

The Benefits of Bitters

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STORY AT-A-GLANCE

- › Bitter herbs, spices and foods offer valuable benefits and can go a long way toward improving your overall health by improving digestion, gastrointestinal health and absorption of nutrients
- › Historically, bitter herbs have been primarily used as cleansing agents, vitality builders and digestive support
- › Many bitters have been shown to have antifungal, antiseptic, antiprotozoal and even antitumor activity
- › Much in the same way bitter compounds help protect the plant from harmful influences, they can be helpful in your body by inhibiting microbe growth, oxidation and inflammation
- › Commercially available bitter tinctures include Swedish Bitters and Underberg. Another easy way of getting more bitters into your diet is simply to add more bitter greens to your salads, and eating your salad first

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Bitter flavors are perhaps the least appreciated and sought-after, yet bitter herbs and spices offer valuable benefits and can go a long way toward improving your overall health. Historically, bitter herbs have been primarily used as cleansing agents, vitality builders and digestive support.¹ According to a paper published in the European Journal of Herbal Medicine:²

"With so many bitter herbs, most with a long history of medicinal use in multiple cultures, it is not surprising to read that 'the urinary system seems to be the only system that does not derive direct benefit from the administration of bitters.'"

As noted by Weston A. Price Foundation, an organization dedicated to restoring nutrient-dense foods to the human diet through education, research and activism:³

"It is unfortunate, then, that our modern diet seems to be completely lacking in the wild bitter tasting plants our ancestors considered so fundamental to their health. Many of the diseases riddling our modern culture – from indigestion and gastric reflux to metabolic disorders ... seem to all point back to the deficiency of bitterness in our diets, and the lack of the protection and tone it imparts to our digestion and metabolic functions."

Bitters Are an Important Part of Optimal Health

As noted by the Price Foundation, bitter-tasting foods are not necessarily "medicine" as much as they are a necessary part of a healthy diet, providing your body with components you cannot get elsewhere, and these components are important for overall good health.

The term "bitters" is an umbrella term for a collective of secondary plant metabolites that include iridoids, sesquiterpene lactones, sesquiterpene hydrocarbons, monoterpene iridoids, alkaloids and volatile oils, all of which have a bitter flavor.

Many bitters have been shown to have antifungal, antiseptic, antiprotozoal and even antitumor activity. Secondary plant metabolites are thought to serve no nutritional purpose per se. Instead, these compounds are part of the plant's self-defense mechanism against microbes, oxidative damage and predators, which include us humans at the top of the food chain.

Typically, bitter-tasting plants are avoided both by insects and mammals. One hypothesis is that animals (including us) learned to correlate bitter taste with toxicity.

Indeed, many bitter compounds are in fact poisonous. However, when consumed in small amounts, they can be significantly beneficial.

Much in the same way bitter compounds help protect the plant from harmful influences, they can be helpful in your body by inhibiting microbe growth, oxidation and inflammation. Importantly, these compounds tend to have a very stimulating and tonifying effect on your digestive system. This is an effect caused by what's known as "the bitter reflex."

The Bitter Reflex

When you eat something bitter, it triggers the release of a hormone called gastrin, which in turns supports and strengthens your digestive function by stimulating the secretion of:⁴

- Saliva, which is where the digestion of food begins
- Hydrochloric acid, necessary for breaking down proteins and enhancing the absorption of minerals from food. Hydrochloric acid also helps destroy harmful microbes, so taking bitters prior to eating not only prepares your stomach for digestion, but it may also offer some protection against foodborne illness, or at least reduce the potential effects of foodborne contaminants
- Pepsin, an enzyme that breaks protein molecules into smaller pieces
- Intrinsic factor, required for vitamin B12 absorption

Bitters also stimulate the flow of bile, which improves digestion of dietary fats and helps prevent the accumulation of waste in your liver. Over time, consuming bitters in small doses on a regular basis ends up strengthening your entire digestive system, including your stomach, gallbladder, liver and pancreas.

The bitter reflex also has the effect of triggering appetite and actually preparing your body for the receipt of food by triggering contractions in your intestines. This is likely

why bitters are generally recommended to be taken about a half-hour before food rather than after.

The bitter reflex also causes your esophageal sphincter to contract, thereby preventing stomach acid from migrating up through your esophagus – a condition known as acid reflux.

Bitters Activate Gastrointestinal Repair Mechanisms

Importantly, the reflex stimulates self-repair mechanisms in your pancreas and intestinal wall,^{5,6} which is another reason why bitters are associated with improved and strengthened digestive function. While there are no studies to prove this, bitters could be helpful in the prevention and/or treatment of leaky gut for this reason.

Leaky gut is a condition that occurs due to the development of gaps between the cells (enterocytes) that make up the membrane lining your intestinal wall. These tiny gaps allow substances such as undigested food, bacteria and metabolic wastes that should be confined to your digestive tract, to escape into your bloodstream – hence, the term leaky gut syndrome.

Once the integrity of your intestinal lining is compromised, proteins and other molecules that were never meant to be absorbed intact into your body end up leaking into your bloodstream, which can cause a significant increase in inflammation, allergies and autoimmune diseases.

Bitters also help prevent gassiness – an effect resulting from increased secretion of digestive enzymes that improves the breakdown of nutrients. By breaking molecules down into units your body can actually absorb, gas formation is prevented. Bacteria in your small intestine are also able to properly break down those units even further, which also prevents gas formation.

Keep in mind that all of these bitter reflex activities are triggered by the actual tasting of the bitter on your tongue. As noted in the *European Journal of Herbal Medicine*,⁷

bypassing the taste receptors by taking bitters in capsule form "renders it virtually useless."

Treatment Indications for Bitters

Bitters are considered "cooling," and therefore suitable for "hot" conditions such as inflammation (including arthritic conditions), dryness, flushing, tension, headache and fever, for example. Other indications for bitters include chronic candidiasis, thyroid dysfunction and allergic conditions such as asthma, urticaria and eczema. Moreover, according to the European Journal of Herbal Medicine:⁸

"They have a general tonic effect, exciting the sympathetic nervous system and improving cardiac function by decreasing heart rate and cardiac stroke volume. They stimulate muscles and improve circulation to abdominal organs.

Some bitters have an antidepressant effect. Some are emmenagogues. Quinine (an alkaloid of cinchona) was the standard anti-malarial for years, and new malaria research is being done on both gentian and wormwood."

As noted by the Price Foundation,⁹ one of the most basic benefits of bitters is the fact that they improve nutrient extraction and absorbability. Nutrition, after all, is the foundation upon which your health is built, and anything that helps your body make use of the nutrients you put into it will be beneficial.

Historically, bitters have also been treated as an important part of culinary tradition, first and foremost, opposed to actual medicine.

"Taken over time, they will lessen symptoms of poor digestive function such as gas and bloating, constipation, loose stools and food allergies; enhance vitamin and mineral absorption; promote balanced blood sugar levels ...

Protect the liver and strengthen eliminatory function; heal inflammatory damage to the gut wall; and reduce the incidence of allergic disorders. In short, the daily

*use of bitters can address some of the most rampant and heavily medicated health conditions of our time," Weston A. Price reports.*¹⁰

Contraindication and Side Effects

While generally safe when taken as directed, bitters are contraindicated for:

- Pregnant women
- People with serious erosive or ulcerative conditions of the gastrointestinal tract
- Chronic respiratory congestion
- Poor blood circulation
- Depressed metabolism

Also, while side effects are rare, some people may experience:

- Headache
- Muscle aches
- A feeling of general malaise when initially starting treatment, likely due to improved detoxification
- Side effects caused by excess absorption of medications taken, as bitters tend to increase the absorption rate of not only phytonutrients but also drugs

At high dosages, bitters may have an opposite effect, inhibiting gastric secretions and suppressing appetite rather than improving them. Overdosing will trigger nausea and vomiting, and in extreme cases may lead to death. As noted in the featured paper:¹¹

"In 18th century France, consumption of wormwood caused an outbreak of absinthism, a psychiatric disorder with epileptiform seizures, hallucinations and delirium, eventually leading to paralysis and death, due to its high thujone content.

Some other bitters also contain toxic compounds; for example, bitter almonds, used in baked treats for centuries, and recommended by Pliny the Elder ... are always taken sparingly, as overdoses can result in death."

How to Add Bitters to Your Diet

Historically, bitters were taken before mealtime, either in the form of fresh bitter greens and roots, or as a bitter aperitif or pre-dinner cocktail – essentially an alcoholic beverage made with a dash of bitter herbs.¹² Another, and probably better alternative to taking up the habit of a pre-dinner cocktail, is to use a bitter tincture.

Commercially available bitter tinctures that are reasonably easy to find include Swedish Bitters^{13,14} and Underberg. These are basically concentrated extracts in an alcohol base. While you can take a teaspoon straight, it may go down easier by mixing it into a couple of ounces of plain water or soda water.

Another easy way of getting more bitters into your diet is simply to add more bitter greens to your salads, and eating your salad first. Examples include [chicory](#), [dandelion](#), [arugula](#), [radicchio](#), [endive](#) and burdock. Start with a small amount and add more as your taste buds and body adjusts.

Sources and References

- ¹ [Organic Spa Magazine, Bitters](#)
- ^{2, 4, 6, 7, 8, 11} [Herb Clip, Bitters: Their History, Conceptual Context and Health Benefits \(PDF\)](#)
- ^{3, 9, 10} [Weston A. Price February 26, 2018](#)
- ⁵ [Hoffmann, David. Medical Herbalism: The Science and Practice of Herbal Medicine. Rochester, VT: Healing Arts, 2003](#)
- ¹² [Chicago Tribune February 7, 2018](#)
- ¹³ [Smallflower](#)
- ¹⁴ [The Crafty Cask](#)