

## Surprising Link Between Dementia and UTIs

**D**uring the 30-plus years that I've been writing *Alternatives*, I've often shared bits of insight that were given to me by my parents. From the moment we're born, we are constantly learning, and much of what we learn comes from our parents. What has surprised me



personally, however, is just how much I've continued to learn from them even during the end stages of their lives.

*Dr. David Williams*

Before my father passed away a few years ago in his 90s, his body was failing to such a degree that we had to move him into a nursing home. His mind, though, was sharp as a tack until

the very end. During my regular visits with him, I would always get an in-depth evaluation of the latest political events along with his predictions and thoughts about current sporting events.

It was also during those visits that I got a close firsthand look at many of the health issues confronting the elderly that cause them to need nursing home assistance. Although the reasons were varied, two factors stood out.

For one, the large majority, like my dad, had physical limitations that kept them from living independently. Over time, a lack of any meaningful exercise had taken a toll on their bodies.

That's when I took a closer look at what specific exercises could be used to improve range of motion and strengthen the joints that often deteriorate and lead to a lack of independence. I shared these in numerous articles and hopefully you've started to implement them in your daily routine. Strength and mobility are essential if you want to remain independent for as long as possible.

The second factor that stood out was the lack of mental stability. I'm not talking about forgetting

where you left the keys; I'm talking about more serious dementias.

Dementia involves the loss of memory and other mental abilities to the point that it interferes with daily life. It comes in many forms, the most well-known being Alzheimer's disease.

Many cases of dementia have been linked to overt nutritional deficiencies and/or poor circulation. A good diet, supplements, and an exercise program can go a long way in preventing and even treating these cases. Unfortunately, as a matter of time and convenience, most nursing facilities place practically all their emphasis on drug therapy.

As I mentioned earlier, my dad's physical body failed, but he didn't have even a hint of dementia. Unfortunately, my mother's current situation has turned out to be just the opposite.

My mother is in her 90s and until just a month or so ago, was able to wash her car, shop for groceries, and live independently. Although she had the expected "wear and tear" arthritis, for the most part her body was (and still is) in great shape.

Then, almost overnight, we noticed a drastic and debilitating change in her behavior and mental

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*You will observe with concern how long a useful truth may be known, and exist, before it is generally received and practiced on.*

— BENJAMIN FRANKLIN

ability. Much like the events that took place with my dad, what I learned from my mother's situation has been eye-opening to say the least.

For your own sake, and the sake of your friends and loved ones, please share the following information with as many people as you can. It could be life-saving.

### The Effects of an Unbalanced Microbiome

For decades, I've been researching and writing about the influence our body's microflora can have on our health. An unbalanced microbiome can lead to sickness and premature death, while the correct blend of bacterial strains in the body supports health and longevity. Balancing the body's microbiome is often so life-changing it could be viewed as a miracle.

I've seen young toddlers completely cured of severe eczema after they restored the balance of their bacterial flora. I've seen life-long estrogen dominance issues disappear when gut microflora was corrected. I've seen obesity and bulimia turn around. Some of the most perplexing cases of depression and mental confusion can even be improved or resolved by rebalancing the body's bacteria.

I've explained many times how bacteria, primarily in the gut but

in the urinary tract as well, have evolved to become a critical part of our immune system. They produce vitamins essential to our well-being. They also produce specific chemicals that cause nerve signals to be sent to the brain via the 10th cranial nerve. Through this action, they can effectively control our appetite, our food cravings, and even our mood.

Just as importantly, when their numbers are large enough, they help keep pathogenic bacteria in check. As we age and our immune system weakens, keeping pathogenic bacteria in check is essential to our survival. I recently observed firsthand with my mother just how critical this can be.

### Unresolved UTIs Can Cause Dementia

The connection between urinary tract infections (UTIs) and dementia isn't common knowledge among the majority of doctors and health care workers. Fortunately, some nursing home professionals have started to make the connection.

Still, I would be shocked if there weren't hundreds of thousands of misdiagnosed elderly patients being treated with antipsychotic medications and/or institutionalized because of the brain-related

side effects associated with unresolved UTIs.

UTIs are fairly common, resulting in more than eight million doctor visits a year. If you've ever had one, most likely you remember it. The painful burning during urination and difficulty emptying the bladder certainly leave a lasting impression. Half of all women will develop a UTI during their lifetime, along with a large percentage of men. Some of the most common causes include:

- **Sex**
- **Constipation (resulting in bacteria traveling from the colon to the urinary tract)**
- **Dehydration**
- **Diabetes (high sugar in the urine)**
- **Delayed bladder emptying ("holding it")**
- **Birth control (use of spermicides or hormone shifts caused by birth control pills)**
- **Unlubricated condoms**
- **Estrogen deficiency causing an alkaline pH in the vagina**
- **Feminine hygiene products**
- **Kidney infections or stones**
- **Pregnancy**
- **Antihistamines or drugs that decrease urination**

In about 20 percent of women, UTIs are chronic and recurring. This is usually due to an underlying

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Dr. Williams works with Healthy Directions, LLC to develop his unique formulations that supply many of the hard-to-find nutrients he recommends. Dr. Williams is compensated on the sales of these nutritional supplements and health products, which allows him to continue devoting his life to worldwide research and the development of innovative, effective health solutions.

NEWS TO USE *from around the world***Pumpkin Seed Oil for Baldness**

Yongsan, South Korea—  
Researchers at Pusan National University recently reported that pumpkin seed oil can be effective in the treatment of male pattern hair loss. (*Evid Based Complement Alternat Med* 2014, Article ID 549721)

The study consisted of 76 men between the ages of 20 and 65 who had mild to moderate hair loss. They were randomly divided into two groups of 37 and 39 members.

The first group received a total of four capsules of pumpkin seed oil per day—two 100 mg capsules before breakfast and another two 100 mg capsules prior to dinner.

The control group received four capsules a day of a placebo.

Labs and photographs were taken at the beginning and end of this period. Participants were also asked to provide a self-assessment of the efficacy of the treatment. Independent investigators evaluated scalp

appearance and hair growth before and after treatment. Additionally, technicians analyzed hair changes, including hair counts and diameters, by phototrichography.

The researchers found that 44 percent of the pumpkin seed oil group experienced slightly or moderately improved hair growth, while 51 percent were unchanged, and one patient had slightly more baldness at the end of the 6-month study.

In the placebo group, 28 percent had an increase in baldness, 64 percent were unchanged, and 7 percent had slightly or moderately improved hair growth.

The phototrichography analysis found that, when compared to those taking placebo, men taking the pumpkin seed oil had an average of 40 percent higher hair counts.

Androgenetic alopecia is the most common type of hair loss in both men and women following puberty. It is believed that 95 percent of the problem involves the compound 5-alpha reductase, which converts testosterone to

dihydrotestosterone (DHT). High levels of DHT damage hair follicles, resulting in thinning hair and ultimately a non-functioning follicle that leads to hair loss.

Excess DHT is also a factor in benign prostatic hyperplasia or enlarged prostate gland. This explains why some of the same herbal products that help prostate enlargement can also be beneficial in slowing hair loss (saw palmetto and green tea, for example). This is also why the same drug, finasteride, is marketed as Propecia for hair loss and as Proscar for prostate problems.

Oral finasteride, however, has been found to decrease libido and ejaculate volume and cause erectile dysfunction. Even worse, there are some studies that appear to suggest that men who take finasteride and develop prostate cancer tend to have the more aggressive, fast-growing type than those who do not take the drug.

Pumpkin seed oil doesn't have any known side effects. It's inexpensive and certainly worth a try if you're trying to slow hair loss.

bacterial imbalance. Until recently, most UTIs could be easily cured with a round of antibiotics and by abstaining from irritants and drinking plenty of water.

However, UTIs are now the second most common infection in the US, and they are becoming

increasingly difficult to treat with the current antibiotics. This is another area where the problematic bacteria have adapted to the treatment (antibiotics) and have become resistant. Bacterial cultures are becoming the new norm and on far too many occasions, intravenous antibiotic drips are needed to

clear the infection. What used to take a few days to resolve can now take weeks.

The chance of developing a UTI increases with age. UTIs are among the most commonly diagnosed infections in older adults. The risk

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## Alternatives MAILBOX

### Lyme Disease Prevention

**Question:** With summer here, I'm worried about ticks and Lyme disease. We live in the Northeast, where Lyme disease is a major concern. What do you recommend for prevention? If at all possible, I would prefer not to cover my family with DEET every time we leave the house. — Lynda C., West Hartford, CT

**Answer:** Online, you'll find a lot of homemade formulas for repelling mosquitoes and ticks. Most use essential oils. I've even recommended a few of these in the past for mosquitoes. However, what works to repel mosquitoes doesn't always work that well for ticks.

Lyme is a very serious disease. The CDC estimates between 240,000 and 440,000 new cases each year in the US. And while the Northeastern US reports the majority of cases, it is also fairly common around the Western part of the Great Lakes.

Lyme disease has even occurred in Texas, California, Florida, and other states where black-legged ticks reside, but to a much smaller degree. It's probably more common than believed in these other areas because the disease is not as well known and is less frequently tested for.

#### Repel With "Repel"

Rather than make your own repellent, I recommend using a product called Repel. The active ingredient of this product comes from the leaves of the eucalyptus citriodora tree (also called the lemon-scented gum tree). The tree is especially prolific in many parts of Australia. Many people consider it a noxious plant that needs to be eradicated, but koalas feed on the leaves.

Tests have shown that the 30-percent eucalyptus oil in Repel can deter mosquitoes and ticks for seven to eight hours. (I would suggest reapplying every six hours if you're outdoors that long.) Repel is

relatively inexpensive and can be found practically everywhere.

#### If You Get Bitten...

I also suggest making and keeping an antibiotic ointment on hand. The ointment wouldn't provide protection against viruses like West Nile or Zika, but Lyme disease is a bacterial infection caused by the bacterium *Borrelia burgdorferi*.

Although the research data are preliminary, an animal study found that treating tick bites with a topical antibiotic cream could stop *B. burgdorferi* from causing an infection. Ticks infected with *B. burgdorferi* were allowed to attach and feed on the backs of mice for 72 hours, and then removed. Twelve of the mice were immediately treated with a topical azithromycin antibiotic cream at the time of tick removal. Another 12 mice were treated with a doxycycline antibiotic cream after tick removal.

Eleven of the 12 mice receiving the doxycycline cream developed an infection, but none of the mice on the azithromycin cream did.

The results of this study were published a few years ago, yet I haven't seen any large-scale follow-up studies. Worse, there's no 4-percent azithromycin cream, like the one used in this study, available on the market. (*Antimicrob Agents Chemother* 2014;58(1):348–51)

Fortunately, with a little effort and ingenuity, you can make your own cream. It's really very easy. You only need four items.

First, you will need a small digital scale that measures in grams.

Second, you'll need azithromycin (also called Zithromax). Azithromycin is the antibiotic contained in the product called "Z-Pak." It has to be azithromycin. Other antibiotic-based creams are NOT effective against the bacterium that causes Lyme disease.

Azithromycin is only available via prescription, but if you explain to your doctor that you're making this cream and refer to the above study, he/she might write you a prescription. If not, there are online sources where it can be purchased overseas without a prescription, such as my-online-pillsstore.com. For the cream, you only need three 250 mg tablets, but nobody I found sells just three tablets.

Third, you'll need a base cream. A good one used by many compounding pharmacies is called



Dermabase. A one-pound container with shipping will cost about \$25 from Amazon or other suppliers like Drugs Depot or AmericanOTC.

The fourth ingredient that was added by researchers was ethoxydiglycol. It's a solvent and carrier added to many skin care preparations. I'm not sure it's really needed, but it doesn't add much cost to the formula. One ounce with shipping will cost about \$10 from LotionCrafter.com.

To make the cream, simply crush three 250 mg azithromycin tablets, mix in 18.75 grams of Dermabase cream, and add a "trace amount" of ethoxydiglycol.

The researchers wanted to know when the cream had to be applied to have maximum benefit. They considered the day of tick removal to be day 0 for purposes of this experiment.

They found that azithromycin cream treatment was 100 percent protective if applied on days 0 through 3 following the tick removal. But even from day 4 up until two weeks following tick removal, the cream was still 74 percent protective. Obviously, the quicker you can remove the tick and treat the site, the better, but it's nice to know it can help even days later.

Apparently, the topical application of the cream has a somewhat systemic effect. These infections were typically well established in the rodents within two weeks of removing the ticks and had started to move from the bite site by three days. The fact that the azithromycin worked when applied two weeks after tick removal suggests that it doesn't just prevent the infection but may also cure an established one.

It's also interesting to note that the cream was effective even if it was applied somewhere other than directly on the site of the tick bite. This might not be true in humans though. Mice are much smaller. In humans, the antibiotic might be diluted to a greater extent because of larger blood volume. I would suggest applying the cream directly to and around the immediate area of the tick bite.

In the study, the cream was only applied one time to the site of the bite, but I would suggest applying it a couple of times a day for three or four days after tick removal, just to be on the safe side.

Azithromycin has a tendency to collect in tissues, which is probably an advantage in this case. Since it is only applied topically and in small amounts for a

short period of time, there shouldn't be any concerns with antibiotic resistance.

One last point: Azithromycin did not protect against Lyme disease when taken orally. It only worked when applied topically.

I'm at a loss as to why this cream hasn't yet been put on the market. Lyme disease is a nightmare to treat—it can take years and cost a fortune. While everyone continues to debate if there are really any long-term health problems associated with Lyme disease, thousands of people are suffering from its debilitating effects, including nerve and joint pain and destruction, cognitive issues, and chronic fatigue. A simple preventive cream like this one seems like a no-brainer.

## Getting a Handle on *H. Pylori* Bacteria

**Question:** It seems like I've had stomach problems for ages. Based on your recommendations, I've started taking digestive enzymes and probiotics. These have helped tremendously but the problem has not totally resolved. One doctor thinks I have too much *H. pylori* bacteria in my stomach and wants to put me on a long course of heavy-duty antibiotics. I'm hesitant to do so because I have never been able to handle antibiotics well. Is there anything else that might help? — J.T., Rockwall, TX

**Answer:** Not knowing your history or what has been found in your lab work makes it hard to give you specific recommendations. However, here are a few options you can try and/or discuss with your doctor.

I'm sure you know *H. pylori* bacteria are associated with stomach ulcers. In addition to antibiotics, probiotics, and digestive enzymes, there are a few other things that can help lower their numbers or eradicate them.

Sulforaphane is a sulfur-based compound found in cruciferous vegetables. It has been shown to exhibit antimicrobial activity against many bacteria, most notably *H. pylori*. Broccoli sprouts happen to be one of the richest sources, containing as much as 50 times more sulforaphane than mature broccoli. (*Cancer Prev Res (Phila)* 2009 Apr;2(4):353–60)

In one study, *H. pylori* were totally eradicated in individuals who consumed just under 30 grams (one

ounce) of broccoli sprouts twice a day for seven days. Broccoli sprouts are best when eaten raw or lightly steamed.

Two other vegetables that are high in sulforaphane are cabbage and Brussels sprouts. Both of these vegetables can be lightly steamed, and the cabbage can be eaten raw. The varieties with the highest sulforaphane content are Savoy and red cabbage.

Cabbage can also be juiced. Cabbage juice contains what was once called “vitamin U,” but we now know it is the compound S-methyl methionine (SMM).

Among other things, SMM stimulates the creation of mucin, the compound produced in the stomach lining to protect itself from stomach acid. In one study, patients with ulcers were given 1.5 ounces of fresh cabbage juice four times a day. Within a week, more than 80 percent no longer had any ulcer symptoms.

Additionally, I would suggest taking deglycyrrhizinated licorice (DGL), which has a very protective and healing influence on the lining of the stomach. I’ve used it personally when I had the beginnings of an ulcer. For most people, it starts providing relief from that dull, aching, or burning sensation in a few days, if not sooner.

The typical recommended dosage of DGL is two to four 400 mg tablets or capsules taken about 30 minutes before meals.

One final remedy you might want to try is hydrogen peroxide. Add 10 drops to a glass of water and drink that three times a day. It’s safe and for many people, it eradicates excess *H. pylori* and can help relieve many, if not all of the symptoms of gastroesophageal reflux disease and/or stomach distress.

I hope you find these helpful. For more tips on how to deal with digestive problems be sure to check my website, DrWilliams.com.

## Put an End to Prediabetes

**Question:** I was just diagnosed as prediabetic. I know my diet hasn’t been very good and I don’t really exercise at all. My doctor counseled me on those things and I fully intend to start walking and cleaning up my diet by eliminating sweets and other sugars. He is also going to evaluate me in a couple of months and if my lab work isn’t any better, he says he will put me on metformin. I’m not too keen about having to take any medication for the rest of my life,

but I don’t want full-blown diabetes either. Any suggestions? — Marvin E., North Hollywood, CA

**Answer:** First and foremost, start taking a multivitamin/mineral supplement and a probiotic, which fill in many of the nutritional gaps that might be in your diet. In addition, turmeric and ginger are two supplements I would suggest you start taking at this time.

### Turmeric

Turmeric is a standout when it comes to preventing type 2 diabetes. A randomized, double-blind, placebo-controlled study from Thailand found that turmeric extract was 100 percent successful in preventing prediabetic individuals from developing type 2 diabetes. (*Diabetes Care* 2012 Nov;35(11):2121–7)

The study involved 240 individuals who met the criteria for prediabetes from the American Diabetic Association (likely the same criteria your doctor used). Over a nine-month period, half of the participants received turmeric extract (250 mg of curcuminoids) and the other half were given placebo capsules daily.

At the end of the nine months, 16.4 percent of those taking the placebo were diagnosed with type 2 diabetes, whereas not a single person in the turmeric-treated group developed the disease. In fact, those taking the supplement were shown to have decreased inflammation, less insulin resistance, and significant improvements in the function of the insulin-producing cells in their pancreas.

There are dozens of companies now producing turmeric supplements that are standardized to contain over 95 percent curcuminoids. And most capsules contain 250–500 mg of the very same extract used in this study. I highly recommend adding a capsule or two to your daily supplement program.

### Ginger

Ginger is another spice that has been shown to improve practically every measurable marker associated with type 2 diabetes. (It just so happens to be in the same plant family as turmeric.)

In one double-blind, placebo-controlled study, participants with type 2 diabetes received either a placebo or 3,000 mg of powdered ginger daily for three months. Those taking the ginger showed significant decreases in A1c and insulin levels, fasting blood glucose, insulin resistance, and C-reactive protein. Additionally, paraoxonase-1 (a marker for reduced oxidative stress) increased significantly,

as did total antioxidant capacity. Malondialdehyde, a marker for oxidative stress, also dropped. (*J Complement Integr Med* 2015 Jun;12(2):165–70)

An earlier study found similar improvements when participants took only 1,600 mg of ginger a day for two months. Additionally, researchers reported reductions in triglycerides, total cholesterol levels, and prostaglandin E2. (*Int J Food Sci Nutr* 2014 Jun;65(4):515–20)

### Berberine

If you're already starting to show signs of significantly increased blood glucose and A1c levels, talk

to your doctor about berberine. This herb exhibits both anti-inflammatory and anti-diabetic effects. It also reduces glucose production in the liver.

Studies have demonstrated that 1,500 mg of berberine (taken in three doses of 500 mg each before meals) is just as effective at lowering blood sugar as 1,500 mg of metformin—the same drug your doctor wants to put you on.

I highly suggest trying these supplements first before resorting to pharmaceutical drugs. Let me know how they end up working out for you.

(continued from page 3)

increases in individuals who are diabetic, have kidney stones, or use a catheter. Estrogen helps protect against UTIs, so postmenopausal women are also at greater risk.

UTIs account for about one-fourth of all infections in the elderly and more than one-third of all infections associated with nursing homes (second only to respiratory infections). Those residing in nursing homes and senior living communities tend to have more exposure to and harbor pathogens that are resistant to the antibiotics used to treat UTIs.

UTIs in the elderly differ from those in younger people. For one, they are harder to detect. Older adults often don't experience the telltale burning sensation. A more common indication in the elderly is the new onset of urinary incontinence. (Individuals who already have incontinence will often start to limit their fluid intake so they don't have to urinate as often. This only increases their risk of developing an infection since it allows

the bacteria to build up in the urinary tract.)

Other signs of a UTI can be even more disquieting. A sudden change in behavior is one of the best indications of a urinary tract infection. One day everything can seem normal, but the next, the person may be totally confused and unable to carry out tasks easily performed a day or two before. Additional telltale signs of a UTI that often get chalked up to dementia include paranoia (often extreme), hallucinations, obsessive behavior, emotional outbursts, and inability to concentrate or logically express thoughts and feelings. **If you ever notice a sudden unexplained change in behavior in an elderly individual, that person needs to be checked as quickly as possible for a UTI.**

Along with behavioral changes, other indications of a UTI include falling, general discomfort, being overly tired, bloody urine, and a loss of appetite.

The higher the infection is in the urinary tract, the more dangerous it becomes. If it moves into the kidneys, a patient might begin to experience back and side pains. Older people rarely get a fever from a

UTI, but if that happens, it means the infection is extremely serious and needs immediate treatment. Fever may or may not be accompanied by shaking, chills, nausea, and vomiting.

The researchers I've spoken with don't completely understand why UTIs can trigger "almost instant dementia," but they all agreed it seems to be happening more frequently than ever and the situation can quickly turn serious.

All infections, regardless of their location, create stress and place a burden on the immune system. Any form of stress, physical or emotional, only worsens the situation for anyone already suffering from dementia. Pathogenic bacteria release powerful and destructive toxins that create havoc throughout the entire nervous system.

There is no way to rid our bodies of every strain of pathogenic bacteria. The key is to keep them in check by consistently supplying the body with beneficial bacteria. Probiotics and fermented foods are more critical than ever to prevent and treat UTIs. They supply beneficial bacteria that "compete" with and crowd out pathogenic strains.

I'll say it again: A quality probiotic is one of the most important supplements you can take.

*E. coli* is one of the most common forms of bacteria that cause UTIs, associated with 70 percent to 95 percent of all cases. In addition to using fermented foods and probiotics, there are ways to help keep *E. coli* from being able to attach to the walls of the urinary tract.

### Two Must-Haves for Urinary Tract Health

One product most people are familiar with is cranberry. Studies have been somewhat mixed about the effectiveness of cranberry juice, probably because of the numerous varieties of juices and concentrates. Unsweetened seems to work best, but it's expensive and harder to find.

For prevention, I prefer cranberry extract over juice or liquid concentrates. Most juices are practically void of A-type proanthocyanidin, the compound that keeps bacteria from sticking to the walls of the bladder and urethra.

In studies involving cranberry extract capsules, roughly 400 mg once or twice a day was as effective as antibiotics at preventing UTIs.

The other compound with an action very similar to cranberry is a natural sugar called D-mannose. Like cranberry, D-mannose makes it harder for bacteria like *E. coli* to attach to urinary tract walls.

For active infections, two grams dissolved in a little water and taken every two to three hours for two or three days (until all symptoms have cleared) works very well. For prevention, the dosage

can usually be cut back to a couple of grams daily.

Both cranberry and D-mannose can be purchased in capsules, which is great for occasional use. However, for long-term prevention, I'd suggest purchasing one or both of the powders in bulk from online retailers like BulkSupplements.com, PureBulk.com, Microingredients.com, or Mountain Maus' Remedies (mountainmausremedies.com).

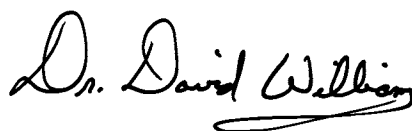
For less than the cost of a glass of cranberry juice, you can use the bulk ingredients to make your own daily cranberry fizz for UTI prevention. Many elderly individuals find this easier to take than capsules.

Here's my formula: Combine a few ounces of cold water with 1 teaspoon (2,000 mg) of D-mannose powder, 1/4 teaspoon (400 mg) of cranberry extract powder, and 1/2 teaspoon of baking soda. Stir well.

The D-mannose slightly sweetens the cranberry extract powder and the baking soda gives it a nice fizz. Feel free to adjust the amounts to your personal liking.

If you are caring for elderly loved ones or friends, be on the lookout for changes in their behavior that could be indicative of an UTI. The changes may be quite dramatic, like my mother recently experienced, or they could be subtle. In elderly adults, UTIs are not just annoying, minor infections; they can be life-threatening.

Until next month,



### This Month Online



Visit my website at **drwilliams.com**, where you'll find information and recommendations for many of your top health conditions, including:

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