



Healing Internally Herbs and Spices

Adding herbs and spices to your food gives your meals an "upgrade" in more ways than one.

First, you get the extra flavor enhancement and complexity that only natural spices can bring, and second, you get health benefits galore because herbs and spices contain antioxidants, minerals, vitamins and unique medicinal properties.

Research has also shown that herbs and spices have the potential to boost metabolism, promote satiety, aid weight management and improve the overall quality of a diet. They can also control blood sugar, remove inflammation, help with repair of intestinal gut flora and more!

Cumin: Cumin is useful for digestion and energy production, and may improve glycemic control in people with type 2 diabetes. The spice has a long history of medicinal use, and has also been found to enhance memory and provide potent anti-stress benefits.

Cumin helps to improve your digestive process and production of energy. Cumin seeds also helps to boost your immune system. Cumin is another popular ingredient in curry and is responsible for that delicious taco flavor in Mexican dishes. It's best to think of cumin as a digestion helper, bacteria fighter, and oxidation preventer. It may also reduce blood glucose and glycation (in diabetic rats) and boost the immune response (in stress-induced mice).

Black Pepper: Black pepper contains a substance called piperine, which not only gives it its pungent flavor, but also blocks the formation of new fat cells. When combined with capsaicin and other substances, black pepper was also found to burn as many calories as taking a 20-minute walk. As an aside, black pepper also increases the bioavailability of just about all other foods -- herbs and other compounds – making it a healthy choice for virtually any meal. Black pepper also helps in improving your digestive system and helps to burn fat at a faster rate. Black pepper is the most commonly traded and consumed spice, yet the benefits are commonly unknown. If they were known, we'd see more pairings of pepper with other spices given that "increasing the absorption of other nutrients" is



its biggest attribute. Think of it as the spice that complements other spices. In one study, researchers administered two grams of curcumin with and without piperine (the chemical compound in peppercorn) and saw 2000-percent greater bioavailability when piperine was included.

Peppercorns: Peppercorns come from black pepper vines and they are dried and used as a spice. Peppercorns exhibit anti-diabetic, anti-cancer and antibacterial properties. They can also be used to aid digestion, lower blood pressure, improve cholesterol levels and reduce weight.

Cayenne Pepper: Capsaicin, the compound that gives peppers their heat, may help fight obesity by decreasing calorie intake, shrinking fat tissue, and lowering blood fat levels, as well as fight fat buildup by triggering beneficial protein changes in your body.²

Part of the benefit may be due to capsaicin's heat potential, as it is a thermogenic substance that may temporarily increase thermogenesis in your body, where your body burns fuel such as fat to create heat, with beneficial impacts on metabolism and fat storage. Research suggests that consuming thermogenic ingredients may boost your metabolism by up to 5 percent, and increase fat burning by up to 16 percent. It may even help counteract the decrease in metabolic rate that often occurs during weight loss. Who knew there was a connection between a spicy pepper scorching your mouth and burning your belly fat? Scientists did! According to a study in the *American Journal of Clinical Nutrition*, daily consumption of one of the compounds found in pepper (capsaicin) speeds up abdominal fat loss by boosting the body's ability to convert food into energy. It also acts as a natural appetite suppressant: men who ate spicy appetizers consumed 200 fewer calories at later meals than those that did not, a study by Canadian researchers found. All you have to do to reap the benefits is use a pinch of cayenne pepper to season grilled fish, meats, and eggs. This spice includes a compound called as capsaicin which helps to burn fat and suppresses your hunger cravings. According to a research done by Prudue University - cayenne is effective in weight loss, because it increases body's metabolism activity which causes the body to burn more calories. This spice comes from those little red and green peppers. It's best known for its ability to fire up your



metabolism and get your blood pumping. The high capsaicin content is responsible for the bump in energy expenditure and dilation of blood vessels.

But the real benefit from capsaicin-containing spices is their ability to control hunger. Arguably, this is the bigger driver behind all the positive research on fat loss. A study from the journal *Physiology & Behavior* split 25 normal weight men and women into two groups. One group received a gram of red pepper spice and the other received none. The spice eaters had a slightly higher core temperature and energy expenditure, and a significantly lower appetite and desire to consume fatty, salty, and sweet foods.

Similarly, a 2009 study showed a significant difference in ghrelin (the hunger hormone) after assigning participants to a capsaicin-containing, or capsaicin-free lunch.

Now, "hot spices" can cause a little bit of gastrointestinal distress. So if you're already dealing with an issue, or suspect you may have one, it would be wise to steer clear of them for now.

Cayenne pepper is a shrub that makes hollow fruit that grows into long pods. These pods are available in fresh, dried or powdered form and valued for their many health benefits. Cayenne can be used to support digestion, prevent blood clots, relieve migraine, nerve and joint pain, promote detoxification, improve allergy symptoms and support weight loss.

Cinnamon: This spice may help to boost your metabolism, and it also has impressive benefits for blood sugar regulation, making it an ideal seasoning for people with diabetes or pre-diabetes. Cinnamon has been found to significantly reduce blood sugar levels, triglycerides, LDL (bad) cholesterol, and total cholesterol levels in people with type 2 diabetes, as well as increase glucose metabolism by about 20 times, which would significantly improve your ability to regulate blood sugar. Kickstart your morning—and your metabolism—with this warming spice. Cinnamon contains powerful antioxidants called polyphenols that are proven to alter body composition and improve insulin sensitivity (which



means it keeps blood sugar stable, preventing hunger-inducing spikes and crashes). Japanese researchers found that mice who ate a daily helping of cinnamaldehyde (the ingredient that gives cinnamon its flavor) lost belly fat, while those who skipped the spice did not. Cinnamon is one of the best weight loss herbs because it helps to stabilise blood sugar level, keeps you full for a longer time, decreases hunger pangs and metabolises fats at a faster rate. When you think of cinnamon, think "blood sugar." It's one of the best things you can add to your diet to improve insulin sensitivity and glycemic control. A review study from the journal *Diabetes Obesity and Metabolism* looked at cinnamon's affect on fasting blood glucose in type 2 diabetics and found reductions ranging from 10-29 percent.

One easy way to add cinnamon to your diet is to put it in your coffee or tea. This will easily put you in the 1-3 gram per day range (1-2 teaspoons) where these benefits lie. It's also a great spice for adding to other foods. The ever-popular sweet potato and cinnamon combo will light up your taste buds without lighting up your blood sugar.

Mustard Seeds: The mustard plant is actually in the cruciferous family of vegetables (along with broccoli, cabbage and Brussels sprouts, for instance). Mustard seeds have been shown to boost metabolic rate by 25 percent, which means you'll burn calories more efficiently. In fact, just 3/5 teaspoon of mustard seeds daily may help you burn an extra 45 calories an hour.⁷

Mustard seeds come from various mustard plants and they are used as a spice in many regions of the world. They are an excellent source of folate, vitamin A, calcium, potassium, magnesium and phosphorus. Plus, mustard seeds can reduce inflammation that causes pain and swelling, treat gum disease, boost the health of your heart, skin and hair, and help to prevent or fight infections due to their antibacterial and antifungal properties.

Cardamom: Cardamom, an aromatic spice with a spicy-sweet flavor, is another thermogenic herb that helps boost your metabolism and may boost your body's ability to burn fat. Cardamom is a popular herb used in Ayurveda, an ancient holistic system of medicine and natural healing from India. This



spice helps boost your metabolism and improve your body's ability to burn fat. It's one of the top spices for aiding digestion, its powerful oil kills pathogenic bacteria (*Streptococcus mutans* and *Candida albicans*) in the mouth and likely the gut, and it has a dilating affect, supporting better oxygen and blood flow. Other than using it in tea or adding it to sweet dishes, you can chew on the cardamom pods, like they do in India, to fight bad breath and get a little teeth cleaning from the fibrous coating.

Garlic: According to a recent study, when rats were put on a high sugar diet, the animals that were also given a garlic compound were able to metabolize sugar more efficiently and were even able to prevent lipids (fat molecules) from building up in the blood. Experts attribute the fat-fighting benefits to a powerful compound in garlic called allicin. (It also happens to be the same compound that gives garlic its pungent taste and smell.) Garlic is like an insurance policy. It protects you against the common cold and other sicknesses, and enhances the overall health of your gastrointestinal tract where disease starts. A regular dose of garlic keeps things balanced in your gut by killing yeast and pathogenic bacteria, and feeding the beneficial microbes that help keep us lean and healthy. Onions and shallots do the same, but what sets garlic apart is its allicin content. Allicin is a compound that's only released when the garlic cloves are chopped or crushed, so consume it fresh when possible.

Garlic contains vital nutrients, including flavonoids, oligosaccharides, selenium, allicin and high levels of sulfur. Consuming cooked or raw garlic, by adding it to food or taking a capsule, can help treat diabetes, fight inflammation, boost the immune system, regulate blood pressure, fight cardiovascular disease, relieve allergies, fight fungal and viral infections, and improve hair loss.

Studies show an inverse correlation between garlic consumption and progress of cardiovascular disease, the leading cause of death in the United States. Research published in the *Journal of Nutrition* shows that garlic reduces cholesterol, inhibits platelet clustering, reduces blood pressure and increases antioxidant status

Ginger: Ginger is another warming spice that has anti-inflammatory properties and is known to help soothe and relax your intestinal tract. Research also suggests that ginger may have thermogenic properties that help boost your metabolism, as well as have an appetite-suppressant effect when consumed, suggesting a "potential role of ginger in weight management." Ginger is a very good body cleanser. Ginger helps to remove the food logged in the digestive system and thus prevents fat storage and weight gain. Ginger is best known for its anti-inflammatory effects. It helps



soothe or calm the muscles of the gastrointestinal system and alleviates nausea and morning sickness. There's also plenty of research to suggest that ginger is beneficial for arthritic pain and muscle soreness, which wouldn't be surprising given its anti-inflammatory effects. It also supplies a hefty dose of antioxidants, so you can expect to experience the same protection against diseases, most notably those of the brain and heart. Ginger is the most widely used dietary condiment in the world today. The therapeutic benefits of ginger come from gingerols, the oily resin from the root that acts as a highly potent antioxidant and anti-inflammatory agent. Gingerol, among other bioactive agents present in ginger, are able to relieve indigestion and nausea, boost immune and respiratory function, fight bacterial and fungal infections, treat stomach ulcers, reduce pain, improve diabetes, prevent malabsorption, and may even inhibit the growth of cancer cells.

According to a 2013 review of evidence published in the *International Journal of Preventive Medicine*, the anticancer potential of ginger is well-documented, and its functional ingredients like gingerols, shogaol and paradols are the valuable ingredients that can prevent various cancers. Researchers also found that ginger has anti-inflammatory and antioxidative properties for controlling the aging process.

There are several ways to use ginger. It can be eaten raw, taken in powder or supplement form, consumed in liquid form by making a tea, or used topically in oil form.

Cloves: When looking at the more common herbs and spices listed here, ground cloves actually have the highest ORAC value – a measure of antioxidant status – with some indexes suggesting it's nearly double that of oregano, the next highest gram-for-gram.

Cloves are great for digestion, essentially "warming up the stomach" and encouraging the body to secrete stomach acid (HCL), which is critical for the proper breakdown of food and absorption of the nutrients in it. Cloves also supply a shot of antimicrobial, antifungal, and antiviral oil which disarms potential pathogens and boosts the overall strength and function of the immune and gastrointestinal system.



Despite conventional thinking, a lack of HCL is the reason many struggle with heartburn, indigestion, and other gastrointestinal issues. So, ditch the Maalox and Tums and get some cloves (and apple cider vinegar) in the mix.

Rosemary: Often added to olive oil and fish oil supplements to prevent oxidation, this carnosol-rich herb is the perfect arterial protector. Research shows it inhibits the formation of HCAs (heterocyclic aromatic amines) when frying meat, improves the oxidative stability of butter, and even encourages the up-regulation of the antioxidant glutathione. Rosmarinic acid, the active ingredient in rosemary, also appears to help with nasal congestion and allergy symptoms, making it the perfect ingredient for soups and teas.

Rosemary is an aromatic herb that's part of the mint family. It's known for its ability to improve memory, promote hair growth, relieve muscle aches and pains, improve cognitive function and soothe digestive issues. Rosemary also possesses anti-inflammatory, anti-cancer, antioxidant, detoxifying, anti-stress and healing properties. Rosemary can be chopped or ground and added to meals, or rosemary oil can be diffused and applied topically.

Thyme: Thymol, the antioxidant in thyme, is a potent infection inhibitor. This member of the mint family is a popular ingredient in mouthwash and cleaners, and it's been used in tea format to treat everything from athletes foot to yeast infections. Thyme is also effective as a cooking oil stabilizer. When combined with rosemary and garlic, it makes for a nice dry rub, especially on lamb! Thyme is a source of vitamins and minerals like vitamin C, vitamin A, iron, manganese and calcium. It can be used to boost your mood, relieve respiratory conditions like sore throat and bronchitis, lower blood pressure and cholesterol levels, and fight cancer cells.



Oregano: As far as antioxidant rankings go, oregano is a powerhouse. It has 42 times more antioxidant activity than apples, 30 times more than potatoes, 12 times more than oranges, and 4 times more than blueberries.

Oregano is so powerful as an antiviral and antibacterial agent that it's proven just as effective in killing E. Coli and staph as penicillin. That makes it the perfect addition to your meals to protect against food-borne pathogens (and carcinogenic cooking compounds), and the perfect addition to your soups and teas to protect against coughs, colds, and sickness.

That said, a little bit goes a long way, especially if we're talking about the dried form which has a stronger taste than the fresh leaves.

Oregano is an herb that has been used for healing for thousands of years. Oregano has the power to reduce inflammation, fight bacterial, fungal, viral and parasitic infections, fight allergies and even shrink tumors.

Basil: If you've eaten pesto sauce you've had basil. And though it's often praised for its anti-inflammatory properties and vitamin K content, you should add it to your meals for the extra protection against bacteria. It can directly disarm a long list of infections (including listeria, staphylococcus, and E. coli) with its various volatile oils (estragole, myrcene cineole, eugenol, limonene, etc).

Not surprisingly, its high concentration of polyphenols and flavonoids also means an increased resistance to cellular damage, both during and after consumption. This appears to hold true for all parts of the plant and all its varieties. Holy Basil is the most popular, and most widely studied, for healing.

Holy Basil



Holy basil is an adaptogen herb that can be used to relieve or ease conditions like anxiety, hypothyroidism, adrenal fatigue and acne. Research shows that holy basil benefits also include its ability to fight cancer, control blood glucose levels and regulate cortisol levels. You can find holy basil in supplement form or drink tulsi tea for these benefits.

The healing power of holy basil is a holistic treatment that has been passed down through many generations. Holy basil steeped into a tea has been commonly used in to treat both headaches and indigestion. Not surprisingly, recent research show that holy basil can also be effective at treating stress, which oftentimes causes both headaches and indigestion.

Tarragon: Sleep and gut health are critical components of a long, healthy life. Fortunately, tarragon can help with both if you get used to adding it to your food regularly. Tarragon improves digestion by stimulating enzyme production, relaxing the gastrointestinal muscles, and going to work on any bacterial infections that may be present in the gut. As for sleep, it appears to be driven by the pain-numbing properties of eugenol. The French use it as an insomnia treatment.

Cilantro (Coriander) : In the journal *Phytotherapy Research*, cilantro is described as "anti-microbial, anti-oxidant, anti-diabetic, anxiolytic, anti-epileptic, anti-depressant, anti-mutagenic, anti-inflammatory, anti-dyslipidemic, anti-hypertensive, neuro-protective and diuretic."

In North America, we typically refer to the leaves of this plant as cilantro and the seeds as coriander. Both contribute to the list of benefits above, but coriander seeds (*Coriandrum sativum*) have been more heavily studied, especially when we're talking about the effects on blood sugar, blood pressure, and blood cholesterol levels.

Cilantro is a versatile herb that contains many healing properties, including phytonutrients, phenolic compounds and flavonoids. Cilantro benefits include its ability to promote the detoxification of heavy metals, reduce anxiety, improve sleep, lower blood sugar levels, boost your heart health, support your digestion, promote skin health and fight free radical damage that can lead to a number of degenerative diseases. The dried seeds of the cilantro plant is known as coriander, which is commonly used as a whole or ground spice. Consuming coriander seeds can help to lower blood sugar



levels, ease digestive issues, improve cholesterol levels, decrease blood pressure and prevent neurological disease.

Turmeric: Turmeric is the most powerful herb on the planet and its benefits are superior to those of conventional medications. Turmeric supplements can be taken in place of antidepressants, anticoagulants, arthritis medications, skin condition treatments, anti-inflammatory medications and cholesterol regulators. Other turmeric benefits include its ability to aid weight loss, treat gastrointestinal issues, ease pain and treat cancer naturally.

Turmeric is a plant that has a very long history of medicinal use, dating back nearly 4,000 years. Modern medicine has begun to recognize its importance, as indicated by the over 3,000 publications dealing with turmeric. This powerful plant can be added to any recipe or taken as a supplement. There are a range of turmeric benefits, including its ability to slow and prevent blood clotting, fight depression, reduce inflammation, relieve arthritis pain, manage diabetes, treat gastrointestinal issues, regulate cholesterol, and fight cancer.

Several studies indicate that turmeric has potent antioxidant, anti-inflammatory, antimutagenic, antimicrobial and anticancer properties. As an antioxidant, turmeric extracts can scavenge free radicals, increase antioxidant enzymes and inhibit lipid peroxidation.

If you're a fan of curry, you're probably also a fan of turmeric, as this is the yellow-orange spice that makes the foundation of many curry dishes. Curcumin, one of turmeric's most thoroughly studied active ingredients, reduces the formation of fat tissue by suppressing the blood vessels needed to form it, and therefore may contribute to lower body fat and body weight gain. This brilliantly orange root is a powerful fat fighter. According to a 2009 study by the USDA, mice whose diets were supplemented with turmeric experienced reduced weight gain and body fat levels even when their food intake was not changed. Experts believe the power of this spice comes from the active ingredient curcumin: Studies, including one published in the journal *Oncogene*, have found that curcumin is one of the most effective anti-inflammatory options out there. Because it's more difficult for your body to lose weight when you're fighting off inflammation, adding anti-inflammatory turmeric will help you achieve your weight loss goals. Talk about the ultimate in fat burning foods! This yellow-orange spice



has several weight-loss properties. It helps to reduce the formation of fat tissues, thus lowering total body fat and prevents weight gain. Curcumin may also be useful for the treatment and prevention of obesity-related chronic diseases, as the interactions of curcumin with several key signal transduction pathways in the body result in improvements in insulin resistance, hyperglycemia, hyperlipidemia, and other inflammatory symptoms associated with obesity and metabolic disorders. It's an anti-inflammatory and thus helps reduce the risk of pretty much every degenerative condition, especially those of the brain, heart, and nervous system.

There's evidence to suggest that lower rates of Alzheimer's disease in India (compared to the U.S.) and East Asia (compared to Europe) could be related to greater amounts of turmeric consumption. This is based on curcumin's ability to cross the blood brain barrier and exhibit a variety of neuroprotective effects.

Curcumin is also a powerful antioxidant, meaning it provides dual protection against disease. Research shows it's 5-10 times stronger than vitamin C and E when it comes to gobbling up free radicals. Berberine is a natural alkaloid that's found in a variety of traditional herbs, including barberry, goldenseal and turmeric. It's sold as an extract that can be used to fight bacteria, helping to treat conditions that are conventionally treated with antibiotics. Berberine also works as a natural remedy for diabetes, high cholesterol, heart disease, obesity, Alzheimer's disease, lung inflammation, SIBO and cancer.