Can an Onion a Day Keep Disease Away?

Last month, when I was discussing food sources of the flavonoid quercetin, I briefly mentioned onions. Although onions are in the same family as garlic, I sarcastically stated that they are treated more like “poor, backwoods relatives.”

My mentioning of onions got me thinking that it’s probably time to provide an update on all the benefits of this underappreciated vegetable.

Even though I’ve talked a lot about onions over the decades, the general public has never given them the recognition they deserve. Regardless of whether or not you are a fan of onions like I am, I think you might enjoy learning how effective they can be in treating so many health problems.

Nearly 20 years ago, I made the following statement, which I feel even stronger about today:

“If I was dead broke and suffered from any one of a long list of health problems, I would turn to onions. I would eat them raw by the bushel. I might lose all my friends, but more than likely I’d regain my health.”

Onions are available all over the world and they cost close to nothing. And while you won’t find them on any list of new, exotic vegetables, they are at the very top of my list of healing vegetables.

We probably respect the powers of the onion less than any other country in the world. In fact, a large part of our population won’t even eat onions, or never have. But in other parts of world, onions are a staple enjoyed by young and old alike. In this country, very few of us start out in life enjoying onions. Save for the children of farmers or gardeners, most kids’ earliest exposure to even handling an onion probably came in high school science class. Since onions have large cells that are visible under low magnification, science teachers routinely used them to teach microscope use and basic cell structure. But I’m not sure that’s even the case anymore.

Onions were among the oldest cultivated crops. They are represented in Egyptian artifacts dating back to 2700 B.C. The Egyptians worshipped onions and thought their spherical shape and concentric rings symbolized eternal life.

Onions were placed in the eye sockets of buried pharaohs. And records show the Egyptians used onions as currency to pay the workers who built the pyramids. They also placed them in the tombs of kings for their afterlife. In fact, onions were found in the tomb of King Tut.

Archaeological and literary evidence from that period suggests that onions were being cultivated and in wide use by that time. However, wild onions were used as a food source even before that. In Bronze Age settlements, traces of onion remains were found alongside fig and date stones dating back to 5000 B.C.

Onions are exceptionally easy to grow, transport, and store. And I can’t think of another vegetable that is so versatile when it comes to preparation and eating. The entire plant can be consumed.

If onions were a patentable drug, I have no doubt society would view them much differently. The drug would probably be hailed as the panacea of our time. Actually, based on how onions have been used and recommended medically throughout the ages, that’s pretty much how they were regarded in the past.

Folk healers loved onions. Based on what I read in my collection of old medical texts, onions were repeatedly recommended for treating open wounds, stomach ailments, constipation, erectile dysfunction, headaches, coughs,
snake bites, hair loss, infertility, muscle weakness, heart problems, breathing difficulties, and many other problems.

While onions might not be my first choice for treating a snake bite, the latest research indicates some of these recommendations aren’t that farfetched. Onions may be one of the most underutilized, inexpensive, and effective healing tools we have at our disposal. This isn’t just my opinion. It’s a fact supported by an ever-increasing amount of research.

There are two components that make onions so beneficial: quercetin and sulfur.

Onions are one of the richest food sources of quercetin, a well-researched bioflavonoid. It has powerful antioxidant, anti-cancer, and anti-atherogenic properties.

All onions also naturally produce numerous sulfur-containing compounds (like cysteine sulfoxide). In addition to acting as antioxidants, these compounds have antimicrobial and antifungal properties that protect the plant against insects, bacteria, and fungi. These sulfur compounds have proven to be beneficial in preventing and/or treating heart disease, atherosclerosis, cancer, diabetes, asthma, and many other health problems.

Heart/Vascular Disease

When it comes to heart protection, onions reduce the oxidation of cholesterol, and they exhibit anti-platelet, anti-fibrin, and antithrombotic activity.

By reducing abnormal blood clotting and impaired circulation, onion consumption has been directly associated with a decrease in the risk of high blood pressure, heart attack, and stroke. Researchers have documented that individuals with the highest intake of onions had the lowest risk of heart and artery disease. (BMJ 1996 Feb 24;312(7029):478–81) (Lancet 1993 Oct 23;342(8878):1007–11)

Most people are familiar with the anti-platelet activity of garlic. But onion oil is 10 times more potent than garlic oil. When two to three teaspoons of onion oil were given every day to hypertensive individuals, two-thirds of them experienced dramatic reductions in blood pressure. Systolic pressure (the top number) dropped an average of 25 points and diastolic pressure (the bottom number) fell 15 points.

Although the amazing powers of onion oil (and onion seed oil) have been well documented, these oils are practically unknown to most doctors and the general public. By now, they should be mass-produced and inexpensive. Instead, when you can actually find them in the marketplace, they are sold at a steep premium as essential oils. Fortunately, while the oils would be nice to have, they aren’t necessary. Simply eat more onions, which are cheap and plentiful.

Periodontal Disease

You likely won’t hear it from your dentist, but regularly consuming an onion with lunch or dinner could go a long way in reversing periodontal disease.

Onions have been found effective against Streptococcus mutans and Streptococcus sobrinus (the two forms of oral bacteria that cause dental cavities), and Porphyromonas gingivalis and Prevotella intermedia (the two main bacteria that lead to periodontitis). (J Nihon Univ Sch Dent 1997 Sep;39(3):136–41)

Research indicates that you need to eat the onion raw and fresh. Researchers found no beneficial activity from grated onions that had been left at 98 degrees for 48 hours, or from onions that had been steamed.

Asthma & Lung Cancer

Onions also have anti-asthmatic properties. In fact, researchers were able to reduce allergen-related episodes of asthma in animals by giving them various compounds.
from onions that inhibit the release of histamine, which is associated with the bronchial constriction and obstruction experienced by asthma sufferers. *(Int Arch Allergy Appl Immunol 1991;94(1–4):262–5)*

Onion consumption was also found to be particularly effective at lowering the risk of lung cancer among both smokers and non-smokers. Again, those with the highest onion consumption had the lowest risk of developing lung cancer. The effect of onions was particularly strong against squamous cell carcinoma, which makes up 25–30 percent of all lung cancers. *(J Natl Cancer Inst 2000 Jan 19;92(2):154–60)*

Onion juice is a natural expectorant. In respiratory conditions like bronchitis, it can help reduce the buildup of phlegm.

A simple way to extract onion juice is to chop and simmer five or six yellow or red onions in a double boiler for two hours. Discard the onions and add a little honey to the remaining liquid. Drinking one or two tablespoons of the juice each hour will help reduce phlegm and other symptoms of bronchitis.

**Other Cancers**

Studies have shown that the daily consumption of roughly 20 grams of allium vegetables reduced the risk of gastric and esophageal cancer by as much as one-half. In this particular study, they focused on onions, Welsh onions, scallions, leeks, garlic, Chinese chive, and garlic stalks. To put this in perspective, 20 grams is approximately the weight of one garlic bulb. *(Gastroenterology 2011 Jul;141(1):80–9)*

Other studies strongly suggest that a higher intake of onions and the other allium vegetables significantly reduces the risk of benign prostatic hyperplasia (BPH), as well as prostate, endometrial, colon, head and neck, lung, ovary, and breast cancers.

**Diabetes**

Adding onions to the diet can also help control blood glucose levels and prevent one of the largest epidemics of our time—diabetes.

One study showed that giving APDS, a compound found in onions, to participants resulted in a significant fall in blood glucose levels and a rise in blood insulin levels during the subsequent four hours. It also stopped any expected increase in triglycerides. This indicated an “insulin-sparing” action. In simple terms, this onion compound increased insulin efficiency.

Diabetes is notorious for causing pathologic changes in the liver and kidneys, leading them to malfunction. But administering these same
Alternatives

Alternatives

Alternatives

When diabetic animals were fed a diet that consisted of 3 percent freeze-dried onion powder, almost all of the complications normally associated with diabetes were either dramatically reduced or counteracted.

Not only did the onion diet significantly lower blood sugar levels and decrease the need for insulin, it also helped prevent liver enlargement, reduce triglyceride and cholesterol levels, lower damaging peroxides in the blood and urine, and partially reverse abnormal plasma levels of albumin, urea, creatinine, and kidney function returning to normal. (Maced J Med Sci 2010 Dec 15;3(4):344–51)

MAILBOX

Whey vs. Pea Protein

Question: I know you've always recommended whey protein, but it seems pea protein powder is the latest trend. What are your thoughts? — Cindy M.

Answer: Pea protein powder is unique in a couple ways. First, it is dairy free, which makes it a good option for vegans. And since it's a plant-sourced protein, it doesn't contain lactose, like whey does. For someone who is lactose intolerant, pea protein might be easier to digest than whey protein.

Pea protein supplies pretty much the same amino acids as whey protein. It also has about the same number of calories. Also, like whey, pea protein can help stabilize blood sugar levels and provide sustained satiety.

Personally, though, I still prefer whey protein. High-quality undenatured whey protein powder has repeatedly been shown to increase levels of the compound glutathione. I consider glutathione to be one of the primary biochemical markers of wellness and healthy aging. Researchers have found that, independent of all other factors, there is a direct correlation between glutathione levels and health and longevity.

Regardless of any other factors, individuals who experience less disease and live into their 80s, 90s, and beyond have higher levels of glutathione. Conversely, people with the lowest levels of glutathione experience more disease and live shorter lives. Low glutathione levels have been linked to accelerated aging, DNA damage, cancer, deterioration of brain function, cardiovascular disease, cataracts, and overall body toxicity.

Research has shown there are several ways to increase glutathione levels. Some of them include:

1. consuming cruciferous vegetables (Brussels sprouts, cauliflower, broccoli, cabbage, kale, bok choy, cress, mustard greens, horseradish, turnips, rutabagas, etc.);
2. taking the amino acid N-acetyl-cysteine;
3. taking a glutathione supplement;
4. drinking goat’s milk; and
5. consuming whey protein.

To manufacture glutathione on its own, the body requires three amino acids—glutamate, glycine, and cysteine. Of all the available protein powders, whey contains the highest levels of cysteine—the most crucial of the three building blocks of glutathione. The level of cysteine in your system is the limiting factor in how quickly your body can produce glutathione and how much it can actually make.

While other protein powders contain varying amounts of cysteine, plant sources are broken down by stomach acid and are primarily taken up by stomach and intestinal bacteria, meaning it doesn’t enter the cells. I suspect this is one reason pea and other plant-sourced proteins haven’t been shown to raise glutathione levels like whey protein.

Whey protein comes from raw milk, which is rich in cysteine. And these cysteine molecules are bonded together by a disulfide bond creating cystine. Cystine easily enters cells and is broken back down into the two cysteine molecules, which are then used to make glutathione.

I’ve found that a daily shake made with whey protein is one of the easiest ways to ensure I’m increasing my glutathione levels. So if you don’t have problems with lactose or allergies to milk products, I think whey protein is the way to go.

**Osteoporosis**

When was the last time a doctor told his or her patients that they could prevent bone loss and osteoporosis by regularly adding onions to their diet? I doubt it has ever happened. For one, very few doctors even know this information, and if they did, they would probably be embarrassed to mention it. Most find it easier to write a prescription for the latest osteoporosis drug than recommend a “folk remedy.” But the research has elevated onions far above any typical folk remedy.

With most nutritional research, the early work is performed on rats. Once safety issues are ruled out, trials are conducted on humans. This same path has been used with onion research. However, even after some extremely positive animal studies, most of the human research seems to have stalled. It's another situation where no one wants to spend the money on research when there's no potential to make a profit or even recoup the expenses.

Osteoporosis has been such a growing problem worldwide that a considerable amount of research has been conducted to try and find a dietary solution. Unfortunately, there hasn't been much success. Calcium in dairy products has only a very small effect on reducing the risk of hip fractures, and soy as a possible natural alternative to estrogen hasn't worked either. Onions, however, could be the answer. Research is promising.

In one study, a single gram of dried white onion powder was added to the food of rats every day for four weeks. In the control group, which did not have any dietary additions, there were no changes in bone mineral content or density. But in the onion powder group, bone mineral content increased by 17.7 percent, bone cortical thickness increased by 14.8 percent, and mineral density by 13.5 percent. Keep in mind, this occurred in only four weeks. *(Nature 1999 Sep 23;401:343–4)*

In a different study, researchers wanted to see if an onion-enriched diet would have any effect on the loss of bone that typically occurs in menopause. To simulate menopause, the ovaries were removed from a group of young adult rats. After only six weeks of adding anywhere from 30 to 1,500 mg of dried onion powder each day, they could prevent the bone loss that normally would have occurred due to the decrease in estrogen levels. *(Bone 2008 Jun;42(6):1154–63)*

Researchers at the University of Bern in Switzerland simulated bone loss by exposing bone cells from newborn rats to the parathyroid hormone, which increases bone breakdown. Some of the cells were treated with onion extract and others were not. Analysis revealed that a natural peptide found in white onions called GPCS inhibited the activity of osteoclasts (cells responsible for the breakdown and resorption of bone). *(J Agric Food Chem 2005 May 4;53(9):3408–14)*

Finally, in South Korea, researchers demonstrated that drinking a simple onion juice could stop bone loss. Study participants were advised to take 100 milliliters (3.4 ounces) of onion juice daily for eight weeks. Onion juice consumption was shown to improve bone mineral density, enhance antioxidant activity, and help inhibit bone loss associated with menopause. *(Food Funct 2016 Jul–Aug;16(4):756–9)*

**Alopecia Areata**

Alopecia areata is an autoimmune disease that causes hair to fall out in small, random patches. Crude onion juice can be an effective treatment in stimulating hair regrowth.

Patients suffering from alopecia areata applied onion juice topically twice a day for two months.
Regrowth of coarse hair began to show after two weeks of treatment. After four weeks, regrowth was seen in 74 percent of the patients, and at six weeks, 87 percent. By contrast, the control group applied only tap water to the affected areas, and just 13 percent began to see hair regrowth after eight weeks. (J Dermatol 2002 Jun;29(6):343–6)

In this particular study, only 23 patients applied the onion juice. However, autoimmune diseases such as alopecia areata are often difficult to resolve. And this is an inexpensive remedy that has no side effects, which certainly makes it worth a try. Keep in mind it may take as long as two months to see noticeable results.

For the best results, the onion juice should be prepared fresh for each application. If you have a juicer, it’s a simple and quick process. If you don’t have a juicer, you’ll need to grate the onion manually or in a food processor, strain the pulp, and squeeze out the onion juice.

Massage the juice into the affected areas of the scalp. Leave it there for at least 30 minutes. You can also leave it in overnight, but if you do, I’d suggest covering your scalp to protect your bedding. The onion smell is strong and can be hard to remove with regular shampoo. But one shampoo that seems to work well is Dr. Bronner’s Peppermint Pure-Castile Liquid Soap.

Maximizing the Benefits

You may have noticed that just about every study I discussed used different forms of onion—raw, crudely made onion juice, water or alcohol extracts of onion, dry onion powder or flakes, and extractions of onion/onion seed oil.

I haven’t seen any detailed research yet that has evaluated the most effective form, but they all seem to be beneficial regardless of form. (The exception may be commercial powder.) In addition, there are a few ways you can maximize the benefits.

As I mentioned at the start of this article, the two primary healing components of the onion (that we are aware of, anyway) are the flavonoids (particularly quercetin) and sulfuric compounds.

The outer skin and outermost layers contain the highest amounts of flavonoids/quercetin, so don’t peel too deep when you remove the dry outer layer. The flavonoids of the onion are also more stable than the sulfur compounds. Quercetin is even relatively stable during cooking, but the method of cooking raw onions has been shown to influence the ultimate percentage of flavonoid content. Below shows the percentage of flavonoid reduction associated with various cooking methods:

- Frying: 33 percent reduction
- Sautéing: 21 percent reduction
- Boiling: 14–20 percent reduction
- Steaming: 14 percent reduction
- Microwaving: 4 percent reduction
- Baking: no reduction

Onions produce flavonoids as a self-protective mechanism against damage by UV radiation. Interestingly, researchers found they could increase the flavonoid content in onions by exposing them to fluorescent light for 24–48 hours. (J Agric Food Chem 2008;56(18):8541–8)

In one study, commercial dehydrated onion products were found to contain low or no flavonoids. I’m not sure if this is true of all onion powders, since many of the positive studies I reviewed actually utilized dried onion powder. However, the researchers in these studies made their own powder, and specifically tested it for flavonoid content.

Until we have studies on specific products, or someone makes a standardized, stable product, I think the best course of action is to stick with raw or cooked onions. Onion powder is inexpensive and may add flavor to dishes, but I wouldn’t count on it providing any consistent health benefits.

While the outer layers of the onion contain the highest content of flavonoids, it is the inside, thicker layers that have most of the sulfur-containing compounds. These sulfur compounds, unlike the flavonoids, are volatile and unstable. They are released into the air when the onion is damaged or cut, and they are responsible for the strong smell and lacrimogenic (“tear inducing”) effects we associate with onions. The more pungent the onion, the higher the levels of sulfur compounds—and therefore, the better they appear to be for your health.

You can save even more money on onions because you don’t need to buy organic. Although your local grocery store may carry organic varieties, and you can find organic onion powder for sale, don’t waste your money.

Since onions have their own natural ability to resist pests, farmers...
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NEWS TO USE from around the world

Update on Fecal Transplantation

In the May 2012 issue of Alternatives, I wrote an in-depth article on how to restore bacterial balance in the colon. In that article, I gave complete detailed instructions on how to perform a fecal transplant. It’s a safe and simple procedure that results in a 95+ percent cure rate for C. difficile infections.

That was more than five years ago, and millions of people are still suffering. They are being subjected to antibiotics, antivirals, steroids, immune suppressants, and even surgery. All this nonsense continues, even though there’s a one-time procedure that should cost next to nothing, with an almost 100 percent cure rate.

Canada is continuing to research and report on fecal transplants, while you hear practically nothing in the US. In one of the latest reports out of that country, they compared fecal transplants performed via by colonoscopy to those performed by swallowing a capsule. The success rate for the colonoscopy was 96.6 percent compared to 89.5 percent for the capsule. The cost (in Canada) was $874 for the colonoscopy and $308 for the capsule. (This didn’t include the costs of donor screening, liability, and infrastructure.) (JAMA 2017;318(20):1985–93)

I’m sure the costs in this country would be astronomically higher, but it would be a mere fraction of the treatment costs (not to mention loss of work) that we are paying now. And a self-administered fecal transplant could be free if it is from a known family member, or minimal cost if from a less familiar donor who needs to undergo a blood test.

If you know of anyone suffering from Crohn’s disease, ulcerative colitis, or C. difficile, please let them know that fecal transplants are a real solution.

Dr. David Williams

Don’t waste their time or money treating onion crops with pesticides or other chemicals. Onions routinely are found to have some of the lowest chemical residue of all fruits and vegetables.

One study found that only 0.3 percent of onions were found to have any form of chemical residue at all. Conventionally grown onions also contain the same amount of polyphenols as those grown organically.

The closer you can eat an onion to its fresh, raw state, the better. If that’s not an option, then slice it fresh before cooking or including it in a recipe.

Besides eating them raw and cooking them, there are many other ways to enjoy onions and reap the health benefits. In fact, I like to ferment red onions, similar to the way I make homemade sauerkraut.

While I make several quarts of sauerkraut at a time in a large crock, I make onions in small batches. On page 3, you can find my personal recipe for fermented onions.

Making Onion Extract for Topical Use

Several studies have shown that onion extracts are effective in treating and reducing the appearance of scars. It’s so effective that many skincare products that aim to improve acne scars and stretch marks, or reduce the color or size of other scars, utilize onion extract as an ingredient. The most popular of these products is called Mederma, which can be purchased online or over the counter without a prescription.

You can also make your own onion extract for topical use with just a few ingredients. With all onion extracts, commercial or homemade, keep in mind that some individuals with sensitive skin might experience an adverse reaction. It’s not common, but the irritation could be as mild as itching or a temporary rash to something more severe like pain or possibly even blistering.

If you want to make your own extract, you’ll need a medium-sized onion, some table salt, liquid dish soap (I recommend Dawn), distilled water, a thermometer, a
Coffee filter, a blender, water, and some ice.

Chop the onion into very small pieces and place the pieces at the bottom of a small glass. Mix 1 ounce (about 5 teaspoons) of salt with 1/3 ounce (roughly two teaspoons) of liquid dish soap. Pour the mixture over the onion and set the glass down in a water bath—a container that has water heated to 140 degrees F—for 15 minutes.

Then transfer the glass with the onion/salt/water mixture to an ice water bath for five minutes, and stir often.

Next, pour the mixture into a blender and blend on a high speed for five seconds. Using a coffee filter, strain the liquid into a new glass. The extract should flow into the container, leaving the foam, onion, and other residue in the filter.

This liquid extract can be applied directly to the problem areas, or you can use it along with your regular face lotion.

**Making Onion Poultice**

This is one of the easiest things to make, and it works wonders for acute respiratory conditions such as colds, coughs, and chest congestion.

Just thinly slice a couple of onions and put them in a double boiler or steam them for about eight to 10 minutes, until they soften. Remove them, pat them dry, and wrap them in a clean, medium-sized kitchen towel. Make sure the towel isn’t too hot and place the poultice on the chest or upper back to break up phlegm and relieve congestion and coughing. If it starts to cool, you can always re-steam the onions, or I prefer to place a heating pad on top the poultice.

This same warm poultice can be placed on the ear for earaches, or on the bottom of the feet to help break a fever. It may sound strange, but it works.

I hope you begin to look at onions in a different light and start to include more of them in your diet on a regular basis. If you have one of the diseases I’ve mentioned, try consuming one onion a day for a couple of months and see what happens. I think you’ll be pleasantly surprised.

I know for some people, that’s not going to happen as their aversion to onions is just too strong. And that’s a shame. It’s also a shame we still don’t have any quality, standardized onion extract products in this country. Japan and Korea do...and it’s probably not surprising that most of the cutting-edge research on onions is conducted in those countries.

It’s hard to find a food that’s so plentiful and inexpensive as the onion. I thought about calling them “the poor man’s garlic,” but that would be like making them the Rodney Dangerfield of vegetables and giving them “no respect.” I love onions too much to do that.

One caveat: Despite the many benefits onions provide to humans, they are toxic to cattle, cats, dogs, and, to a lesser extent, sheep and goats. In animals, onions can lead to anemia and impaired oxygen transport. So don’t feed them to your pets.

Until next month,