



## DRINK WATER for your HEALTH & VOICE



### WE NEED WATER.

A dog can go for days without food & survive, but not without water.  
 Water cleanses, balances, carries away dead cells. It does amazing things for the body!  
 Water is the largest component of most the cells of our body.  
 Water absorbs water-soluble vitamins.  
 Water is absorbed by fiber to add beneficial bulk to your diet.

### WHY IS VOCAL LUBRICATION SO IMPORTANT?

Your vocal cords are also called vocal FOLDS, because they are a pair of folded muscles, with the fold-edges facing each other. Over eons of evolution, they have developed a CORDED edge to them that appear, especially when viewed from above, to be cords moving together & separating in a wave-like motion over the stream of breath you send up through them from the lungs. They move *thousands of times a minute* while you are making any vocal sounds (phonating)!

\*Singing a middle C, they are vibrating 265 times a second.

\*Singing an octave above that, they're vibrating twice as much, approx. 530 times a second.

They must move together, seal over the airstream like a valve, then open, close-seal-open, over & over & over again, creating a movement of air that causes vibration through your vocal mechanism which causes the sounds. These tissues must be extremely FLEXIBLE, RESILIENT & LUBRICATED work. If the tissues are dry or sticky, friction will cause resistance. The friction will cause irritation. Thus, all components of voice production will be compromised. Great strain & potentially serious difficulties develop if you're not well-hydrated & moist, or if your vocal technique is poor and unbalanced.

### DO I HAVE TO DRINK PLAIN WATER?

We've heard that we should drink 8 glasses of water a day. Why? coffee, tea and pop 🍹 has water in it, so does that count as water intake? **NO**. Your body is over 70% water. A celery stalk is over 90% water! Your body prefers PLAIN water, so it doesn't have to WORK to absorb it. When you drink beverages with chemicals or caffeine, the body has to call upon its **store** of water that had been diverted to help other bodily functions & now requires some of that water to come back to the digestive system to help you digest this "chemicalized" beverage. When you go to the bathroom, your body is DRIER after your coffee, tea, your pop, beer, etc., than you were before the drink. The body can use the water in fresh fruits, vegetables, and 100% juices relatively easily, so these would be next (best) to plain water in preference for body hydration. The next best source of hydration is natural herbal teas. Adding some citrus (lemon, orange, lime, etc.) to water & tea is also beneficial. With all of these, the body is getting the bonus of some vitamins / minerals / micro-nutrients & some fiber from the fruits & veggies as well.

## HOW MUCH WATER SHOULD I DRINK?

You may be healthiest with up to 13 glasses of water daily. According to Rose Worton, ballerina, choreographer and production manager in Atlantic City, she knows opera singers who drink water until they “pee clear”. That is: their urine has no colour. The darker your urine is, the more water you need to ease the concentration of toxins you are eliminating. Your water intake should be based on your weight. Most voice experts and doctors agree that you should drink half your body weight in ounces each day.

\*If you are a woman weighing 100 lbs., you would drink 50 oz. of water each day for good health. That's a little over 3 pints, slightly more than 6, eight oz. glasses of water daily.

\*If you are a man weighing 200 lbs., that's 100 oz. of water a day or more than 6 pints, 16 eight oz. glasses or almost a gallon of water a day.

If you drink mostly beverages other than water, you may need a lot more water to counteract the detrimental effects of non-water drinks like coffee, tea, sodas, which like beer, wine, and other alcohol, can dry out your entire body... especially the vocal cords. Give your body enough daily water, and you will improve your vocal health. Our bodies are our instruments.

## HOW DOES MY BODY HANDLE ALL THIS WATER?

The first thing you think is, “I’ll be in the bathroom all the time!” You may even have experimented with drinking more water for a day or 2, then found that you were right. But your mind is powerful. You can tell yourself you are going to be drinking more healthy water & you *expect* your body to adapt, and to use the water efficiently, comfortably & effectively.



Imagine a cracked, parched, dry desert. Suddenly, there's a huge rainfall on the dry, hard earth. What happens? The water just rolls off, unable to be soaked in. But if the rainfalls persist, eventually the hard ground will soften and begin to accept the quenching water. When you haven't been drinking enough water, your body has adapted itself to *drought* conditions, working hard to keep your bodily functions prioritized. If you suddenly start drinking lots more water, yes -your body can go into “flood-mode”, but it's temporary. You will soon feel amazing. Your body may take from 2 weeks - 3 months to adapt to changes and re-educate itself to new nutrition.

**OPTION ONE:** Start drinking 8-10+ full glasses of plain water daily & plan to go to the bathroom more frequently. Work with your mind, telling yourself that you know your body can adapt well to this improved hydration & will benefit greatly.

**OPTION TWO:** Start gradually, increasing water intake steadily, preparing your mind & body for change and improvement in functioning. This increase in drinking cleansing, detoxifying, moisturizing, healing, refreshing water will improve your health and hydrate your voice.

## WHEN SHOULD I DRINK WATER?

Listen to your body. Don't mistake thirst for hunger. Drink water when you go to bed to help your body detoxify while you sleep. Keep water at your bedside and drink a full glass of water when you get up to help flush out the toxins your sleeping body cleaned out. If you have a speech, presentation or vocal performance pending, be sure and start drinking water at least ½ hour before the event, not 10 minutes before. Hydrate through absorption into the body's tissues! Your vocal mechanism (larynx) is in, and suspended across your windpipe (trachea) at the top entrance to your lungs. **Nothing you drink, eat or suck on actually touches your vocal cords.** Drinking water will moisten your throat (pharynx) area, but when we eat or drink

anything, our voices seal shut like a valve to protect our lungs from debris...therefore no water touches your voice. Absorb the water by drinking it beforehand and letting the tissues plump up as it metabolizes through your body. Don't dump lots of water into your body suddenly the day of a performance. There is such a thing as muscle memory, and if your voice is used to over-working because it's dry...then a sudden flooding of water might confuse your body and have a negative effect on the sound of your voice.



### **WILL IMPROVEMENTS BE OBVIOUS?**

Most people begin to notice vocal improvement, comfort and ease within a week of increased water intake. They notice increased energy, too. If they suddenly DECREASE their water intake, they feel more vocally challenged...but they feel immediate improvement as soon as they increase water intake again! You may even feel as if, no matter how much water you're drinking, you may now seem to crave more! The human body is a magnificent and wise machine which it tells you a great deal. Listen to your instincts.

### **OTHER WATER BONUSES !**

**ALLERGY SUFFERERS:** Speakers, singers and performers often experience allergies, sinus difficulties or have post-nasal drip. Regular intake of water can help tremendously. As water is absorbed into the body, it helps dilute fluids, mucous and phlegm and become more viscous. Secretions in the nasal area can be cleared and swallowed away more easily. Water helps flush irritants, pollutants, toxins, allergens and germs out before they get worse and accumulate.

**SAVES MONEY:** Water is the beverage your voice needs most. It should be the beverage you drink most often. And as a side benefit, drinking lots of water can save you hundreds or even thousands of dollars a year, over the cost of drinking non-water beverages!

## **FACTS ABOUT DRINKING WATER**

- 75% of Americans are chronically dehydrated. (Likely applies to half world population.)
- In 37% of Americans, the thirst mechanism is so weak that it is often mistaken for hunger.
- Even MILD dehydration will slow down one's metabolism as much as 3%.
- One glass of water shut down midnight hunger pangs for almost 100% of the dieters studied in a U-Washington study.
- Lack of water is the #1 trigger of daytime fatigue.
- Preliminary research indicates that 8-10 glasses of water a day could significantly ease back and joint pain for up to 80% of sufferers.
- A mere 2% drop in body water can trigger fuzzy short-term memory, trouble with basic math, and difficulty focusing on the computer screen or on a printed page.
- Drinking 5 glasses of water daily decreases the risk of colon cancer by 30-40%, plus it can slash the risk of breast cancer by 79%, and one is 50% less likely to develop bladder cancer.

## WHAT ELSE HELPS MY VOICE KEEP MOIST?

**HUMIDIFIERS:** The air you breathe shouldn't be dry. Use a good humidifier to moisten room air, especially in your bedroom. Use a steam inhaler you place on your face...breathing steam deeply into your nasal & head cavities, throat & lungs. Use the inhaler more than an hour before any heavy vocal usage so that you are not over-heating the vocal tissues around speaking or performing.

**ES THROAT SPRAY:** Saliva, mucous & other body lubrication fluids have elements which are necessary for functioning in the body. Even if you practice consistent hydration, you may experience the effects of having less-than-optimal amounts of one particular element in your mucous secretions that lubricate your voice. The mucous needed around the voice includes 3 basic element types: globular, strand & sheet. If one of these is poorly secreted, supplementation may help & sooth...& may even prevent &/or ameliorate possible damage to the vocal tissues. SO: **ENTERTAINER'S SECRET THROAT RELIEF SPRAY** has been developed by a collaborative effort on KLI CORP in Carmel, IN & a Nashville otolaryngologist (ENT specialist) Richard Quisling, MD. It is formulated to resemble our natural secretions. Its 3 main ingredients: glycerin, sodium carboxymethylcellulose & aloe vera stand-in for these mucous elements & are blended into a buffered, aqueous hypertonic solution that's safe & soothing for singers & public speakers who may lack in elements of secretions. It has no numbing anesthetics, alcohol, antiseptics, analgesics, antihistamines, decongestants, anti-inflammatory agents, irritants, or any other drying/medicinal ingredients that could produce unwanted side-affects or after-effects. It can be recommended & used with confidence. It does not substitute for water. It can lubricate the vocal mechanism & keep the tissues from being irritated or damaged if the area is dry &/or being misused & is helpful when speaking or singing with a cold or allergy. Aloe vera is somewhat healing. **Both glycerin & aloe vera are humectants (as is honey...)** which hold in or retain moisture & draw to the tissues moisture from the air we breathe, helping soothe & lubricate the tissues more than spraying water over them would. Nor does this spray cure vocal distress caused by continuing vocal misuse or poor vocal technique. It is a palliative, it soothes & moisturizes the tissues and helps prevent friction, abrasion & irritation. Singers & speakers need to pursue good vocal technique studies if their voice is in distress. You are your vocal instrument---body, mind, voice & spirit. Everything you think, eat, drink & do affects how you let your voice come through you. As you take loving good care of yourself & your voice, you will enjoy vocalizing at your best!



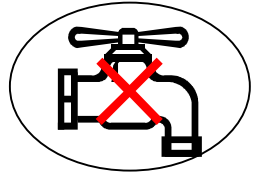
*I recommend a water cooler. They're worth it. You'll drink way more water & trust the safety. If you can't afford a cooler, purchase a Brita (or similar) filtering system like one you attach to your faucet. If you can't do that either, run your tap for at least 1 minute to wash away minerals from pipes. I have a Cedar Springs cooler in my kitchen. To rent a water cooler, it's approx. \$15/month + water. I bought mine (approx. \$350, guaranteed for 5 years. We drink more than a 5 gallon-bottle/week, including use for cooking & beverages. 1 large bottle holds 5 gallons (18.9 litres). There's a built-in refrigeration system.*



### DON'T DRINK TAP WATER:

We know it isn't healthy. Many plumbing pipes are made partially from **cadmium, copper or lead** & as these minerals start to erode, the water carries out these particles of metal with it. An overload of heavy metals in mammals can cause kidney damage, emphysema (\*there's a lot of *cadmium* (heavy metal) in cigarette smoke, by the way), high blood pressure, heart disease, mental retardation, anemia, miscarriages, epilepsy, depression & arthritis. Human waste also shows up in tap water. That's only a partial list. Fluoride is added intentionally. It's a mass 'medication' to help prevent tooth decay. Medical studies on everything from fruit flies to humans have shown incidences of cancer caused by fluoride. Dean Burk, Ph.D., said "Our data in the United States indicates in my view, that 1/10 of all **cancer deaths** in this country can be shown to be linked to the fluoridation of public drinking water." (40,000 extra deaths/year) Dr. Burk was an advanced researcher at the U.S. Public Health Service's National Cancer Institute in the Washington area for 35 years.

*I needed to know if bottled water was safe for my aquarium fish. I contacted the CEDAR SPRINGS Lab and they faxed me their contents. I was amazed at the 4 pages of chemicals tap water contains. ...*



## What's Really In Tap Water?

Source: Kathy's Fax (Oct. 8'99) from Cedar Springs Bottled Water (Report prepared by **Barringer Laboratories**, project 976455.)

\* **BOLD** items were **NOT** detected in Cedar Springs bottled water.

\* **BOLD+** items **ARE** detected in tap water.

### METALS:

**Aluminum**, **arsenic**, barium, **beryllium**, **bismuth**, boron, **cadmium**, calcium, **chromium**, **cobalt**, copper, **iron**, **lead**, magnesium, **manganese**, **molybdenum**, **nickel**, **phosphorus**, potassium, **selenium**, **silver**, strontium, **tin**, **titanium**, uranium, **zinc**.

### INORGANIC CHEMICALS:

Chloride, **fluoride**, **bromide**, **ammonia**, nitrate, pH (as a unit), colour (5 TCU), dissolved solids (what's this?) , silica (SiO<sub>2</sub>), **dissolve organic carbon**, **phenols**, **free cyanide**, **Kjeldahl nitrogen**, **organic nitrogen**.

### PCB's, PESTICIDES, HERBICIDES:

**Aldrin**, **alpha-BHC**, **atrazine**, **azinphosmethyl**, **Beta-BHC**, **chlorpyrifos**, **cyanazine**, **4,4'DDD**, **4,4'DDE**, **4-4'DDT**, **delts-BHC**, **diazinon**, **dieldrin**, **dicamba**, **2,4-dichlorophenoxy acetic acid (2,4D)**, **dichlorvos**, **dimethicoate**, **dinoseb**, **demeton**, **alpha-chlorodane**, **gamma-chlorodane**, **endosulfan I**, **endosulfan II**, **endosulfan sulfate**, **endrin**, **endrin aldehyde**, **ethion**, **fenitrothion**, **fenchlorphos**, **fenthion**, **fonofos**, **heptachlor**, **heptachlor epoxide**, **malathion**, **methoxychlor**, **parathion**, **phosmetryn**, **phosmet**, **PCB's**, **silvex**, **simazine**, **terbufos**, **thimet**, **toxaphene**. \***DDD & DDE** are metabolites of ddt which is now a banned substance.

### PHENOLIC ORGANIC COMPOUNDS:

**2-chlorophenol**, **2,4-dichlorophenol**, **2,4-dimethylphenol**, **4,6-dinitro-o-cresol**, **2,4-dinitrophenol**, **2-nitrophenol**, **4-nitrophenol**, **o-cresol**, **pentachlorophenol**, **phenol**, **m-cresol** & **p cresol**, **4 chloro-3 methylphenol**, **2,4,5-trichlorophenol**, **2,4,6-trichlorophenol**.

### POLYAROMATIC HYDROCARBONS:

**Acenaphthylene**, **anthracene**, **benzo (a) anthracene**, **benzo (a) pyrene**, **benzo (b) fluoranene**, **benze (ghi) perylene**, **benzo (k) flouranthene**, **2-chloronaphthalene**, **chrysene**, **dibenzo (a,h) anthracene**, **fluoranthene**, **fluorene**, **ideno (1,2,3-cd) pyrene**, **1-methylnaphthalene**, **2-methylnaphthalene**, **naphthalene**, **phenanthrene**, **pyrene**

### TRIHALOMETHANES (THM's):

**Bromodichloromethane**, **bromoform**, **chloroform**, **dibromochloromethane**.

### VOLATILE ORGANIC COMPOUNDS:

**Benzene**, **bromochloromethane**, **bromomethane**, **carbon tetrachloride**, **chlorobenzene**, **chloroethane**, **1,2-dibromo-3-chloropropane**, **cis-1,2-dichloroethane**, **cis-1,3-dichlorobenzene**, **1,2-dichlorobenzene**, **1,3-dichlorobenzene**, **1,4-dichlorobenzene**, **1,1-dichloroethane**, **1,2-dichloroethane**, **1,2-dichloropropane**, **1,3-dichloropropane**, **ethyl benzene**, **ethylene dibromide**, **methylene chloride**, **m,p-xylenes**, **o-xylene**, **styrene**, **1,1,1,2-tetrachloroethane**, **1,1,2,2-tetrachloroethane**, **1,2,3-trichloroethane**, **1,1,1-trichloroethane**, **tetrachloroethene**, **toluene**, **trans-1,2-dichloroethene**, **trans-1,3-dichloropropene**, **trichloropropene**, **trichlorofluoromethane**, **vinyl chloride**.

*FURTHERMORE.....*





## How **8** GLASSES of WATER a Day KEEPS FAT Away !

*By Donald S. Robertson, M.D., M.Sc..... From "The Snowbird Diet"*

Incredible as it may seem, water is quite possibly the single most important catalyst in losing weight and keeping it off.

Water suppresses the appetite naturally & helps the body metabolize stored fat. Studies have shown that a decrease in water intake will cause fat deposits to increase, while an increase in water intake can actually reduce fat deposits. Here's why: The kidneys can't function properly without enough water. When they don't work to capacity, some of their load is dumped onto the liver.

One of the liver's primary functions is to metabolize stored fat into usable energy for the body. But, if the liver has to do some of the kidney's work, it can't operate at full throttle. As a result, it metabolizes less fat, more fat remains stored in the body & weight loss stops.

Drinking enough water is the best treatment for fluid retention. When the body gets less water, it perceives this as a threat to survival & begins to hold on to every drop. Water is stored in extracellular spaces (outside the cells). This shows up as swollen feet, legs & hands. Diuretics offer a temporary solution at best. They force out stored water along with some essential nutrients. Again, the body perceives a threat & will replace the lost water at the first opportunity. So the condition quickly returns. The best way to overcome the problem of water retention is to give your body what it needs - plenty of water. Only then will stored water be released.

If you have a constant problem with water retention, excess salt may be to blame. Your body will tolerate sodium only in a certain concentration. The more salt you eat, the more water your system retains to dilute it. But getting rid of unneeded salt is easy: just drink more water. As it's forced through the kidneys, it takes away excess sodium.

The overweight person needs more water than a thin person. Larger people have larger metabolic loads. Since we know that water is the key to fat metabolism, so the overweight person needs more water.

Water helps to maintain proper muscle tone by giving muscles their natural ability to contract and by preventing dehydration. It also helps to prevent the sagging skin that usually follows weight loss - shrinking cells are buoyed by water, which plumps the skin & leaves it clear, healthy & resilient.

Water helps rid the body of waste. During weight loss, the body has a lot more waste to get rid of - all that metabolized fat must be shed. Again, adequate water helps flush out the waste.

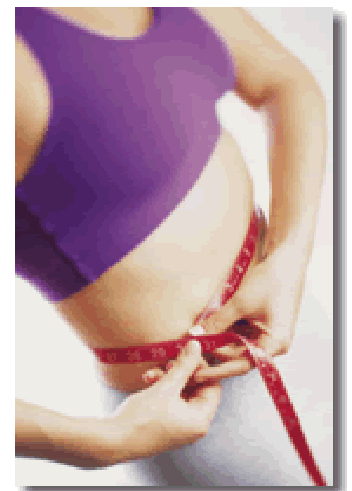
Water can help **relieve constipation**. When the body gets too little water, it siphons what it needs from internal sources. The colon is one primary source. Result? Constipation. But when a person drinks enough water, normal bowel function usually returns.

**SO FAR:** We've discovered some remarkable truths about water & weight loss.

- \*The body will not function properly without enough water
- \*The body can't metabolize stored fat efficiently.
- \*Retained water shows up as excess weight.
- \*To get rid of excess water you must drink more water.
- \*Drinking water is essential to weight loss.

Water should preferably be cold. It's absorbed into the system more quickly than warm water. Evidence suggests that drinking cold water can help burn calories.

To utilize water most efficiently during weight loss, follow this schedule:



MORNING: 1 quart consumed over a 30 minute period.  
 NOON: 1 quart consumed over a 30 minute period.  
 EVENING: 1 quart consumed between 5:00 pm. and 6:00 pm.

When the body gets the water it needs to function optimally, its fluids are perfectly balanced. When this happens, you have reached the "breakthrough point". What does that mean?

- \*Endocrine gland function improves.
- \*Fluid retention is alleviated as stored water is lost.
- \*More fat is used as fuel because the liver is free to metabolize stored fat.
- \*Natural thirst returns.

There is a loss of hunger almost overnight.

If you stop drinking enough water, your body fluids will be thrown out of balance again, & you may experience fluid retention, unexplained weight gain & loss of thirst. To remedy the situation you'll have to go back and force another major "breakthrough".

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## *Hydration*

*Mar. 5, 2003, by Dr. Paul Kahl, from "The Zone" website*

I really want to push this point home. I want you to drink 8 glasses of water a day. There was a study of men and the effect of drinking water on their health that came out of the University of Washington in 1999. Interestingly, they actually had to *pay* these guys to do this, because it was so hard for them to get them to drink four glasses of water a day. Imagine that!!

Especially if you're beginning to exercise, you've got to drink a minimum of eight glasses of eight ounces of water a day. That's 64 ounces a day. Don't wait until you're thirsty. As we age, our thirst mechanism grows lazy, and it often doesn't signal us when we're becoming significantly dehydrated. And here's another interesting fact. As we age, often our brain gets a little confused with the signaling process, so that when we're thirsty, our brains may *incorrectly* signal that we're hungry, when in reality, all we need is a good glass of water! Drinking water is an old dietary trick, but a good one. You don't want your brain signaling you're hungry, when you're really not, but are actually becoming dehydrated. Please, drink water throughout the day. Limit your caffeine intake! Along with all the reasons to avoid caffeine, caffeine is a natural diuretic and it makes you go to the bathroom.

*... Wishing you good health!*

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### **E-Mail from student Leigh Re: DRINKING WATER, Feb. 25, 2005:**

Now the biggie....I have taken your advise with the water – i.e., drink more water. I'm up to 2L a day and it has made the **biggest difference of ALL**. Now, for years I've gone up and down with drinking the required water that one needs. My doctor is always telling me about the good effects. But I must say, because I am so determined with the singing, I've really taken this seriously. I no longer am clearing my throat every second, I find it's easier to warm up and sing and let's not forget the other side-benefits of increasing water intake (too many to mention). I can see/feel/hear the difference already. I'm hooked! And I am forever grateful for your sage advice – thank you a million times Kathy. I would say that if your other students are not drinking tons of water they are missing out. You can quote me by the way ☺

*Leigh*