* (chamomile, manzanilla) and *Mentha* spp. (mint, hierba buena) are often given to young children (Linares et al. 1990, Weiss 1998).

The concepts of hot and cold, used in the classification of illnesses and medicinal plants, are ideas that are native to Mexico and the New World (Ortiz de Montellano 1990, Weiss 1998). The Badianus Codex, an Aztec (Nahuatl) herbal written by de la Cruz in 1552, shortly after the Spanish conquest, mentions various body parts in relation to hot and cold disorders (Ortiz de Montellano 1990). Only the abdomen is mentioned in relation to cold. The Badianus Codex also mentions a particular kind of diarrhea caused by drinking cold water after eating raw vegetables. In Aztec cosmology, cold, phlegm, and wind disorders were associated with Tlaloc, the rain god (Ortiz de Montellano 1990).

For the Chatino people of Oaxaca (with whom I lived over a two-year period), a cold disorder is often precipitated by attack of the river god, jo'okieku, first experienced as a sudden fright in the water. Cold symptoms are related to the spleen. Reminiscent of the Chinese Spleen, the afflicted Chatino spleen is associated with diarrhea, pallor, and swelling and prefers warmth (Weiss 1998). For cold disorders, warming herbs are heated and applied externally to the left side of the body, over the physical spleen. Internally, in addition to chamomile, Chatino herbs specifically mentioned for cold type diarrhea are: *Tanacetum parthenium* (feverfew, santa maría), cinnamon (canela), *Pimpinella anisum* (anise, anís), and *Hyptis suaveolens* (pignut, tintallo) (Weiss 1998).

Latido, a pulsing abdominal pain, is a chief complaint and major cause of concern among the Chatino. Latido can be differentiated into hot and cold types, where the hot type is associated with the Chatino liver and the cold type corresponds to the stomach/spleen. Cold latido may be due to exposure to cold or to skipped meals (malpasa de

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Cinnamomum spp.
(cinnamon, canela) are
used in both Ayurvedic and





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Salvia fruticosa (Greek sage)
 is used in Arabic herbalism for
 digestive disorders.

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hambre). Warming plants for cold latido include the standard chamomile and mint, as well as *Croton ciliatoglandulifer* (croton, garañona, kuityi karaño, also used in external baths for edema and swelling), *Persea* sp. leaf (avocado, aguacate, also used by the Chatino internally for bruises and contusions, a Chinese Spleen indication), feverfew, *Phyla dulcis* (Aztec sweet herb, hierba dulce), *Piper nigrum* (black pepper, pimienta), *Montanoa xanthiifolia* (tree daisy, canelillo), and “oregano” (possibly *Origanum* sp. or *Lippia* sp.) (Weiss 1998).

Arabic Herbalism in Israel

Among Arabs in Israel, *Salvia fruticosa* (Greek sage, maramiya or marva) is used primarily for digestive disorders like diarrhea, stomachache, gas, and indigestion (Palevitch and Yaniv 1991), an application very similar to the warming Spleen tonics in Chinese medicine. In Shefar’am, an Arab city in the Northern District of Israel, all parts of the mature *Foeniculum vulgare* plant (fennel, shomar or shumar) are boiled as a tea to

treat asthma. Fennel seeds are carminative and tonic for digestion and mildly expectorant (Weiss 1988, Tierra 1988). I consider fennel as much a Lung and Spleen tonic as the other medicinal plants mentioned above from Chinese medicine.

Epilogue: Differential Diagnosis and the Paradoxical Hot-Cold Energetics of Herbs

Digestive disorders must be differentially diagnosed before healing herbs can be selected. For example, the Chatino distinguish between hot and cold diarrhea: hot diarrhea (dysentery) is “red” in color, while cold diarrhea is accompanied by green or white coloration or mucus. As mentioned above, the Chinese Liver and Stomach, are more often afflicted by heat disorders, while the Spleen is prone to cold and damp disorders. Tibetan wind and bile/heat may also be associated with digestive disorders, as may be imbalances of the pitta dosha in Ayurveda. The different patterns of hot and cold disorders can be discerned through careful observation and differential diagnosis. The concepts of heat and cold are not abstract and obtuse, but are empirically associated with specific and clearly defined symptoms and signs. These models concisely summarize complex clinical pictures, and are therefore clinically useful. Once the character of the disorder is understood, a plant or plants may be selected to balance the disorder.

The designation of hot-ness and cold-ness of some medicinal plants that are widely used for digestive disorders often is controversial. For example, some Western herbalists consider peppermint, and mints in general, to be cooling. This may be based on the Chinese classification of *Mentha arvensis* and *M. haplocalyx* (wild mint, bo he) as a cooling diaphoretic herb for febrile conditions and constrained Liver Qi (Bensky and Gamble 1993). Peppermint is considered to be a warming, stimulating, and carminative remedy in European herbalism, although it was also used for hot or inflamed liver disorders. As we can see, the designation of peppermint as primarily cooling is not necessarily supported by the medical anthropological literature. Chamomile, generally considered to be warming, is known to

be anti-inflammatory and helpful for liver disorders associated with heat (Weiss 1988). Tierra (1988) describes peppermint as slightly cool, and chamomile as neutral. Holmes (1989) considers peppermint “warm with secondary cooling effects,” primarily a diaphoretic for febrile (wind-heat) conditions and Liver conditions; he considers chamomile “warming with cooling potential,” primarily for constrained Liver Qi.

In another example, a Christian Arab woman from Nazareth told me that maramiya (Greek sage) was hot and gave her constipation. Others have also asserted that it is hot. The closely related *Salvia officinalis* (common sage) dries breast milk, is contraindicated during nursing, and has estrogenic activity (Newall et al. 1996, Weil et al. 2000), yet common sage is considered by some Western herbalists to be a cooling Yin tonic that moistens dryness (Herbal Hall, pers. comm.). Holmes (1989) considers common sage to be cool and dry, a Lung and Spleen Qi tonic with estrogenic effects. Tierra (1988) considers common sage to be warming. Perhaps sage regulates fluids and is both a Spleen Qi and Kidney Yin tonic?

For practical purposes, we might consider herbs like peppermint, chamomile, and sage to be neutral, useful, and important plants for digestive problems, both hot and cold. I recommend using Holmes' and Tierra's assessments of the traditional classification of Western herbs as general guidelines. In my own formulas, I further accentuate my intention to warm or cool a person by using a combination of herbs. I apply traditional differential diagnoses and concepts to the use of Western herbs in my own practice. I encourage you to do the same, and to keep an open mind about these wonderful healing plants. ■■

EDITOR'S NOTE: An earlier version of this paper was published as Weiss, J. 2006. The spleen, primary organ of digestion in traditional medicine. Kol Hatzmahim/Voice of Plants 5:39-42. It has since been removed and is no longer available in English.

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A Flexible Approach to Formulation for Digestion



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igestive tissues and processes are complex. Support for normal function or correction of pathologies requires a complex combination of herbal actions.

This formula, with flexible modifications, has been developed over the last 25 years of my practice. In one form or another, it has been given to more than 3,000 patients. I will describe how to build this formula in segments, followed by two digestive case studies.

The formula begins with a classic pair: *Matricaria chamomilla* (chamomile) and *Mentha x piperita* (peppermint). These two herbs are frequently undervalued, yet each one has potent effects on various digestive tissues and functions. Their mildness is of benefit, because they support function rather than drive it, and may be taken for longer periods of time without producing imbalances. I frequently give this simple pair of herbs as a tea on the first visit, to be taken 30 minutes before meals, to support normal digestion until the first follow up. I give this formula even when digestion is not a chief complaint. Patients nearly invariably positively respond about the effects.

- *Matricaria chamomilla* (chamomile):

Digestive bitter, nervine, mild sedative, carminative, digestive antispasmodic, topical anti-inflammatory (including topical effect on upper gut tissues), neutral to slightly warm, slightly dry.

- *Mentha x piperita* (peppermint): Digestive antispasmodic, carminative, anti-emetic, anti-inflammatory to gut tissues, antiseptic, mixed warm and cool, slightly dry.

Together these herbs support gastric secretions, peristalsis, and nervous balance, reduce inflammation, and have a near-temperate balanced humoral effect. This is a key vitalist approach to therapeutics, to first normalize and promote healthy digestion, regardless of the chief complaint. The proportions of the herbs can be altered as needed, for instance, more chamomile for additional bitter nervine effect.

My classic formula often includes a second pair of herbs, *Foeniculum vulgare* (fennel) and *Glycyrrhiza glabra* (licorice). I learned this four-herb combination in the early 1990s from Jillian Stansbury, ND and Herbalist.

- *Foeniculum vulgare* (fennel) seed: Carminative, mild bitter, anti-inflammatory, relaxant to the system, warming, drying.

- *Glycyrrhiza glabra* (licorice) root: Demulcent, anti-inflammatory, tonic/adaptogen in larger doses, hepatoprotective, neutral in temperature, moistening.

This is a key vitalist approach to therapeutics, to first normalize and promote healthy digestion, regardless of the chief complaint.



Here the fennel seed strongly reinforces the carminative effect of the chamomile and mint, as well as the bitter and anti-inflammatory properties. The three herbs together are more potent in all the actions than the original pair. In a modest proportion of the formula, licorice root is corrective to the dryness of the original three herbs. If included in a larger proportion, licorice root can provide more demulcent action, as well as systemic tonic/adaptogen and anti-inflammatory effects. This four-herb formula supports normal function while also being useful as an intervention for a wide variety of digestive conditions.

Chronic conditions often include higher levels of inflammation and tissue damage, and in some cases are accompanied by bacterial overgrowth. The third module of our standard formula includes three herbs: *Althaea officinalis* (marshmallow), *Calendula officinalis* (calendula),

and *Plantago* spp. (plantain). Each of these herbs has powerful topical anti-inflammatory effects on the walls of the upper gastrointestinal tract, and all three herbs promote wound healing.

- *Althaea officinalis* (marshmallow) root: Demulcent, anti-inflammatory, vulnerary, immunostimulant, cooling, moistening.
- *Calendula officinalis* (calendula): Strong bitter, anti-inflammatory, vulnerary, mild hepatic, antispasmodic, antiseptic, cooling, drying
- *Plantago* spp. (plantain): Mild bitter, anti-inflammatory, vulnerary, mild hepatic, antiseptic, cooling, drying.

These three herbs can be added in conditions with chronic tissue injury and dysfunction, or impaired intestinal permeability (i.e., leaky gut). In one

.....
The flowers of *Matricaria chamomilla* (chamomile)

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...the formula can be modified for its humoral effects and according to the client's constitution...other herbs may be added to provide complementary properties...

case, a patient with a rare genetic condition that made her completely intolerant of carbohydrates experienced frequent upper gastrointestinal inflammation. She was able to use this simple triplet to completely control this inflammation.

This resulting seven-herb formula can be a beginning template for a patient specific formula. I have been continuously using this formula, with flexible modifications, in teaching

clinics at a succession of three herbal schools since 1997. Several other herbal communities and schools have also adopted this formula and methods for modification, and it is evolving into a contemporary classic formula.

Formula Modifications

First a screening for herbal preferences is necessary. Some individuals do not like licorice, mints give heartburn to some people, and chamomile can cause an allergic rash in a small proportion of people. Over the years I have seen occasional patients of each type, and initially had to accept a return of the formula for replacement and reformulation. This screening has now become routine in my clinics.

Next the formula can be modified for its humoral effects and according to the client's

Foeniculum vulgare (fennel) seed as it appears in the garden.

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constitution. In the damp, bloated patient, the demulcent herbs can be reduced or omitted, and more warming and drying herbs may be added, such as *Zingiber officinale* (ginger) and/or *Cinnamomum* spp. (cinnamon).

Astringents such as *Agrimonia* spp. (agrimony) or *Achillea millefolium* (yarrow) may be added to tighten boggy tissues. In a client with a dry presentation, the proportion of drying herbs may be reduced, and demulcents increased.

Finally, other pairs or triplets of herbs may be added to provide complementary properties. A common modification in my clinics has been the addition of *Taraxacum officinale* (dandelion) root and *Berberis* spp. (Oregon grape) root, to increase the liver alterative properties already present with several of the core herbs.

Forms of Delivery

With any gastrointestinal condition, teas and powders should be the preferred treatments. Tinctures primarily exhibit their effects in the stomach, as alcohol-soluble constituents are nearly completely absorbed in the stomach and may not directly reach the tissues of the digestive tract below the stomach, even if they indirectly affect the gut by systemic means. The main delivery form I have used over this period has been the decoction. Powders may be especially effective, and may also be delivered in media that are beneficial to the gut, such as applesauce, honey, or blackstrap molasses.

Case Illustrations

The following two cases illustrate the use of a simple version of the formula and a modified formula. In both cases, the individuals had chronic inflammatory and tissue changes in the gut secondary to food intolerance, a very common presentation in the contemporary clinic. Screening for and removing poorly tolerated foods is a core skill, and is essential for full recovery or cure from many chronic digestive or autoimmune disorders. In both cases, the individuals agreed to a withdrawal of the offending food, and the formulas were given to support healing of the tissues. We have seen many times that these kinds of formulas

will mask the effects of food intolerances for a time, but unless the food is strictly avoided, the symptoms return soon after stopping the herbs. This process can be beneficial in the progress of a case, as the client comes to understand that the deeper cause must be addressed.

Client A: Recommendations and Symptom Changes

In this case, the client had chronic intestinal inflammation with bloating, thus calendula was added to the basic four-herb formula, increasing the bitter, drying and anti-inflammatory effects.

Client A: Symptom checklist on Intake and Follow-up

BODY SYSTEM	SYMPTOM	VISIT #1	VISIT #3 at 6 WEEKS
Mouth and Throat	canker sores	2	0
	TOTAL	2	0
Digestive tract	diarrhea	4	1
	constipation	5	2
	bloated feeling	4	2
	belching	4	2
	gas	4	2
	stomach pains	2	1
	heartburn	1	0
TOTAL	24	10	
Musculoskeletal	pains or aches in joints	5	2
	stiffness	4	2
	pains in muscles	5	2
	weakness	4	2
	numbness	4	1
TOTAL	22	9	
Energy and Activity	restlessness	4	2
	fatigue, sluggishness	5	2
	apathy, lethargy	5	2
	TOTAL	14	6
Emotions	mood swings	3	2
	anxiety, fears	5	2
	nervousness	2	2
	anger, irritability	3	2
	aggressiveness	3	2
	depression	3	2
TOTAL	34	19	

Scale: 5 - frequently have severe symptom; 4 - frequently have mild symptom; 3 - occasionally have severe symptom; 2 - occasionally have mild symptom; 1 - rarely have symptom; 0 - never have symptom.

1. Removal all wheat and gluten-containing foods from diet

2. Herbal formula of equal parts:

Matricaria chamomilla (chamomile) flower

Mentha x piperita (peppermint) leaf

Foeniculum vulgare (fennel) seed

Glycyrrhiza glabra (licorice) root

Calendula officinalis (calendula) flower

Preparation: Strong decoction of 1-2 ounces of herbal mixture per quart water, cooked for 30-40 minutes on very low heat.

Dose: 1 quart per day

Client B: Symptom checklist on Intake and Follow-up

BODY SYSTEM	SYMPTOM	VISIT #1	VISIT #2 at 3 WEEKS
Digestive tract	constipation	3	0
	bloated feeling	3	5
	belching	5	3
	gas	5	3
	stomach pains	5	3
	heartburn	3	1
	TOTAL	24	15
Musculoskeletal	pains in joints	5	3
	pains in muscles	3	0
	TOTAL	8	3
Energy and Activity	insomnia	5	1
	fatigue, sluggishness	3	3
	apathy, lethargy	3	0
	TOTAL	11	4
Emotions	mood swings	5	0
	anxiety, fears	5	1
	nervousness	5	2
	anger, irritability	5	2
	depression	3	2
	TOTAL	23	7

Scale: 5 - frequently have severe symptom; 4 - frequently have mild symptom;

3 - occasionally have severe symptom; 2 - occasionally have mild symptom;

1 - rarely have symptom; 0 - never have symptom.

The client's compliance was perfect. She experienced much relief of symptoms in six weeks, as summarized in the table on the previous page.

Client B: Recommendations and Symptom Changes

In this case, the client's chief complaint was panic disorder. Thus, the formula was modified with the added nervines: lemon balm and skullcap. Her presentation was dry, and thus the addition of marshmallow root, but not the calendula or plantain.

1. Remove all dairy from diet.

2. Herbal formula of equal parts:

Matricaria chamomilla (chamomile) flower

Mentha x piperita (peppermint) leaf

Foeniculum vulgare (fennel) seed

Glycyrrhiza glabra (licorice) root

Althea officinalis (marshmallow) root

Taraxacum officinalis (dandelion) root

Melissa officinalis (lemon balm) leaf

Scutellaria lateriflora (skullcap) leaf and flower

Preparation: Strong decoction of 1-2 ounces of herbal blend per quart water, cooked for 30-40 minutes on very low heat.

Dose: 1 quart per day

3. Peppermint and ginger candy as needed symptomatically – she was already taking these and wanted to continue.

The client's compliance was mixed, as she did not completely eliminate dairy foods. Nevertheless, her twice or thrice weekly panic attacks were completely gone at the three-week point. ■

That Gut Feeling: Choosing the Correct Probiotic for Clients in the Herbal Clinic

Susan J. Fidler, RH (AHG)

How does it feel to know that most of the DNA in your body is not yours and not human at all? ...that your body's DNA is outnumbered 10 to 1 by microorganisms (Qin et al. 2010)? What

do these microorganisms do and how do they affect your biochemistry? After all, there's only one of you and a lot of them.

It is estimated that there are 35,000 different species of organisms in a healthy human gut alone, most of them unnamed, although the most prevalent species are held in common (Ballentyne 2014). Forty to sixty percent of the weight of the stool is bacterial. So many organisms in such a wide variety have a very significant impact on human health, and not just gut health (Ballentyne 2014).

Probiotics are defined as organisms that promote life. They were first formally described by the Bulgarian Nobel laureate, Élie Metchnikoff (1908), as organisms that could modify harmful bacteria populations. Major groups are shown in Figure 1.

About 50 of our gut microbial species belong to just five or six genera, and two phyla account for 99 percent of gut microbe biomass: *Bacteroidetes* and *Firmicutes* (Conlon and Bird 2015). *Bacteroides*, *Bifidobacterium*, and *Eubacterium* are numerically the most important genera, accounting for more than 60 percent of the microbes in human stool. *Clostridium*, *Enterobacteriaceae*, and *Streptococcus* are also important, although far fewer in number.

From mouth to anus, the gut is a very large organ – about 9 meters long and lined with epithelial cells creating various functional tissues along its length. The pH also varies along the length of the gut, accommodating the digestive juices as they work, and locally changing the terrain of the microbiota. The microbiota of the mouth is different from the stomach and the anus. Probiotics live outside the gut too – the skin, vagina, sinus cavities, and even the amniotic fluid all have their distinct microbial populations. In fact, all people have their own micro-floral fingerprint that is so specific that it can be used for forensic identification (Franzosa et al. 2015). Even the flora of the left hand is different from the right.

A very large literature on probiotics now exists – review articles cited in PubMed amount to 2,125 during the last five years alone. Applying this information in clinical practice becomes a necessity, but navigating the wealth of information

Applying this information in clinical practice becomes a necessity, but especially difficult as the evidence mounts for probiotic influence on so many body systems...

can be most daunting. This is especially difficult as the evidence mounts for probiotic influence on so many body systems – thyroid function, neurology, mood, embryo health, diabetes, irritable bowel syndrome (IBS), vaginal infections,



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bone density, cancer, obesity, and immunity, to name a few (Mazzoli and Pessione 2016, Conlon and Bird 2015, O'Mahony et al. 2015, Ballentyne 2014, Cryan and Dinan 2012, Mayer 2011, Bures et al. 2010, Huxley et al. 2010, Arslanoglu et al. 2008, Ley et al. 2006). Lactose intolerance, for example, responds to *Lactobacillus casei* Shirota and *Bifidobacterium breve* Yakult (Almeida et al. 2012). Bacteria can provide a secondary source of bile acids – good news for those who have had their gall bladders removed or have hypercholesterolemia (Conlon and Bird 2015). In liver cirrhosis, an oral microbiome erroneously appears in the lower intestinal tract and may be emended (Tilg et al. 2016, Elzouki 2015).

Remarkably, 70 percent of the body's immune cells reside within the gut-associated lymphoid tissue (GALT), and the probiotic “glove” covers much of the convoluted surface of the gut microvilli where the lymphoid tissue resides. This microbial layer directly influences cell function by inhibiting pathogenic adhesion, detoxifying bacterial substances, stimulating brush border enzymes, and stimulating the protective mucin layer of secretory immunoglobulin A (SIgA; Artis 2008).

Other research demonstrates that neurotransmitters and vitamins can be generated by gut microbes (Mazzoli and Pessione 2016). Gut bacteria can change the availability of serotonin

Figure 1. *Bifidobacterium* and *Lactobacillus* have a broad range of beneficial effects.

Adapted from B. Sunshine (personal communication, 2017)

An Overview of Intestinal Bacteria								
Beneficial Effects				Harmful Effects				
				<i>Bifidobacterium</i>	Production of Carcinogens	Intestinal Putrefaction	Microbial Toxins	Pathogenicity
				<i>Lactobacillus</i>				
				<i>Eubacterium</i>				
				<i>Enterococcus</i>				
				<i>Anaerobic Streptococcus</i>				
				<i>Bacteroides</i>				
				<i>Escherichia</i>				
Improvement of Intestinal Environment	Vitamin Synthesis	Immune Support	Prevention of Infection	<i>Clostridium</i>				
				<i>Proteus</i>				
				<i>Pseudomonas</i>				
				<i>Veillonella</i>				
				<i>Staphylococcus</i>				

(5-hydroxytryptamine or 5-HT) receptors, leading to the conclusion that the depression experienced by many elderly people could be due to dysbiosis (O'Mahony et al. 2015). Similarly, psychiatric co-morbidities of various chronic inflammatory intestinal disorders reveal the influence of the gut microbiota on the central nervous system (Bercik et al. 2012; Cryan and Dinan 2012). The influence of the microbiome has also been well documented in people with autism (Adams et al. 2011; Williams et al. 2011). There are similarly changes in the gut

microbiome with Parkinson's disease: increased intestinal permeability, infiltration of *Escherichia coli* and endotoxin (lipopolysaccharide or LPS) exposure. These changes correlate with enteric neuronal damage. An impaired gut barrier may also contribute to symptoms or complications of autism, kidney disease, type 2 diabetes, cardiovascular disease, metabolic syndrome, obesity, and liver disease (Conlon and Bird 2015). This overview of probiotic function barely scrapes the surface of the available research, but can open

Table 1. Causes of Dysbiosis

CAUSES	OUTCOMES	CITATIONS
Long-term stress	Leaky gut, impaired immunity	(Conlon and Bird 2015)
Elevated or depressed cortisol	Leaky gut, immunity	(Conlon and Bird 2015)
Over cooked or stale oils and fats, trans-fats, browned/charred foods	Inflammation, decreased immunity	(Martinez et al. 2017)
Refined sugar in the diet (150-170lbs per capita per year in the U.S.)	Obesity, low minerals, fungal overgrowth	(Martinez et al. 2017, USDA 2015)
Soft drinks (300 per capita per year in the U.S.)	As above plus dental caries, low calcium due to phosphoric acid, osteopenia	(USDA 2015)
Alcohol	Liver function, dementia, cirrhosis, cancer many organs	(Alkasir et al. 2017, Elzouki 2015)
Antibiotics	Leaky gut, depression, IBS	(Ballentyne 2014)
Pain pills, NSAIDS, heartburn drugs	Leaky gut, depression, IBS, reduced calcium uptake, raised cholesterol, bleeding, lung aspiration.	(Otani et al. 2017)
Eating on the run, improper chewing	Inadequate digestion, change in pH, poor mineral/vitamin uptake	(Martinez et al. 2017)
Radiation and chemotherapy	Inadequate digestion, change in pH, poor mineral/vitamin uptake, loss of gut epithelial tissue	(Ciorba and Stenson 2009)
Excessive exercise	Cortisol disruption, promoting leaky gut	(Ballentyne 2014)
Poor dental health	Uncontrolled inflammation, systemic influence, change in bowel flora, loss of perception of repletion	(Evenepoel et al. 2016)
Obesity	Difficulty losing weight	(deClerq et al. 2016)
GMOs	Loss of cell-cell adhesion, leaky gut	(Ballentyne 2014)



Taraxacum officinale (dandelion) root can be part of a strategy to balance intestinal flora.

George Wesley and Bonita Dannells CC
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the imagination to think about the widely ranging sequelae of dysbiosis.

Causes of Disruption in the Microflora

Common stressors to the gut microbiome are recorded in Table 1. For example, dysbiosis can occur when antibiotics are used, which destroy pathogenic and beneficial organisms indiscriminately. Prolonged stress of many kinds (real and imagined) also disrupts the gut flora.

Consequences of Dysbiosis and SIBO

When the gut microflora is disrupted, the microvilli of the gut wall may be damaged; “leaky gut” will develop as the adhesion between cells is disrupted) and pathogenic bacteria may produce toxins and putrefaction (Rautava et al. 2009). As Conlon and Bird (2015) write, “Tight junctions between cells help prevent translocation of bacteria and molecules (including toxins) across gut epithelial tissues.” Statistically, dysbiosis and leaky gut can have lifelong effects if not corrected. Clients with celiac disease are especially vulnerable: they have a ten-fold increase of autoimmune disease associated with gut dysbiosis (Kharrazian 2010).

When there is leaky gut, absorption of minerals and the products of digestion is sub-optimal. Materials that are incompletely digested may be absorbed, setting up allergenic or, more seriously, autoimmune reactions due to molecular mimicry. Some probiotics, commonly *Bifidobacterium* spp. and *Lactobacillus* spp., can cause autoantibody formation, especially in the thyroid. Severe eosinophilic syndrome has occurred with probiotics in “healthy”

individuals and in those with autoimmune disease (Ballentyne 2014). Elevated eosinophils can indicate early stages of autoimmunity.

Such gut disruption can promote populations of colonic microbiota to migrate into the small intestine, referred to as “small intestinal bacterial overgrowth” or SIBO. The small intestine usually does not contain nearly as many organisms as the colon. Patients with SIBO typically develop symptoms including nausea, bloating, vomiting, diarrhea, malnutrition, weight loss, and malabsorption (Bures et al. 2010). Insufficient hydrochloric acid can cause SIBO, so clients on calcium-containing antacids or proton pump inhibitors (PPIs) are particularly vulnerable. With reduced stomach acid, bacteria swallowed in nasal mucus or food may not die. The bolus leaving the stomach will be less acidic, meaning that pepsinogen and other digestive juices will not be released and proteins will be undigested. Undigested food may result in allergies or autoimmune reactions. Bioavailability and absorption of minerals (especially iron) is reduced, as stomach acid is necessary to release them from food bases. A sliding hiatal hernia may contribute to SIBO. A non-patent ileocecal valve can also allow a backwash of microbes into the small intestine from the colon. SIBO may also be caused by an intolerance to FODMAPs in the diet. FODMAPS are fermentable sugars that cause fructose malabsorption, producing allergy-like symptoms. If dysbiosis or SIBO symptoms persist after adhering to an Autoimmune Protocol diet (AIP), FODMAP foods must also be removed from the diet, hopefully temporarily. Even stress alone can cause SIBO.

Therapeutics

Along with the right probiotics, herbal bitters – including *Taraxacum officinale* (dandelion) root – should improve bile flow, stimulate digestive fluids, and rebalance the small intestinal flora. Some clients may need betaine hydrochloride to initiate digestion. While their gut heals, many clients find they need to eliminate all grains, especially those with gluten, as well as legumes, sugars, dairy, nuts and seeds, and other cross-reacting foods. With the AIP diet, increasing

dietary fiber, chiefly up to ten cups of vegetables daily, provides food (prebiotics) for the probiotics (Gibson et al. 2010). At first vegetables need to be cooked, but more raw foods are acceptable as the gut heals. This diet has proven to be the fastest way for many of our severely compromised clients to regain their health. Fiber from fruits and vegetables does not seem to have cross-reactivity and gut bacteria can break it down easily (Conlon and Bird 2015, Pandey et al. 2015, Ballentyne 2014).

Dysbiosis or SIBO may constitute up to three species out of balance, usually from the following genera: *Streptococcus*, *Staphylococcus*, *E. coli*, *Micrococci*, *Klebsiella*, and *Candida*. *Berberis aquifolium* (Oregon grape) root works well to rebalance most of these.

Severe SIBO may need antibiotics or anti-fungal agents if the appropriate herbs do not work or are unavailable. Even with pharmaceutical medications, proper diet and herbs are still extremely necessary to prevent relapse. Monolaurin, *Uncaria tomentosa* (cat's claw), *Tabebuia* spp. (pau d'arco), *Olea europaea* (olive) leaf, Oregon grape root, *Berberis vulgaris* (barberry) root, and *Origanum vulgare* (oregano) oil may all be useful in moderating SIBO. Biofilm disruptors like lactoferrin and N-acetylcysteine (NAC) may have their place, as may *Andrographis paniculata* (green chirayta) and liposomal Vitamin C.

Any protocol for gut healing will greatly benefit from serum levels of Vitamin D [25(OH)D] above 50ng/ml (normal range is 30ng/ml to 74ng/ml). As all immune cells have Vitamin D receptors, any degree of auto-immunity needs Vitamin D at 50-70ng/ml, as this level supports the T-regulatory cells, thus balancing the Th1 and Th2 arms of the immune system. Vitamin D requires Vitamin A for absorption, so Vitamin A status should also be confirmed (Shang and Sun 2016).

It is sometimes necessary with SIBO to omit supplemental probiotics until the overgrowth subsides. These clients will let you know – they will have very low tolerance for even the tiniest amount of a single strain of probiotic, even if it is lactose-free and without prebiotics. Some fermented food might be tolerated, but every fermentation batch will have a different

distribution of microorganisms – up to 686 identified strains (Plengvidhya et al. 2007) – so approach these foods with caution. Campbell-McBride (2012) recommends a quarter teaspoon of juice from fermented foods at first.

Fermented foods can produce high levels of histamines, from *Lactobacillus casei* and *L. bulgaricus*. Probiotics that are the most beneficial for those who are histamine sensitive are probably *L. rhamnosus*, *L. plantarum*, *L. reuteri*, *Bifidobacterium infantis*, and *Bifido. longum*. *L. reuteri* is also anti-inflammatory. *Streptococcus thermophiles* downregulates histamine receptors and upregulates anti-inflammatory agents (Asprey 2016).

Fermented foods may also contain high levels of glutamate, an important neurotransmitter. Unfortunately, many clients with methylation differences have a mutation preventing them from converting the stimulating glutamate into the calming gamma-aminobutyric acid (GABA). This is especially obvious in chronic insomnia or in some people with autism, where glutamate fires the neurons and prevents relaxation or deep sleep, leading to a feeling of overstimulation or being “wired and tired.” People with this sensitivity should avoid fermented beverages, even early in the day when mental concentration is needed and especially later in the day.

Several bacteria produce glutamate, including *Corynebacterium glutamicum*, *Brevibacterium lactofermentum*, and *Brevi. flavum* (Sano 2009). Such clients would benefit from probiotics that produce GABA, as it is more anxiolytic, such as *Lactobacillus*, *Lactococcus*, and *Streptococcus* genera, and *Bifidobacterium* strains (Mazzoli and Pessione 2016).

Although the use of fecal transplants to correct microflora is becoming a more common therapy and is likely to increase (especially as suppositories), these transplants usually occur only in medical facilities and are thus not addressed here (Hudson et al. 2017).

Prebiotics

Whichever strain of probiotic bacteria is chosen for therapy, all species of probiotic need a medium (a food) to ferment – these media are

Most clients seen at the clinic need a leaky gut tea for three to four months; some may need the autoimmune diet and gut-healing tea for a year or longer.

termed prebiotics. Many marketed probiotics include prebiotics, often derived from herbs, which feed the probiotics (Gibson and Roberfroid 1995). Which prebiotics suit the client will depend on how they react to different food groups. Careful case history and analysis by biofeedback or muscle testing will reduce the likelihood of picking an unsuitable brand – both methods are used in my office. Prebiotics may be fine, but can be problematic for those with borderline or full-blown autoimmune disease, as polysaccharides (fermentable sugars and fiber-like grains) may be cross-reactive. For example, giving a probiotic containing inulin (often extracted from *Cichorium intybus*/chicory) could be disastrous for those with SIBO, even though inulin increases glutathione production and therefore should improve detoxification. In the absence of prebiotics, *Centella asiatica* (gotu kola) can be used to effectively raise glutathione levels, as can *L. fermentum* ME-3 (Kullisaar et al. 2010). Meanwhile, when in doubt, omit probiotic formulas.

Choosing the Right Probiotic

How should one choose the best probiotic for clients from a clinical perspective? It is not as easy as choosing “X” for diabetes and “Y” for

Crohn’s disease. There are so many factors to consider – latent infection, parasitism, fungal overgrowth, inflammatory levels (inherited and circumstantial), activity levels, environment, toxicity, immuno-suppressant drugs, chemotherapy and radiation, insomnia, heavy metal toxicity, environmental particulates or toxins, and most importantly diet. Priorities to address should become apparent through a good case history. Emotional stress and diet greatly impact inflammation, but healing the gut greatly reduces many people’s anxiety and increases their stress resistance, with overall healing progressing faster (Mika et al. 2016). Most clients seen at the clinic need a leaky gut tea for three to four months; some may need the autoimmune diet and gut-healing tea for a year or longer. There are over 60 genes involved with gut integrity, and some clients will need far more help and for much longer than can be done with herbs alone. Eating GMOs slows healing, and many have genes that may prevent processing of glyphosates; many clients need an organic diet or the gut (and the immune system) may never heal (Erdei 2017).

Most probiotic review articles only deal with one strain or one blend at a time and do not consider other factors. Trial participants usually had uncomplicated health histories and

The roots of *Cichorium intybus* (chicory) are a common source of inulin, a prebiotic polysaccharide.

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Table 2. Choosing the Right Probiotic

CONDITION(S)	RECOMMENDED PROBIOTIC(S)	COMMENTS
Chronic Fatigue Syndrome (CFS/CFIDS), short bowel syndrome	None	No lactobacillus: d-lactic acidosis may increase fatigue, foggy thinking, ataxia (Asprey 2016)
Colon cancer	<i>Lactobacillus acidophilus</i> , <i>L. bulgaricus</i> , <i>Propionibacterium freudenreichii</i>	Destroy toxins produced by pathogens, secrete short chain fatty acids (SCFAs), enhance immunity (Pandey et al. 2015)
Crohn's disease	<i>Faecalibacterium prausnitzii</i>	(Sokol et al. 2008)
Dysbiosis	Soil-based organisms	(Ballentyne 2014)
Eczema	<i>Lactobacillus acidophilus</i> , especially strain L-92	There is controversy over whether strains should be alive or dead (Torii 2011)
Glutamate decarboxylase (GAD) mutation leading to elevated glutamate	<i>Lactobacillus</i> spp., <i>Lactococcus</i> spp., <i>Streptococcus</i> spp., <i>Bifidobacterium</i> spp	(Ballentyne 2014)
<i>Helicobacter pylori</i> infection	Blends including <i>Enterococcus faecalis</i> TH10; use with anti-microbial herbs to control <i>H. pylori</i> .	Dr. Ohhira blend includes 12 species with special subspecies (Ohhira 2017)
Irritable bowel syndrome (IBS)	<i>L. acidophilus</i> NCFM and <i>Bifido. lactis</i> Bi-07, GF, and DF; may also need <i>L. salivarius</i> UCC118 or <i>L. plantarum</i>	Remove allergens, especially gluten, probably grains, legumes, and soy; treat leaky gut and possibly parasites; <i>Bifidobacterium</i> strains can produce and regulate melatonin (Wong et al. 2015)
Infant, nursing mother	<i>Lactobacillus rhamnosus</i> GG, <i>Bifidobacterium animalis</i> ssp. <i>lactis</i> BB-12	Human milk contains prebiotics (Coppa et al. 2006); mothers can apply probiotics to nipples for baby (Lundelin et al. 2016, Rautava et al. 2009); check that products are free of excess prebiotics, flavorings, etc.
Leaky gut, ulcerative colitis (UC)	VSL#3®, <i>L. salivarius</i> UCC118	Tightens junctions and decreases inflammation; glutamine assists if no GAD gene mutation; remove allergens (Ballentyne 2014)
Obesity	Possibly fecal transplants	(deClercq et al. 2016)
Poor dental health	<i>Bifidobacterium</i> spp., <i>Lactobacillus</i> spp.	<i>Commiphora myrrha</i> (myrrh) in a mouth wash/ soak with <i>Thymus vulgaris</i> (thyme), <i>Salvia officinalis</i> (sage), and <i>Glycyrrhiza glabra</i> (licorice) root (Rastogi et al. 2011)
Pre-pregnancy	Wide spectrum if tolerated	(Arslanoglu et al. 2008)
Small intestine bacterial overgrowth (SIBO)	None	Heal leaky gut first; fix non-patent ileocecal valve; use <i>Berberis</i> spp.; improve stomach acid (Ballentyne 2014)
Sinus infections, chronic	<i>L. paracasei</i> and <i>L. plantarum</i> DF and GF	Use anti-fungal herbs/essential oils, <i>Hydrastis canadensis</i> (goldenseal) root, and <i>A Armoracia rusticana</i> (horseradish) root (Campbell- McBride 2010)
Unrelenting diarrhea of undiagnosed origin, <i>Clostridium difficile</i> ("C. diff")	<i>Saccharomyces boulardii</i>	Safe even for babies (Rautava et al. 2009)
Vaginitis	<i>L. rhamnosus</i> , <i>L. reuteri</i>	Internally and inserted in vagina (Mur-Pérez et al. 2016)

were apparently dealing with only one illness. Unfortunately, many clients of herbalists have multiple issues that make probiotic choice much more difficult. For clients who are histamine sensitive, you might select blends that include soil-based organisms and that do not contain the two most prescribed kinds of bacteria – *Lactobacillus* and *Bifidobacterium* – as these “yoghurt” genera are the most likely to stimulate histamines. For most clients, probiotic blends should be free from gluten, dairy, soy, egg, corn, tree nut, peanuts, and yeast, and have pathogens removed. A 14-species blend has contributed to the success of our clinic, but it is not dairy-free (Bio-Kult®). Rotating among several brands has merit for some clients. A local chiropractor is experimenting to see if probiotics can be chosen based on body types, but results are not yet available (B. Sunshine, personal communication, 2017).

Any probiotic choice involves investigation. How viable are the organisms? Are the organisms guaranteed to be alive after opening, or only in the factory, or until the last capsule is taken? On what medium have the bacteria been grown? Were they refrigerated during distribution? Are they blister-packed for better compliance? Should only one species be tried at a time? Are the caps easy to open for those who can only tolerate a few grains? All these details must be addressed. The better-known probiotics have been summarized in Table 2, with specific conditions for which they seem suitable as a practical introduction.

Conclusion

In view of the complexity of the human gut, it is imperative to take a thorough case history, pay close attention to food diaries, and incorporate as much background information as possible before selecting a probiotic product. Herbal support for co-morbid conditions is essential, not forgetting to address stress and to eliminate allergens or autoimmune stimulating substances when appropriate. Healing the underlying terrain of our clients will prevent relapse. ■

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Irene C. Payne grew up on a humble farm in the foothills of northeast Georgia, where she spent most of her time outdoors. She learned botany from a very young age, and she maintained interest in the subject as she pursued a biology degree at Young Harris College. After receiving her bachelor's, Irene went to work at Oak Ridge National Lab as a research assistant, where she currently studies improving the means of producing biofuels through the degradation of organic materials by microorganisms. Irene hopes to keep studying botany and microbiology as she begins her PhD work at the University of Georgia in August 2017. She would like to become a professor and mentor young researchers as they overcome obstacles and work towards creating a sustainable future.

Antimicrobial Effects of *Xanthorhiza simplicissima* (Yellowroot) on Selected Gut Bacteria

Irene C. Payne, with Dr. Paul T. Arnold and Dr. Andrea L. Kwiatkowski
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Plant compounds are used for medicine, and many are still used in their natural form (Sumner 2000). In earlier forms of plant medicine, Native Americans would dry roots, or even use the roots of plants fresh from the earth and steam them, boil them, or crush them into powders (Densmore 1974). The plants were then applied to a wound in need of medical attention or consumed to cure internal ailments, such as stomach complaints.

One plant in particular that has been used throughout history for its remedial properties is *Xanthorhiza simplicissima* (yellowroot). Yellowroot is a small, deciduous, perennial shrub found along stream and river banks throughout forests of the Eastern United States extending westward into Ohio and Texas (Pawling 2011). Yellowroot is a member of the Ranunculaceae, or buttercup, family. Yellowroot is known for the yellow coloration beneath its bark and within its roots, which has been used commonly for dyeing silk and for the medicinal properties of the alkaloid berberine.

Medicinal alkaloids are best extracted in water and/or alcohol (Shamma 1992). For this

experiment, the roots of yellowroot were used to create a tincture (extract) using 75% ethanol as a solvent (thus 25% water). This yellowroot tincture was used to test the potential for yellowroot to act on infectious digestive ailments by testing it against four different species of digestive system bacteria that are associated with various illnesses within the digestive tract.

- *Streptococcus salivarius* (a gram-positive bacterium found in the mouth) is associated with various diseases, such as meningitis and endocarditis in related strains (Delorme et al. 2011).
- *Salmonella enteritidis* (a gram-negative bacterium found in the intestines) is often the cause of food poisoning.
- *Escherichia coli* (a gram-negative bacterium found in the intestines) is typically harmless, but some related strains can cause intestinal disorders (CDC 2015).
- *Enterococcus faecalis* is a gram-positive bacterium that exists within the oral cavity and the intestines and typically exhibits antibiotic resistance (Jett et al. 1994).
- Note that pathogenic strains were not permitted in the laboratory where this work was performed.



Typical growth habit of
Xanthorhiza simplicissima
(yellowroot)

Desultrix CC BY-SA 2.0 flickr

In the first phase of this experiment, sterile filter paper discs were soaked in either yellowroot tincture or ethanol and placed in petri dishes containing Brain-Heart Infusion (BHI) agar inoculated with a lawn of one of the four bacterial species. This approach allows us to measure the zone of inhibition of the various bacteria for tincture vs. ethanol control. In the second phase, a minimum inhibitory concentration (MIC) procedure was performed where tincture and ethanol control were tested against each of the bacteria in a BHI broth at progressively lower concentrations to compare the minimum concentrations at which tincture and ethanol control inhibited the bacteria.

Yellowroot Tincture Preparation

Yellowroot rhizomes were collected from the banks of Corn Creek in Young Harris, Georgia. Roots were collected in October and November 2015 during evening hours; weather conditions were moderate with no rainfall within the previous 24 hours. After the roots were collected, they were rinsed with distilled water and then placed in the Presto® Dehydro™ Electric Food Dehydrator for approximately eight hours.

Approximately 6.25 g of dehydrated yellowroot rhizomes were mixed with 50 ml of 75% ethanol and then ground using a Magic Bullet blender. [Editor's Note: This is approximately a 1:8 extraction ratio.] The solution was filtered for large particles. The solution was then placed in a test tube and rocked via the MaxQ™ 4450 orbital benchtop shaker at the third speed setting for 24 hours at 37°C. The tincture was stored at 4°C and vortexed prior to each use.

Methods: Disc Diffusion Assay

To prepare the sterile antimicrobial discs, Whatman® filter paper was hole-punched and then placed in a covered glass petri dish, sealed with autoclave tape, and placed in the autoclave at ~114°C (15 psi) for 30 minutes. The sterile discs were left in the sealed glass petri dish and stored at room temperature until they were used.

To prepare a sterile saline solution to mix with the bacteria, 10 ml of phosphate buffered saline (PBS) was mixed with 90 ml of distilled water and autoclaved at ~114°C (15 psi) for 30 minutes. The sterile saline was stored at room temperature until needed for bacterial inoculation.

For this experiment, four different

bacterial cultures were used: *Streptococcus salivarius* (strain ATCC 13419), *Salmonella enteritidis* (from Ward's science), *Escherichia coli* (from Ward's science), and *Enterococcus faecalis* (from Carolina Biologicals).

Each bacterial species was suspended in 10 ml of sterile saline in individual test tubes. After vortexing, each suspension was checked to ensure that all cultures had equal density. A sterile cotton swab was used to streak each species onto ten BHI agar plates (40 plates total).

For each plate, two sterile filter paper discs were soaked in yellowroot tincture and two sterile discs were soaked in 75% ethanol solution. Four discs, two for the yellowroot tincture and two for the 75% ethanol solution, were evenly distributed on each BHI agar plate for each bacterial strain using sterile tweezers. All plates were then incubated for 24 hours at 37°C, and the zones of inhibition for each disc (160 discs total) were measured at the end of 24 hours.

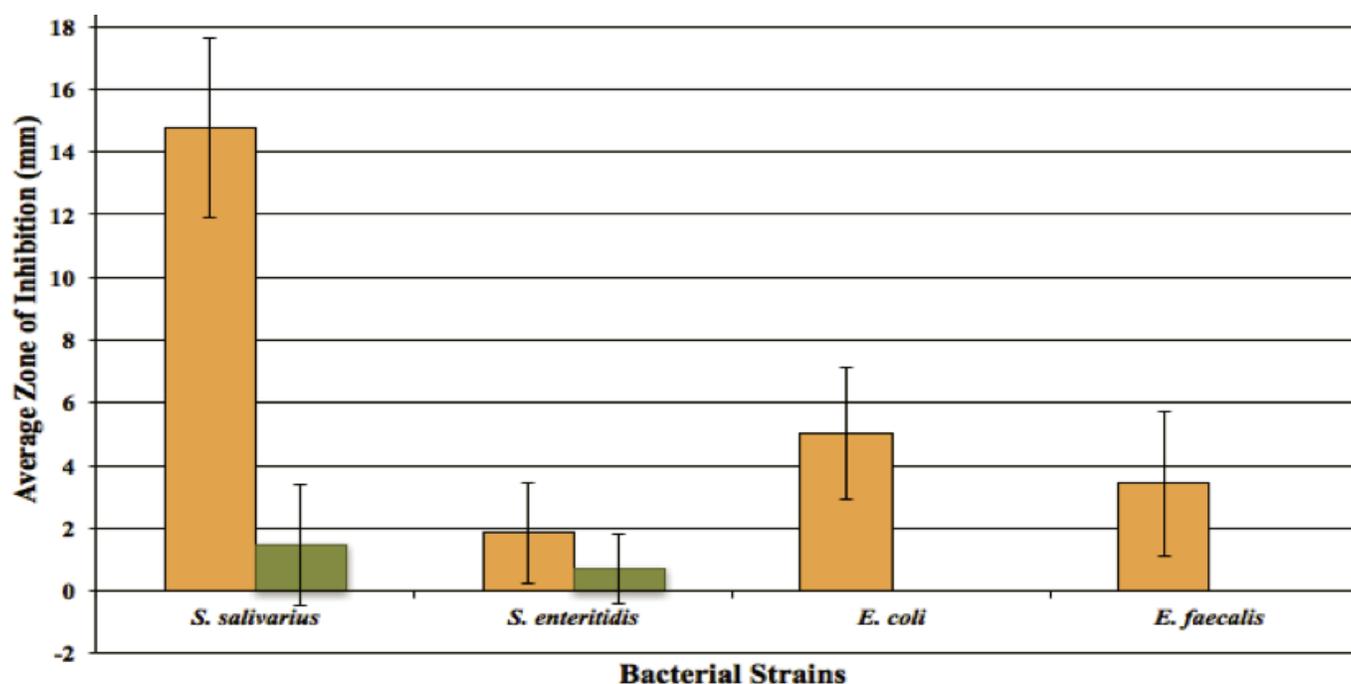
Methods: Minimum Inhibitory Concentration Test

A minimum inhibitory concentration (MIC) procedure using serial dilution was conducted in order to identify the concentration of yellowroot

tincture that resulted in the greatest inhibition of bacterial growth for the four different species compared to the ethanol control. Ten test tubes containing 2 ml of BHI broth were set up, and 2 ml of yellowroot tincture were then placed in the first two tubes. Tube one served as the blank when reading absorption levels for each tube. Tube two was then vortexed, and 2 ml of its solution was transferred into test tube three, as seen in Figure 2. This serial dilution continued for all of the remaining tubes. After the serial dilution was performed, 2 ml of one of the diluted bacterium was placed in tubes two through ten. This entire procedure was repeated for each bacterium and for the ethanol control, using 75% ethanol instead of the tincture. The ethanol MIC control procedure was needed to determine to what extent ethanol vs. yellowroot tincture inhibits bacterial growth. Serial dilutions for both the tincture and the ethanol control were repeated three times for all four bacterial species.

All tubes for all bacteria species were incubated for 24 hours at 37°C, then a spectrophotometer was used to measure the absorption reading of each of the test tubes to determine the extent of bacterial growth. The absorption readings for all replicates of each of the

Figure 1: Comparison between the average zone of inhibition for the tincture (n=20) versus the ethanol control (n=20) for each of the four bacterial species. The standard deviation for each average is shown by the whisker line over each bar.



ten tubes for both the yellowroot tincture and the ethanol control were entered into RStudio and an analysis of variance (ANOVA) test was performed to determine if there was any significance between the averages of each test tube for all four bacteria.

Results: Disc Diffusion Assay

Inhibition of *S. salivarius* averaged 14.8±2.9 mm for the yellowroot tincture discs (n=20) and 1.5±2.0 mm for the 75% ethanol control group discs (n=20). Results were significantly different with $p < 2.2e-16$ (Welch’s t-test). Inhibition for *S. enteritidis* averaged 1.9±1.6 mm for the tincture (n=20) and 1.1±0.7 mm for the ethanol (n=20). Results were significantly different with $p = 0.01276$. Inhibition for *E. coli* averaged 5.0±2.1 mm for the tincture (n=20) and 0.0±0.0 mm for the ethanol (n=20). Results were significantly different with $p = 1.936e-09$. Inhibition for *E. faecalis* averaged 3.4±2.3 mm for the tincture (n=20) and 0.0±0.0 mm for the ethanol (n=20). Results were significantly different with $p = 2.297e-06$. Figure 1 shows a comparison of the overall results for the four bacterial species.

Results: Minimum Inhibitory Concentration Test

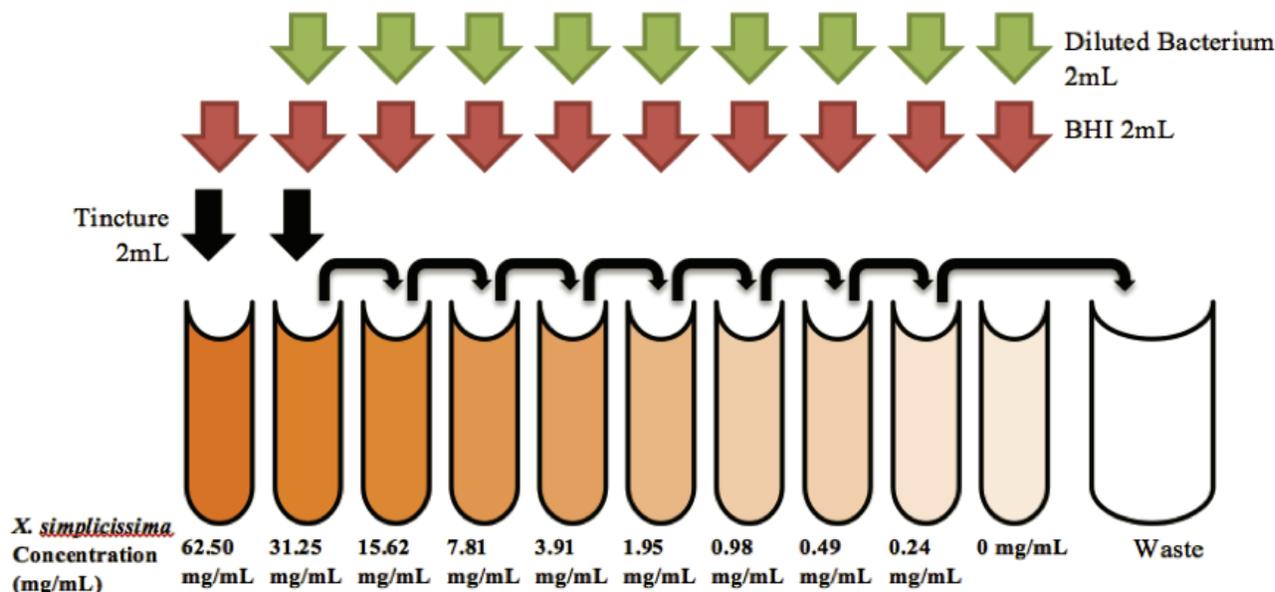
For *S. enteritidis*, *E. coli*, and *E. faecalis*, the

These results argue that there is merit to the traditional uses of yellowroot as a microbial-balancing gastrointestinal remedy.

difference in average absorption readings between tube four (7.81 mg/ml yellowroot) and tube five (3.91 mg/ml yellowroot) were statistically significant ($p \leq 0.01$, ANOVA). For the ethanol control with these three bacteria, the difference in average absorption readings between tube three (9.38% ethanol) and tube four (4.69% ethanol) were statistically significant ($p \leq 0.001$, ANOVA). These results indicate that tube four is the MIC for these three bacteria in yellowroot tincture and tube three is the MIC for the ethanol control.

For *S. salivarius*, the difference between the average absorption readings between tube four (7.81 mg/ml yellowroot) and tube five (3.91 mg/ml of yellowroot) were statistically significant, and the difference between the average absorption readings for the ethanol control between tube four (4.69% ethanol) and tube five (2.24% ethanol) were also statistically significant ($p \leq 0.05$, ANOVA). These results indicate that tube four is the MIC for both the yellowroot tincture and the ethanol control for *S. salivarius*.

Figure 2: The minimum inhibitory concentration procedure for the yellowroot tincture, used for all four bacteria species. The same procedure was completed for the ethanol control for all four bacteria species. The amount of ethanol in each control tube was the same as the amount of ethanol in each tincture tube.



Discussion

The zone of inhibition study (Figure 1) indicated that the yellowroot tincture treatments created significantly greater zones of inhibition than the ethanol controls in all four bacterial species tested ($p \leq 0.001$, t-test). Because the results are statistically significant, we can conclude that yellowroot tincture exhibits bacteria-inhibiting properties on contact that are stronger than those of ethanol alone.

The results for the MIC indicated that yellowroot rhizome tincture inhibited the growth of *S. enteritidis*, *E. coli*, and *E. faecalis* at a lower concentration of alcohol than the pure ethanol control. We can conclude from the tests that yellowroot tincture (yellowroot plus alcohol) is inhibiting the growth of these three species in solution better than ethanol alone.

The results for the MIC tests on *S. salivarius* showed the same MIC for both the yellowroot tincture and the ethanol control. These results are interesting because the disc diffusion assay revealed that the yellowroot tincture inhibited the growth of *S. salivarius* more so than the ethanol control. There are a few possible explanations for this discrepancy. For instance, *S. salivarius* could prefer growth in broth rather than agar. The diffusion of the tincture on the agar plates could have been slower than the denser ethanol, giving the tincture more time to hinder the growth of *S. salivarius* before evaporating in the incubator; whereas in the MIC tubes, the tincture and ethanol control remained in liquid form for the same amount of time. Furthermore, only three trials were conducted to determine the MIC, and one skewed absorption reading could have greatly affected data results. The standard deviations for tube four for both tincture and control for *S. salivarius* were rather large due to the results of one trial being higher than the other two trials. In order to confirm the legitimacy of tube four being the MIC for both the tincture and ethanol control in inhibiting the growth of *S. salivarius*, more trials would need to be conducted.

In conclusion, our tests showed that yellowroot tincture exhibited bacteria-inhibiting properties on contact that were stronger than those of ethanol for all four bacterial species, and

that yellowroot tincture in solution inhibited the growth of three bacterial species (*S. enteritidis*, *E. coli*, and *E. faecalis*) better than the pure ethanol control solution. These results suggest one possible mechanism by which yellowroot may affect GI flora. It is important to note that these results cannot reflect the effects of a tincture passing through the digestive tract, as we do not know how digestive secretions and processes might alter tincture constituents.

Further research should be performed to determine which other bacterial species are inhibited by yellowroot. In addition, in some plant species, concentrations of medicinal alkaloids vary according to growing conditions. For example, in *Camptotheca acuminata* (Chinese tree of joy), the alkaloid camptothecin has differing concentrations depending on the amount of sunlight exposure (Sumner 2000). Research could investigate whether growth factors such as the average exposure to sunlight or moisture affect the alkaloids in yellowroot. This research could further open the door to understanding yellowroot's medicinal properties. ■■

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Case Study: Healing the Gut and Overcoming Relapse in Crohn's Disease

Katja Swift

The inflammatory bowel disorder known as Crohn's disease can be complicated – there is often quite a bit of intestinal damage that requires attention to improve, and Crohn's is particularly prone to relapse. Following is a case study that illustrates these points.

Client Details

The client is a 40 year old female who was 35 at the time of the first appointment. She was

originally diagnosed with Crohn's disease in her 20s, and it steadily progressed as she got older. An anal fistula developed, which required surgical insertion of a temporary stent after her second pregnancy, and which worsened after her third pregnancy.

The client had chronic acid reflux, diarrhea (often severe), nausea, and vomiting. At times she also experienced constipation, which caused a lot of difficulty with the fistula. In general, she found bowel movements very difficult, requiring 30 or more minutes each time, even if she was not constipated. The fistula continued to drain



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Calendula officinalis
(calendula or pot marigold)

Immanuel Brändemo CC BY-NC-ND

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for two or three hours after a bowel movement, which often required a change of clothes.

After her last pregnancy and beginning about two years before the intake, the client began self-injecting prescribed Humira® (adalimumab), which is an immunosuppressant. As a result of the immunosuppression, she typically experienced frequent respiratory illnesses as well as boils/abscesses in various locations around body (e.g., arm, arm pit, behind ear, leg). The client was 30-50 pounds overweight at intake. She was reasonably active when she felt up to it, but that varied by the day.

The client's diet at intake was a "standard American" and strict Kosher diet. The diet was heavy in carbohydrates and the client had sugar cravings. The client has three children, a family business, and is very active in community - her stress level was high due to these commitments. She typically was sleeping five to six hours per night.

Initial Assessment and Recommendations

The client was initially unwilling to make any changes to her diet, so we started with a palliative and vulnerary "gut heal" tea outlined in the table below. This tea does not require long-infusion; however, for the sake of convenience, I suggested that she brew one or two quarts of tea all at once in the morning, so that she only has to pour herself a fresh cup throughout the day. Brewing in a French press made this process even easier and faster. Given the client's schedule, success depended on making the goal easy to fit into her schedule.

For the more acute acid reflux symptoms, I suggested a cold infusion of *Althaea officinalis* (marshmallow) root. As part of the long term corrective strategy for acid reflux and to help her get more grounded in the middle of her body, I suggested *Acorus calamus* (sweet flag) root tincture as a digestive bitter before

"Gut Heal" Tea

PARTS	BOTANICAL	COMMON NAME	NOTES
1	<i>Calendula officinalis</i>	calendula flower	vulnerary to the GI tract, bonus liver and lymphatic stimulation
1	<i>Plantago lanceolata</i>	plantain leaf	vulnerary to the GI tract
1	<i>Matricaria chamomilla</i>	chamomile flower	anti-spasmodic to the GI tract, bonus nervous system relaxant
1	<i>Nepeta cataria</i>	catnip herb	relaxes "upward" digestive complaints such as heartburn
1	<i>Filipendula ulmaria</i>	meadowsweet herb	analgesic, anti-inflammatory
½	<i>Zingiber officinale</i>	ginger rhizome	anti-spasmodic, anti-inflammatory, flavor
½	<i>Mentha x piperita</i>	peppermint herb	although peppermint does have digestive actions, in this case it was used for flavor
½	<i>Rosa spp.</i>	rose hips	flavor, bonus bioflavonoids and vitamin C

Infusion: ¼ cup herbs to 1 quart boiling water, steeped 20-30 minutes

Dose: 1-2 quarts daily

meals. Over the next month, we also added ginger apple cider vinegar at meal time, which she found very effective. She also added supplementation of magnesium (liquid form, 400-800mg/day, divided doses) and vitamin D (10,000-50,000IU/day, levels monitored every two months) to her regime. In my experience, deficiencies in magnesium and Vitamin D are common in Crohn's disease.

Follow-up: Five Weeks

The initial recommendations were very effective in improving all of her original symptoms: most notably, the reflux, intestinal cramping/irritation, and nausea/vomiting subsided. After five weeks, the client wanted to talk about other strategies she could add.

We talked about various dietary changes, in particular the Whole30® Program, which is my preferred elimination diet. In my experience, removing dairy and gluten-containing foods provides a great deal of baseline improvement for autoimmune conditions affecting the digestive tract. The client had known people in her community who had done the diet, so she was willing to try it. She even had some friends and family members who were willing to follow the diet with her.

I suggested adding gut-healing bone broth to her daily routine, with *Lentinula edodes* (shiitake) and *Grifola frondosa* (maitake) mushrooms when possible, and mucilaginous *Chondrus crispus* (Irish moss) seaweed, to further improve intestinal health. I also suggested a Squatty Potty® to assist with bowel movements.

Her goal was to move towards being able to be more active. The client liked to be athletically active if she felt well enough to do it.

Follow Up: Three Months

Over the next three months, all of the client's original symptoms continued to improve. Most markedly, bowel movements were taking 20 minutes or less, sometimes down to 10 minutes, which she attributed to both the food changes and the Squatty Potty. She continued to inject Humira, followed a very strict Whole30 diet, and used the Squatty Potty daily.



She continued to drink the “gut heal” tea daily, and to use the marshmallow root infusion as needed for palliative relief. At the three-month point, all acid reflux symptoms were gone.

The client was able to start various regular movement regimens, including yoga, walking, and even trying a “gentle” cross-fit class. She started losing weight. She reported, “I feel pretty awesome!”

The Next Two Years

Over the next 12 months, the client experimented with dietary interventions, restricting and reintroducing various foods to determine if further improvement was possible. Her progress was so thorough that she decided to stop the Humira injections.

Over the subsequent 12 months, the client was able to be very physically active, was rarely sick, and the fistula became minor enough that she very rarely needed to change clothes through the day because of leakage. Bowel movements

.....
Plantago lanceolata
(narrowleaf plantain) leaf
groen et groener CC BY-NC-ND 2.0 flickr



Rosa spp. (rose) hips

Andrew Fogg CC BY 2.0 flickr

regularly took 10-20 minutes. Sleep was still a challenge, but on good nights, she was getting seven or occasionally eight hours of sleep.

The Third Year

At the end of the second year, a close friend of the family was diagnosed with a terminal cancer. This person and his wife quickly required daily care, and my client provided it. This informal hospice-like situation lasted for six months, during which time my client became more and more exhausted, and her self-care activities were drastically reduced and ultimately abandoned. Shortly after the friend's death, my client relapsed into a full Crohn's flare up that was as bad as she had ever experienced.

The client reported that she "spent most of a year sick," and spent one entire month restricted to bed. During this time, she experienced six to eight symptomatic incidents each day, including severe diarrhea, nausea, vomiting, and considerable worsening of her fistula symptoms. She was experiencing

inflammatory symptoms in other areas of the body that didn't have any obvious causes.

This flare-up happened approximately 18 months from when she had stopped using Humira. Humira has a known 12-18 month post-discontinuation "honeymoon" period: people who stop Humira often initially do well, but then experience a relapse of Crohn's symptoms in 12-18 months. In this client's case, it's impossible to tell whether Humira discontinuation was a factor in the relapse, given the extreme stress of providing care for her friend.

At this point, the client decided to resume the Humira injections. She considered hyperbaric oxygen therapy, but it was cost-prohibitive.

Year Four

At this point, I strongly recommended she put everything aside that wasn't self-care: to sleep 12-14 hours a night when possible; to return to eating simple Whole30-style meals of well-cooked foods, favoring bone

...recovery doesn't really require anything exotic, just a thorough commitment to a robust self-care regimen and some fairly basic herbs... knowing that self-care pays off so thoroughly can motivate us to look for creative ways to implement it in the lives of clients...

broths, soups, and stews; to drink the "gut heal" tea and marshmallow root or *Ulmus rubra* (slippery elm) bark cold infusions daily; and to take baths whenever possible. She was able to commit to these suggestions.

She also incorporated *Thymus vulgaris* (thyme) and/or *Monarda* spp. (beebalm) steams at least twice daily to combat the chronic respiratory infections that came with restarting Humira. She found that the steams helped considerably, both in decreasing congestion as well as reducing the severity of the respiratory problems.

With three months of dedicated self-care, her bowel movement and fistula symptoms decreased to the point of no longer negatively impacting her life. She was back to her fitness routines. She was feeling well enough to again start experimenting with expanding her diet. She committed to enrolling in a master's degree program. It had been emotionally difficult for her to commit to taking time to do nothing but care for herself, but after the amount of energy she spent caring for her friends, she really did need to take the time to recover.

Discussion

At year five, the client is currently still mostly symptom free. She irregularly takes Humira, and adjusts her dietary restrictions as feels appropriate, within a gluten-, dairy-, corn-, and soy-free baseline diet.

Crohn's disease is tenacious and may never completely "go away," but it can be managed so that it doesn't have negative impacts on a person's life. The management of Crohn's disease is a lifetime effort: sometimes there will be some fairly drastic recovery needed. In this case, we illustrate that "drastic recovery"

doesn't really require anything exotic, just a thorough commitment to a robust self-care regimen and some fairly basic herbs.

It is worth noting that this client is a person of privilege, with means to hire house cleaners and nannies and support staff during her self-care time. In most peoples' lives, it is no simple task to take three months for nothing but self-care. However, knowing that self-care pays off so thoroughly can motivate us to look for creative ways to implement high levels of self-care in the lives of clients who may not have the same opportunities this client has. The recovery time may be longer, but with focus and creativity, the impact can be impressive. ■■

Meadowsweet (*Filipendula ulmaria*)"

Bernard Spragg NZ, public domain, flickr



Book Review

Body into Balance: An Herbal Guide to Holistic Self-Care

By Maria Noël Groves

Paperback: 336 pages

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Storey Publishing, North Adams, MA

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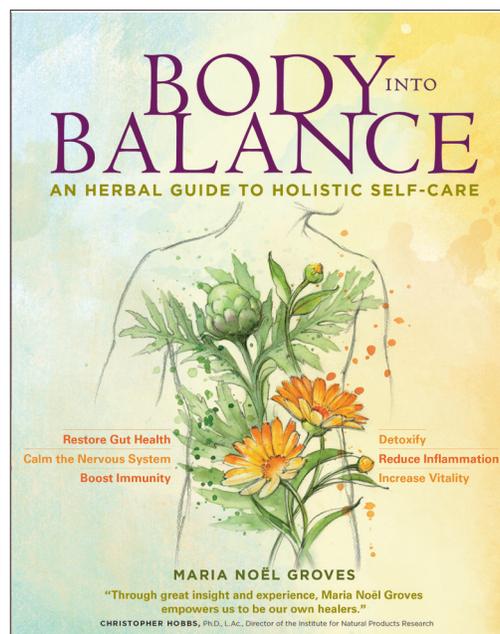
ISBN-13: 978-1612125350

Reviewed by Jennifer Steinbachs

Maria Noël Groves' book, *Body into Balance: An Herbal Guide to Holistic Self Care*, is a beautiful book for beginner to intermediate herbalists. More experienced herbalists may find this text useful as a teaching aid in classes. My younger self really needed this book, while my current self has been enjoying the richness of this work.

Groves puts tonic and nutritive herbs front and center, focusing on prevention rather than symptomatic use. The book is divided into three parts. The first part is focused on foundations: basic needs, herbal nutrition, stress, sleep and mood, digestion and elimination, and detoxification. The second part goes a little bit deeper into other body systems, including a chapter on managing pain. Part three covers sourcing, harvesting, and storing herbs, and includes "how-to" instructions for everything from teas and tinctures to creams and hydrosols. Two appendices follow, one for scientific names of plants and the other for more resources (including a list of safety resources).

Groves emphasizes lifestyle practices from a very general perspective, followed by more specific recommendations for various concerns in the body-system chapters. In fact, much of the first chapter is devoted to articulating the



helpful habits that contribute to good health. While this book does not follow the "herb-for-this" format, the author addresses specific concerns for each body system (e.g., sciatica), into which she incorporates both diet and lifestyle tips, in addition to herbs (sometimes supplements), further emphasizing the whole body approach that she is recommending.

The author deftly blends wise traditions with a more science-based clinical approach, describing both cascades of neurotransmitters that contribute to chronic pain and the healing power of daily tea. She sprinkles a few recipes into the appropriate chapters, including bone broth, Maria's Sleep Tea, and Choco-Vanilla Rooibos Tea. Where they are relevant, she includes information on flower essences and the qualities they help to rebalance.

What I enjoyed most, however, were the graphics and the overview charts. The photos

NERVOUS-ENDOCRINE SYSTEM HERB CONTINUUM

Caffeinated/Very Stimulating		Stimulating		Less Stimulating	Balancing/Neutral	Calming		Most Sedating	
High Caffeine	Low Caffeine	Stimulating Adaptogens	Semi-Stimulating Adaptogens	Balancing Adaptogens	Calm Energy Adaptogens	Calming and Uplifting Nervines	Gentle Nervine-Sedatives	Relaxing Sedatives	Sedatives and Sleep Aids
Guarana*	Black tea*	Red Asian ginseng*	Codonopsis	Maca	Ashwagandha	Lemon balm*	Chamomile	Passionflower	Valerian (warming)
Kola nut *	Chocolate*	White Asian ginseng*	Eleuthero	Schizandra*	Holy basil*	Fresh milky oat seed	Lavender	Skullcap	Hops (cooling)
Coffee*	Green tea*		Cordyceps fungus*	Licorice	Gotu kola*		Catnip	Blue vervain	Melatonin (sleep cycles)
Yerba maté*	White tea*	American ginseng*	Reishi mushroom*	Bacopa*	Shatavari	St. John's wort	Linden	Wood betony	Wild lettuce
		Rhodiola*	Aralia spp.	Chaga		Damiana	Hawthorn	Motherwort	
			Tart cherry juice			Jujube	Jamaican dogwood (very strong; use with caution)		
			Kava			California poppy (mild opiate)	Opium poppy (illegal, addictive)		
			Tryptophan and 5-HTP						
Warm milk with honey									
Nutmeg									
Mimosa									
Vanilla									
Turmeric									
								<i>Pedicularis</i> spp. (muscle relaxer)	

*These herbs have memory-enhancing, brain-boosting, and/or focus-enhancing properties.

of the featured herbs are artfully presented, with the herbs carefully and clearly labeled. Several of the chapters have an “At a Glance” section, summarizing the relevant herbs and their actions, though not always using the standard herbal jargon. By using everyday language, my not-an-herbalist mother could easily understand the herbal actions being described. In particular, Groves includes a table, “Nervous-Endocrine System Herb Continuum,” that artfully highlights the range of nervines and adaptogenic herbs, from stimulating to sedating.

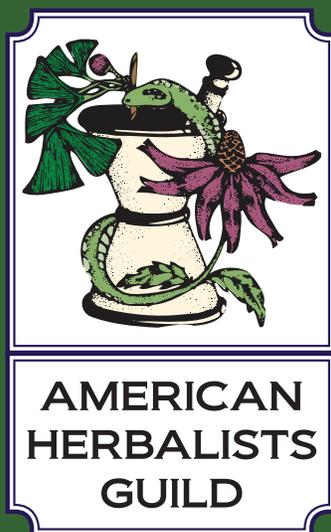
I do take issue with Groves’ commentary on naturopathic doctors in the “Who’s on Your Health Care Team?” section. She recommends seeking out a licensed naturopathic physician and cautions about anyone who isn’t licensed. There are at least a few herbalists who call themselves traditional naturopaths (myself included), who are not – indeed, cannot be – licensed. While I personally learned through direct apprenticeship, others may have trained through legitimate non-physician programs, and still others may

have trained in the UK and relocated, but are not eligible for licensing in the U.S. Moreover, herbalists who practice with a whole body outlook (even Groves herself) may be more similar in philosophy and approach to the traditional naturopaths of the early 1900s than are many of the licensed naturopathic physicians of today.

Otherwise, this book is a delightful treasure on my own bookshelf and I encourage others to add it to theirs. It is also a good resource for teaching or sharing with curious clients in the herbal clinic.

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