

MEDICINE CHEST

ASTRINGENT HERBS

Maria Noël Groves

In the world of herbal actions, energetics, and flavors, "astringent" often comes up, but what does it actually mean? You may not realize it, but you probably use astringent foods and herbs daily in a variety of ways, so let's break it down.

WHAT DO THEY DO?

Astringents primarily astringe—meaning they tighten and tone, constricting and binding tissues including the skin and mucous membranes. They also offer a variety of direct and indirect healing properties, but not without some challenges in medicine making as well.

In herb lingo, "astringent" is best classified as an herbal action, but we also see it come into play in energetics (astringent herbs tend to be considered "drying" because they shore up leaky membranes). Astringent is sometimes considered a "taste," but it's really more of a mouthfeel. Have you ever sipped an over-brewed cup of black tea? Or eaten an underripe banana? That sensation when your mouth puckers and feels dry—that's astringent. Lightly astringent flavors give body and depth to tea blends and even smoking mixtures. Facial toners like witch hazel reduce the appearance of pores or disinfect and ease hemorrhoids when applied to your tush.

Introducing Tannins

Tannins are the primary group of constituents responsible for an herb or food's astringent action. Many types of tannins exist, ranging from the antioxidant polyphenols in green tea and berries to the super potent tannins in oak bark that are traditionally used to tan leather. Red wines can also be high in tannins.

Tannins vary in strength, astringency, and safety. They love to bind to other compounds such as proteins, amino acids, minerals, and alkaloids. This can be beneficial, annoying, or dangerous depending on the degree and situation. By binding to proteins in our skin and mucous membranes, they tighten, tone, and astringe.

When consumed or applied, they tone blood vessel lining for better circulation and to reduce bruising and ease discomfort from hemorrhoids and varicose veins. Tannin-rich oak and grape leaves added to lacto-fermented pickles will help them retain some crispness. When combined with other herbal constituents in a tincture blend, they will bind to alkaloids and other compounds, precipitating out in clumps. If you consume a lot of tannins alongside a mineral such as an iron supplement, the tannins can interfere with mineral absorption by binding to it, making it less available to the body. Excessive and long-term tannin consumption can irritate the kidneys and impair nutrient absorption in the gastrointestinal tract.

Indirectly, we find a variety of secondary actions. Tannins are often antioxidant, antimicrobial, circulation-enhancing (due to better blood vessel tone), hypoglycemic, and sometimes bitter. As herbalist jim mcdonald points out, we often consider astringents "drying" because they ease leakiness and create a dry sensation in the mouth and on contact, but they can also be considered "moistening" because they help you hold on to fluids.

Benefits for the Plants

Herbs produce tannins to protect themselves from infection and animals. Large amounts of tannins can be unpleasant tasting and moderately toxic. Tree bark is notably high in tannins. Many plants will increase the tannin content in their leaves and bark when grazing animals or disease arrive in the colony; affected plants release alarm aromas and other signaling compounds that tell the other plants in the colony to shore

up their defenses. A grazing animal eventually finds the flavor unpalatable and moves on, and infections or pests may be kept in check or prevented. Tannins in tree bark also help provide resistance to fire damage.

EXAMPLES & USES OF ASTRINGENT HERBS

Gentle Rose Family Astringents: My teacher Michael Moore called these "YARFAs" (Yet Another Rose Family Astringent). Many leaves and flowers in the rose family contain gentle, light tannins that are safe for regular use in boggy, leaky conditions to tighten and tone. They particularly favor the skin, uterus, mouth, and gastrointestinal tract—for example, acne-prone skin, sore or irritated gums, leaky gut, non-pathological excessive vaginal discharge, uterine bleeding, and chronic loose stools or dysbiosis. They have mild antimicrobial and flora-balancing actions on contact with tissues and are usually used as tea or other water-based extract. Favorites include rose petals, raspberry leaf, lady's mantle aerial parts, strawberry leaves, and the more potent blackberry root. Though these are safe and well tolerated by most, they can feel like a punch in the stomach or irritate sensitive bellies, especially if taken unsweetened and without food.

Additional Mild Astringents: Herbs like nettle leaf and root, lemon balm, linden, and yarrow aren't as famous for their astringency, but they do offer some. Cinnamon bark can vary in astringency from modest to high depending on how it's prepared and which species you use. Cassia cinnamon that's decocted or used as a powder (often mixed in applesauce or oatmeal) will be the most astringent. Yarrow is popular as one of our safer hemostatics to help staunch bleeding in wounds as well as for uterine or gastrointestinal bleeding. (Disclaimer: If you're bleeding excessively or chronically and/or you don't know why you're bleeding, please *don't* self-treat with herbs. Call your doctor or go to the emergency room!)

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USES OF HERBS

Astringents: My
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Polyphenols: Many of our puckery antioxidant- and pigment-rich herbs are high in polyphenols, which are related to tannins but better known as "superfoods" that fight inflammation, oxidative stress, and the perils of aging. These include the anthocyanin and anthocyanidin compounds responsible for the red-blue-purple of berries, pomegranates, and purple grapes as well as hibiscus, butterfly blue pea flowers, black rice, black beans, purple potatoes, and purple corn; the less pigmented precursor oligomeric proanthocyanidins in hawthorn, pine bark, and grape seed; and Epigallocatechin gallate (EGCG) and related catechins in true tea (*Ca-*

mellia sinensis) and cacao. Fun fact: the pigments are bluer in alkaline (ripe, sugary fruit) environments and pinker in acidic environments (unripe fruit or lemon added to tea). Mint family antioxidant herbs are also polyphenol rich, particularly lemon balm.

Polyphenols are usually safe and promote health with regular long-term use. But long-term stability can be a problem with extracts because the polyphenols eventually precipitate out, which is why you might see your berry syrups or wines get brown and "raisin-tasting" over time or notice clumps in your tinctures, and why green tea is best immediately after it's brewed.

Potent Circulatory Astringents: Horse chestnut, witch hazel, and oak bark have higher amounts of potent hydrolyzable tannins, which are not safe for internal use—particularly long-term—due to potential toxicity, gastrointestinal and kidney irritation (except for specially prepared horse chestnut standardized extracts). Topically, they're popular to tone vascular weakness including hemorrhoids, varicose veins, and vascular insufficiency. Witch hazel and oak bark (and the slightly less potent oak leaves) also help disinfect and promote wound healing, and they ease the itch of bug bites. Milder, safer