

Troubled Times



Health



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Troubled Times



TOPIC: Colloidal Silver

Per reports by [Dr. Dellyn Hansen](#) and [Steve LaFontaine](#), colloidal silver is non-toxic to humans but prevents single cell organisms such as those causing [Gangrene](#) from growing. [Laboratory Results](#) show it has [Antiseptic](#) qualities when applied externally or taken internally. [Friendly Flora](#) may be temporarily affected. Colloidal silver is making a [Comeback](#) as a self-help medicine and method for [Purifying Water](#) available to the common man, but don't mix with [Chlorine](#). Warnings about [Turning Blue](#) are appropriate for additives but do not apply to pure colloidal silver. The [Herx Effect](#) is normal. A dedicated Troubled Times member explains the [Theory](#) behind making colloidal silver and the [Brownian Movement](#) and how to make using [Ionized Water](#), [Merlin's Magic](#), a [Generator](#), and [Parts & Supplies](#) to create a [Box Construction](#). Then [Production](#), monitoring [Quality Control](#), adjusting [Density](#), concerns over proper [Storage](#), and comparison to [Commercial](#) colloidal silver, and [Usage](#) can begin! Another reports that a generator can be made from [Spare Parts](#). Particle size can affect [Color](#) and [Effectiveness](#).

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TOPIC: **Lead Poisoning**

[Lead](#) in drinking water accumulates in the human body and causes damaged nerves with consequent inability to coordinate voluntary muscle movements, seizures, and bizarre behavior. Mental retardation in the young and high blood pressure in adults also result. Lead in drinking water is tasteless, but [Symptoms](#) of lead poisoning include lethargy, vomiting, abdominal pain, and constipation. [Lead Intake](#) can be reduced by [Diet](#) and [Farming](#) practices. [Treatment](#) in the Aftertime is possible. [Lead Testing](#) kits are available, and a Troubled Times [TEAM](#) has been formed to explore lead testing options. A diet high in Iron and Calcium is the cure, though medicines to purge the system, such as [Live Earth](#), called [Chelation](#), also exist. [Epsom Salts](#) also can remove lead from the gut.

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Dr. Dellyn Hansen

Report by Dr. Dellyn Hansen of Orem, Utah, as formerly reported by the *Radiant Living* web site.

Report on Colloidal Silver

Silver is a powerful, natural prophylactic/antibiotic, used for thousands of years, with no side effects. It is a catalyst, disabling the particular enzyme that all one-celled bacteria, fungus and virus, use for their oxygen metabolism, they suffocate. Yet it is of no harm to human enzymes or any part of the human body chemistry. And it kills all disease-causing organisms, in six minutes or less, upon contact, even those pleomorphic, no matter how they mutate. Resistant strains fail to develop, and the body doesn't develop a tolerance. Colloidal Silver is both a remedy and a prevention of infections of any kind. Having sufficient Colloidal Silver in your body is to have a superior, second immune system. It was in common use until 1938. Great Grandma put a silver dollar in the milk, to keep it fresh at room temperature. (Ref-1,9)

Established Usage

Oral Formula (4-oz. bottle): After taking one teaspoon daily for four days take one half-teaspoon daily, as adults, (and proportional, by body weight, for children), or apply directly to cuts, scrapes and open sores, or put a few drops on a small Band-Aid and wear over warts, cuts, abrasions, or any open sore, or dab directly onto eczema or such itchy areas, or acne, mosquito bites, or any skin problem. Water is purified by adding one half-teaspoon per gallon, shake well, wait six minutes, and shake again, wait six minutes, and drink. Mix it this way, it's tasteless, and drink two quarts, over a day's time, especially with meals, as a great digestive aid, because it eliminates fermentation. It is the ideal food preservative, because it is also good for you. Use in canning at one-quarter teaspoon per quart. Those already using Colloidal Silver report that they catch milder, and fewer if any, colds or flu. The emphasis is on the prevention of all infections. There are *never* any side effects. It *never* does any harm to the liver, kidneys, any other organ, system or any part of the body. No-one has ever overdosed, regardless of the amount, as it is not at all an allopathic poison. The Intravenous Formula, (1/2 oz. bottle/adult, proportional), is often preferred as it is more long lasting and for some people, works better. Syringes are available from veterinary suppliers, like IFA. (Ref-1,7,9,11,12,d)

Recognized Remedies

The following is a partial list of the more than 650 diseases that Colloidal Silver has been used successfully against: acne, acne rosacea, AIDS (Ref-2), allergies, appendicitis, arthritis, athlete's foot, tuberculosis, bladder inflammation, blood parasites (cause gray hair), blood poisoning, boils, bubonic plague, burns, cancer (Ref-7,8), candida, chilblains, cholera, colitis, conjunctivitis, cystitis, diabetes (Ref-1), dysentery, eczema, fibrositis, gastritis, gonorrhea, hay fever, herpes, impetigo, indigestion, keratitis, leprosy, leukemia, lupus, lymphangitis, lyme disease, malaria, meningitis, neurasthenia, parasitic infections both viral and fungal, pneumonia, pleurisy, prostate, pruritus ani, psoriasis, purulent ophthalmia, rhinitis, rheumatism, ringworm, scarlet fever, septic conditions of the eyes, ears, mouth and throat, seborrhea, septicemia, shingles, skin cancer, staph infections, strep infections, syphilis, thyroid, tonsillitis, toxemia, trachoma, trenchfoot, dermatitis, all forms of virus, warts, whooping cough, yeast infection, stomach ulcer, and also canine parvovirus and other veterinary uses. Also in all bacterial, fungal and viral attacks on plants. Simply spray diluted Silver on the leaves and add to soil water. (Ref-1,2,3,4,7,8,11,12).

Additionally

There has *never* been a drug interaction with any other medication. Colloidal Silver has been found to be both a remedy and a prevention for all colds, all flu, all infections and all fermentation due to any bacteria, fungus or virus, especially staph and strep, which are found present in every disease condition. Through simple high school biology studies we learn that all living things exist in the colloidal form. The body can more readily use medications already in the colloidal form, as opposed to crystalline. Colloidal Silver is the most useable form of the most effective disease fighter there is. The body actually needs Colloidal Silver to fight disease-causing organisms, and to aid healing. The adult RDA for Silver is 400 milligrams. Taken orally each day, it's like having a second immune system. Older folks feel younger because their body energies are used for something other than fighting disease, and digestion is better. Medical research has proven that Silver promotes rapid healing, with less scar tissue, even in the case of severe burns. Silver aids the developing fetus in growth, health, and eases the delivery and recovery. Fantastic successes have been reported in many cases previously given up by establishment doctors. Colloidal Silver is tasteless and won't sting, even Baby's eyes and won't upset the stomach.

It is produced today by a modernized original process, at a tiny fraction of the pre-1938 cost, and is more concentrated. Contains no free radicals, as the Silver acts only as a catalyst, and is stabilized. This is not a chemical compound containing Silver, but pure metallic silver of submicroscopic clusters of just a few atoms, held in suspension, in pure water, by the tiny electric charge on each atom. It is absolutely non-toxic, (except to one-celled plants and animals), and non-addicting. Colloidal Silver is the remedy for all infections, even the non-apparent, low-grade general body infections most people have. Parasites are also killed, as they have an egg-stage in their reproductive cycle, which is one-celled and therefore killed in six minutes or less). Keep from freezing, and in a cool, dark place. (Ref-1,2,9,12)

Ref-1

Use of Colloids in Health and Disease. Colloidal Silver is proven particularly effective in cases of intestinal troubles. Dr. Henry Crooks found that silver in the colloidal state is highly germicidal, quite harmless to humans and absolutely non-toxic. Rather than in a chemical compounds the Silver, in the Colloidal state, may be applied in a much more concentrated form, with correspondingly better results. All fungus, virus, bacterium, streptococcus, staphylococcus, and other pathogenic organisms are killed in three or four minutes; in fact, there is no microbe known that is not killed by Colloidal Silver in six minutes or less, at a dilution of as little as 5 parts per million, though there are no side effects whatsoever from high concentrations.

Ref-2

Provo Herald 13 Feb. 92, pg.D1: **Colloidal Silver as a cure for AIDS.**

Ref-3

American Drug Index, section on **Inorganic Pharmaceutical Chemistry**, recognized Silver for its germicidal action, calling a stabilized form: **Mild Silver Protein**. There are several forms of Mild silver Protein.

Ref-4

The Condensed Chemical Dictionary 6th Edition: **Mild Silver Protein** is listed for medical use, (the "Protein" is the trace used as a stabilizer).

Ref-5

The FDA has stated that because Colloidal Silver is (by fifty years) a pre-1938 drug, it may continue to be marketed. A 13 Sept. 1991, letter received from consumer safety officer, Harold Davis, **U.S. Food and Drug Administration**. Moreover, the FDA has no jurisdiction regarding a pure, mineral element.

Ref-6

Environmental Protection Agency's Poison control Center reports no toxicity listing for Colloidal Silver, considering it harmless in any concentration.

Ref-7

Dr. Robert Becker *The Body Electric*, recognized a correlation between low Silver levels and sickness. He said the Silver deficiency was responsible for the improper functioning of the immune system. Dr.Becker's experiments conclude that Silver works on the full spectrum of pathogens without any side effects or damage to any cells of the body, (being tissue and not single cells). He also states that the Silver was doing something more than killing disease-causing organisms. It was also causing major growth stimulation of injured tissues. Burn patients and even elderly patients noticed more rapid healing. And he discovered that all cancer cells change back to normal cells. All strains of pathogens resistant to other antibiotics are killed by Silver. Yet at that time he couldn't find a Silver supplement on the market.

Ref-8

Dr.Bjorn Nordstrom, of the **Karolinska Institute**, Sweden, has used Silver in his cancer cure method, for many years. He says the whole thing is quite simple. This brought rapid remission in patients given up by other doctors.

Ref-9

Silver Our Mightiest Germ Fighter *Science Digest* March 1978. As an antibiotic, Silver kills over 650 disease-causing organisms; resistant strains fail to develop. Silver is absolutely non-toxic. Silver is the best all around germ-fighter we have. Doctors are reporting that, taken internally, it works against syphilis, cholera and malaria, diabetes and severe burns. Richard L. Davies, executive director of the Silver Institute, which monitors Silver technology in 37 countries, reports: "In four years we've described 87 important new medical uses for Silver."

Ref-10

Colloidal Preparations of Silver in Pharmacy *British Medical Journal*, Feb 1923 , Pure silver is entirely non-irritant. In tests, at very high dilution rates, exceeding two-hundred to one, it has been shown repeatedly that the rapidly exerted disinfectant action is of considerable therapeutic value.

A very important note: There are some manufacturers who have come out with a Colloidal Silver product of greater concentration in an attempt to improve it's effectiveness. They are operating under a false premise, the reverse is true. It is less effective and in some cases can even lead to toxicity. Please don't be fooled by claims of the benefits of greater concentration. We don't carry these products for this reason.

Disclaimer: This article on Colloidal Silver has been written and presented strictly for informational and educational purposes only. ... The information conveyed herein is based on pharmacological and other records both ancient and modern. ... No claims whatsoever as to any specific benefits accruing from the use of Colloidal Silver.



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Steve LaFontaine

Report titled **Suppressed Miracle Drug Re-Discovered**, by Steve LaFontaine

Silver has been used in healing as far back in recorded time as 4000 BC. Persian records mention the practice of keeping water in silver vessels. The ancient Babylonian and Greek civilizations were aware of silver's ability to disinfect. Colloidal Silver was used as a remedy as far back as ancient Egypt. It continued to be used in the Middle Ages to treat wounds.

The Romans reported the use of silver compounds for medical treatment. Before the days of refrigeration, silverware or a silver coin was kept in the drinking water and the milk to prevent spoilage. Silverware became prized for the preparation, serving and storage of foods because it was recognized that food processed in silver vessels stored longer and was less likely to cause illness.

The March 1978 issue of *Science Digest* had an article called **Silver Our Mightiest Germ Fighter** in which they stated that more than half of the world's airlines use silver treated water as the method of choice for protecting passengers from water-borne diseases.

It is accepted fact that the best, and usually the most expensive, water treatment system filters contain silver. Additionally, the article quoted Dr. Harry Margraf, St. Louis Missouri, as saying "Thanks to eye opening research, silver is emerging as a wonder of modern medicine. An antibiotic kills perhaps half dozen different disease organisms, but silver kills some 650. Resistant strains fail to develop...silver is the best all around germ fighter we have." Indeed no known bacteria have developed an immunity to silver.

According to the encyclopedia " The element silver exhibits bactericidal properties not fully understood, although these are thought to be a result of its ability to absorb oxygen. Colloidal silver is used as an antiseptic, germicide, astringent, caustic and for water sterilization and to arrest hemorrhaging by coagulating the blood. Astringents act by shrinking tissues and reducing the permeability (passage of gas or liquid) of membranes. They may be used internally to diminish mucous secretion in a sore throat, check diarrhea, or reduce stomach acid secretion. Externally, they are used for conditions such as cold sores, poison ivy, or hemorrhoids and as antiseptic deodorizers eliminating odor-causing microorganisms." As recently as 1953 the official *Handbook of the Hospital Corps of the United States Navy* stated;

Silver compounds have a wide variety of uses as caustics, astringents, antiseptics, and germicides. Their activity resides in the silver ion, which is a protein precipitant. It is toxic to bacteria by precipitating the protein in the bacteria protoplasm. Colloidal silver preparations, in which the silver does not exist to any large extent as free ions, act by the milder and sustained antiseptic effect brought about by the formation of a protein silver compound which slowly liberates small amounts of ionic silver. Colloidal silver compounds, contain very little ionizable silver . Use of any silver preparation over a long period may cause permanent blue discoloration of the skin and mucous membranes, (particularly the lips and under the fingernails) known as Argyria. There are no known adverse health effects of Argyria. The colloidal silver preparations contain high concentrations of silver, largely in non-ionized form. Their antiseptic value depends on the activity of the free silver ions and not on their content. They do not precipitate protein but penetrate the tissues. Those mentioned here are silver proteins and silver halides.

Colloidal silver preparations are used as antiseptics, particularly for application to the mucous membranes of the eye, nose, throat, urethra, bladder, and colon. They are commonly used for infections of the upper respiratory tract. They are also effective as prophylaxis against gonorrhoea, in urethral irrigations about 1 hour after exposure. They are prepared in the form of solutions, ointments, swabs, suppositories, and tampons.

Bacteria are developing immunities to modern specialized antibiotics at an alarming rate. The medical community has acknowledged this publicly for years. The *Los Angeles Times* reported in an article titled **Arsenal of Antibiotics Failing as Resistant Bacteria Develop** October 23, 1994 "But in the last decade, a broad resistance to antibiotics has begun to emerge. And because bacteria can transfer genes among themselves experts only expect the resistance to grow. The potential nightmare is an Andromeda strain, a super-microbe immune to all antibiotics that could wreck havoc." UCLA Medical Center has reported that "colloidal silver ... killed every virus that was tested in the lab."

Colloidal silver is considered by the **Food and Drug Administration** (FDA) to be a pre-1938 drug. The drug companies lobbied for this and were successful, because it was more profitable to manufacture 'designer' antibiotics that only killed six to eight "bugs." It is known that prior to 1938, colloidal silver was administered in just about every way that modern drugs are used today. These uses included intravenously, orally and topically, i.e. throat gargle, eye drops, douche, open wounds and burns, for which it is particularly effective due to its combined disinfectant and astringent properties. It protects the highly susceptible burn tissue from infection while promoting rapid healing.

Contemporary medical tests indicate no known adverse effects from the use of properly prepared colloidal silver, and there has never been a recorded case of drug interaction or reaction with any other medication. It successfully reduces the length and severity of infectious disorders. This is of immense importance in view of recent reports that infectious disease is the third largest killer on the planet.

Colloidal Silver consists of molecules or pure silver suspended electrically in clean drinking water. Today it is made by driving lightning into fine silver. This process tears the silver molecules apart and deposits them with a high electrical charge into the water. The highest grade colloidal silver is made from .999 silver in 99% distilled water. Colloidal Silver destroys bacteria and simple infections, viruses, yeast, fungi and parasites while protecting the natural enzymes of the body.

Colloidal Silver has been used successfully against 650 diseases, including, arthritis; athlete's foot; bacterial pneumonia; bladder infections; blood parasites; boils; cancer; candida; diabetes; hay fever; herpes; leukemia; lupus; Lyme disease; psoriasis; rheumatism; ringworm; staph and strep infections; septic conditions of the eyes, ears, mouth and throat; shingles; skin cancer; ulcers and tonsillitis.

Colloidal Silver can be applied to cuts, scrapes, bug bites, and skin conditions such as acne and eczema and is so safe that it is a common practice in American hospitals for doctors to put a few drops in the eyes of newborn babies to kill bacteria that can cause blindness.

While analyzing hair samples Dr. Robert Becker noticed a correlation between low silver levels and sickness. He believed that a silver deficiency was the reason for the improper functioning of the immune system. Dr. Becker's experiments concluded that silver works on a wide range of bacteria without any adverse side effects and without damage to the cells of the body.

Dr. Becker also states that in the presence of the silver ion, cancer cells change back to normal cells, regardless of their location in the body.

Today, with advances in technology the manufacture of colloidal silver is far advanced and superior to the antiquated grind method that was most popular pre-1938. The most advantageous and highest quality colloidal silver is a result of the electro-colloidal non-chemical procedure using the electric-arc technique. This method allows for the concentration of colloidal silver to be measured in parts per million (PPM). The best way to ascertain if a product is a true colloidal silver is by reviewing the ingredients. Additives or

stabilizers may make the product unsuitable. Refrigeration may indicate that there is an ingredient (additive) that might spoil at room temperature. Long term stability is an important aspect of colloidal silver. Trying to impress the public, some companies go for a higher concentration of the silver, but then necessity requires that they use stabilizers or a protein to bond the silver. The major problem with the use of stabilizers and proteins is that they reduce the antimicrobial benefits by bonding to the silver, and so therefore contain higher levels of silver to compensate for this reduced effectiveness. This is where great caution should be taken. Consuming hundreds of times the recommended amount of stabilized silver may result in Argyria (the discoloration of the skin due to silver deposits). There are no known documented cases of Argyria from the use of pure (no stabilizers or additives) electro colloidal silver. Of special note, there is an inherent electrical charge in the hydro-carbon molecule of plastic containers. This draws the silver out of solution, binding it to the walls of the container.

It is also sensitive to light and heat. Therefore, storage of colloidal silver should be in colored glass, in a cool dark place but not in the refrigerator.

Colloidal silver is not "germ specific" like the prescription antibiotics available today. It has a long shelf life (as long as it is stored properly) and, possibly the best thing about Colloidal Silver is that it is available without a visit to your doctor !!



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Gangrene

I'm glad you brought this up because just over a week ago my girlfriend stubbed her toe causing a fracture and small cut. Well within 48 hours she had cellulitis and the doc's had her getting antibiotics through an I.V. for two days. Now for those who don't know cellulitis is just before gangrene sets in at which point you have to cut the flesh infected out to even have a chance. Anything you can learn or supplies saved will be invaluable and may just save your life. The docs said one more day with out treatment and probably she'd have lost her foot. This for just a stubbed toe. Cellulitis is an infection mostly caused by staph. It's very painful, involves redness, swelling, and hot flesh. If you ever cut yourself and it gets infected and you see red line start moving towards your lymph glands get help quick or you can die.

Offered by [Yahbo](#).

I have first hand experience of colloidal silver sorting out cellulitis, taken in 8 to 14 ounces at a time.

Offered by [Ian](#).



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Laboratory Results

As you can see from this report, there is a narrow range where the concentration of colloidal silver works the very best. If the concentration is a bit too low, then as one can see with the *Staphylococcus aureus*, the growth is a bit higher at 9 PPM than it is at 15 PPM. Similarly, there is a point above the 15 to 25 PPM level where the effectiveness of the colloidal silver goes down as well. Clearly, the adage, more is better, is not necessarily true when it comes to the effectiveness of colloidal silver. It is interesting to note that the early-part-of-century reports have pretty much the same results as the report from Molecular Biologics. There is an optimum concentration range (15 to 25 PPM) for colloidal silver.

This study by Molecular Biologics is one of the most recent laboratory studies acquired. There have been many other similar studies conducted. Some have been done in the last five or six years. However, the majority of studies on the effectiveness of various concentrations of colloidal silver were conducted before 1938. In fact, it has been the 1916's to the 1919's in which we find the greatest number of reports on the subject.

Offered by [Pat](#).

March 6, 1996 - California, **Molecular Biologics Laboratory** Report

Using Colloidal Silver solution as a disinfectant against *Salmonella thyphi*, *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *Escherichia coli*.

A. Culture Media

The nutrient broth for growing the microbes contained 5.0 grams of beef extract and 20 grams of peptone in one liter of purified water. 5 mls of broth was pipetted into test tubes and autoclaved.

B. Microbes

Using four regular nutrient broth test tubes, one disk of each microbe was added to each one. All four test tubes were incubated for 24 hours at 35 degrees Celsius. A blank control of the broth was also incubated.

C. Reagents

Using a 1.0% silver solution and nutrient broth, dilutions of silver solution were made: 0.10%, 0.05%, 0.025%, 0.005%, and 0.0025%. Four sets of the dilutions were made and inoculated with each microbe. The four sets of inoculated silver solution dilutions were incubated at 35 degrees Celsius for 24 hours.

D. Results

Silver content and a microscopic exam using a hemacytometer was done on each dilution for each microorganism. The blank nutrient broth showed no growth.

Salmonella thyphi: Microscopic exam of the control showed >25 colonies per counting square.

10, 13 and 24 PPM Silver... no growth

84 PPM Silver... >2 colonies per counting square

179 PPM Silver... 5 colonies per counting square

Conclusion: Results showed luxuriant growth without silver and a 80 to 100% reduction of microbes with silver.

Staphylococcus aureus: Microscopic exam of the control showed >30 colonies per counting square.

9 PPM Silver... 3 colonies

15 PPM Silver... 1 colony

43 PPM Silver... >1 colony

84 PPM Silver... 8 colonies

139 PPM Silver... 5 colonies

Conclusion: 73 to near 100% reduction of microbes with silver.

Pseudomonas aeruginosa: Microscopic exam of control showed >30 colonies per counting square.

18 PPM Silver... >1 colony

44 PPM Silver... 2 colonies

89 PPM Silver... 3 colonies

178 PPM Silver... 3 colonies

Conclusion: 90 to near 100% reduction in microbes with silver.

Escherichia coli: Microscopic exam of the control showed >15 colonies per counting square.

10, 40, and 44 PPM Silver... No Growth

70 PPM Silver... 2 colonies

89 PPM Silver... 1 colony

Conclusion: 87 to 100% reduction with silver.



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Antiseptic

Acting as a catalyst, it reportedly disables the enzyme that one-celled bacteria, viruses and fungi need for their oxygen metabolism. They suffocate without corresponding harm occurring to human enzymes or parts of the human body chemistry. The result is the destruction of disease-causing organisms in the body and in the food.

From the [All Natural](#) site

Here is an excerpt from an **FDA** research paper. I believe the report says 650 organisms.

"And now it's (colloidal) silver that is finding wholly new uses as a wonder in modern medicine... perhaps it soon will be recognized as our mightiest germ fighter." (*Science Digest*, March 1978.) Silver is considered to be one of the most universal antibiotic substances known. Jim Powell reported in the *Science Digest* article quoted above, that an antibiotic kills perhaps 7 different disease organisms, but silver kills some 650. Resistant strains fail to develop. Moreover, silver is non-toxic!

Offered by [Brian](#).

An article in *Science Digest* (March 1978) titled **Silver, Our Mightiest Germ Fighter** was the original source to conclude that colloidal silver kills over 650 disease-caused conditions. The authors called colloidal silver the best all-around germ fighter we have.

Offered by [Educate-Yourself](#).



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Friendly Flora

Yes, the body has lots of healthy flora or bacteria, mostly in the GI tract but also benign bacteria and viruses on skin and other areas. This is why so often when we take an antibiotic, we can get a superinfection or overgrowth of other harmful bacteria, because the antibiotic wipes out the healthy bacteria that the body uses to aid digestion among other things. A long-held view is that you should increase your intake of live yogurt culture when using an antibiotic, which is one way of reestablishing the healthy flora. Does anyone know if this is necessary with Colloidal Silver therapy, i.e. replenishing the healthy flora? Does Colloidal Silver just kill off harmful bacteria?

Offered by [Craig](#).

From my own experience Colloidal Silver does kill off intestinal flora to some extent depending on how much Colloidal Silver you take. Not as much so as antibiotics. It is always safe to recommend taking additional intestinal flora supplements when taking Colloidal Silver. Use the type with the most different types of intestinal bacteria. I use a brand that has up to 7 different types of intestinal flora. I am currently taking 1.3 oz/day of 100+ PPM or the equivalent of 13 Oz/day of 10 PPM Colloidal Silver. I have gone for long periods of time without taking intestinal flora and have not noticed any detrimental effects that would indicate a major loss of intestinal flora. Without supplemental flora I have in the past noticed some drying of the stool at each increase of Colloidal Silver amount, then it recovers and balances out after awhile.

Offered by [Mike](#).

My girlfriend and I take large quantities of Colloidal Silver and it has never upset our stomachs or produced any ill effects. What it has done is completely cured my girlfriend's cystitis. She had suffered with this for a year and a half . We had seen every consultant, tried every antibiotic (which made her very ill), and finally we tried the Zapper and it cured the attacks overnight. However it didn't stop them from coming back. It just stopped the infection in its tracks. That's when we tried Colloidal Silver and she now has been free of attacks for 7 months (which is as long as she has been on it). I have supplied over 1000 zappers and sell mostly to doctors and clinics and I have not had one bad report back. I also sell Colloidal Silver generators. The US Government is trying to make Colloidal Silver illegal so making it yourself will soon will be the only way to get it. I'm not trying to sell these items as you can get them wherever you live.

Offered by [Ian](#).



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Comeback

Colloidal silver is making a comeback for people who are taking charge of their own health and safety in fighting back infectious diseases. There is a wealth of information on the subject along with making/buying your own generator. A must for the end times! One can find excellent write-up on colloidal silver and the [Manufacturing Devices](#) used plus details on what to look for.

Offered by [Pat](#).



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Purifying Water

To the best I can tell we have no dosage amounts recommended for purifying water. Next I did a search for the information on the Web and found the following usage recommendation:

To Purify Water

Add one ounce per gallon, shake well, wait six minutes and shake again; wait six minutes and drink.
(note: This is talking about a 5 ppm source)

For Plants

For all bacterial, fungal and viral attacks on plants, simply spray diluted silver on the leaves and add to soil water. Mix one teaspoon per quart.

While look through my hard copy file folders I did find the following from *Unusual Alternatives* Date Apr/May 1995:

The Heritage Institute

Box 174 Plainfield, WI 54966:

We're often asked how as little as a teaspoon of colloid can 'purify' a gallon of water if the colloid only contains 3-5 parts per million of silver to start with. Wouldn't the other 128+ ounces of water dilute it to the point where it wouldn't contain enough silver to do much good at all? As mystifying as it sounds, the answer is "no". Medical researchers have discovered that weak solutions can be made stronger by vigorously shaking them for a few seconds, then letting them stand for about 5 minutes before use.

Note: 1 Ounce = 2 Tablespoons = 6 Teaspoons. If anyone has access to more or better data, please submit it. I think we should at least have a bottom line recommendation of how to use silver to purify water.

Offered by [Mike](#).

This information is accurate. It really takes very little silver to sterilize water and the shaking info is true also. Of course, more silver is not going to hurt anything, but it isn't necessary.

Offered by [Educate-Yourself](#).



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Chlorine

Colloidal silver can be used to replace bleach. I recommend adding colloidal silver before and then again adding some after the storage time. Depending on the length of storage time the small silver particles may settle out of solution and thus not be as effective. Thus, putting some more in after taking the water out of storage would solve this. If there is any chlorine in the water before storage don't add silver as it goes into storage. In this case add silver only after the storage time. The chlorine will be gone by then. Silver and chlorine make a poisons compound. The swimming pool industry found silver to be superior to chlorine for water purification, but had to abandon it because the tap water used to fill the pool had chlorine in it. Another way would be to put the water in the sun for a day or so and the chlorine will come out of solution. Then add silver and then put the water into storage.

Distillation does remove the chlorine. It will come out of solution before it boils. To be absolutely safe you may want to dump the first little bit of water that comes out of the distillation process for each batch. This is a good practice anyway. It cleans the condensation pipe. There is a slight chance some chlorine can re-dissolve back into the hot water condensing during the start of the condensation cycle. However, I doubt this quantity would be enough to hurt anything. But, just to be safe you could toss the first little bit of water that comes out.

Offered by [Mike](#).



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Turning Blue

Stories about your skin turning blue (or silver) from using colloidal silver are misleading. In fact, this story about skin discoloration is the premiere scare tactic used by organized medicine and the pharmaceutical industries to scare people away from using colloidal silver. Colloidal silver is nothing but pure (99.99%) elemental silver particles suspended in water. The skin discoloration problems are caused by compounds that are molecularly bound to silver (usually protein compounds). There's a *big* difference in the two! Colloidal silver does not cause argyria.

Offered by [Educate-Yourself](#).



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Herx Effect

The Herxheimer effect is addressed in a quote from Bruce Marx, N.D.

Offered by [Michael](#).

Herxheimers (Herx) basically can be a side effect of any antibiotic, be it pharmaceutical, herb, or colloidal silver. When it kills the bugs faster than your eliminatory system is able to remove them from the system, it manifests itself generally with flu like symptoms. These can include headaches, soreness/swelling in joints, swollen glands, bloating, constipation, and numerous other discomforts.

Many people are in good enough physical/systemic condition to not have any noticeable indication of Herx. Those who are generally well, (but not totally healthy, and many do not realize this), are usually surprised by and anxious to get rid of the discomfort. Relief will generally come within a few hours of stopping the medication/therapy and drinking large amounts of distilled water to help the system flush the toxins out. Hopefully they will resume the treatment at a lesser dosage, again slowly increasing. I call these the bouncers. However, many who have experienced long term chronic illnesses look forward to these side effects, as an indicator that what they are doing/taking is working, and try to maintain a tolerable level of discomfort until they effect submission/remission of their condition. I call these people stringers.



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Theory

Tiny particles of pure silver are made to deposit into water by simple electrolysis. Two silver wire electrodes, placed in a glass of water, are attached to the positive and negative terminals of a source of Direct Current (DC) electricity.

For our colloidal silver generator, square 9 volt batteries provide the easiest source of DC current. We'll be using three 9 volt batteries hooked up in series. This means that the positive terminal of one battery is hooked up to the negative terminal of the next battery, etc., so that the individual voltage of each battery is added to the next battery. The sum effect being the total of all the battery voltages added together. Three 9 volt batteries will give us a working voltage of 27 volts. This is very near the ideal voltage of 30 volts used for making colloidal silver, that Peter Lindemann mentions in his recent article, *A Closer Look At Colloidal Silver*. After the three batteries are hooked up in series, we're still left with an unattached negative terminal on the first battery and an unattached positive terminal on the third battery. We'll attach a silver electrode to each of these terminals.

The negative (-) terminal attached to the silver electrode provides an excess of electrons. Those electrons would like to get to the positive (+) terminal electrode since it has a deficit of electrons. Everything in Nature wants to balance out and exist in a state of equilibrium, including electrons. The water solution that the electrodes are placed in provide a path through which some of those electrons can get back to the positive terminal. While electrons are flowing through the water solution from the negative silver electrode to the positive silver electrode, other things are happening.

Silver atoms have a net positive charge, or plus valence. As the electrons which left the negative silver electrode arrive at the positive silver electrode (also called the anode, since it receives electrons), they "push off" clusters of silver atoms, who don't appreciate being 'crowded' by these extra electrons. These silver atoms go into the water solution and remain suspended there. Since these atoms have a net positive charge, they repel each other as best they can and create a colloid solution. A small number of these silver atoms are also attracted to, and cluster around, the negative silver electrode as well. In addition, because of the electron movement through the water, some of the water molecules (H₂O) will break down-thereby releasing hydrogen and oxygen atoms. Most of the released hydrogen will bubble up out of the water as hydrogen gas.

Some of the oxygen will form oxygen gas (O₂) and bubble out, some will go into solution, and some oxygen atoms will combine with the silver atoms and form a silver oxide (2AgO₄) on the positive silver electrode. This will blacken the positive silver electrode. This undesirable buildup of silver oxide reduces the flow of silver atoms into the solution. In addition, if the buildup of silver oxide is allowed to go on too long, the excess oxide will break off from the electrode and drop to the bottom of your solution, contaminating it. The oxide buildup can be controlled by either periodically cleaning the electrodes or reversing the electrical polarity to the electrodes., thus reversing the role of which silver electrode acts as the anode.

By following the technique outlined next, we'll be able to produce very small sized particles of silver (on the order of .001-.005 microns) which will turn the solution a golden yellow. These ideal sized particles provide the greatest biological benefit as well. Larger sized particles will turn the solution different colors. There is a precaution, however, that you must observe. If you don't monitor the reaction, the current flow will rise to excessive levels, and you'll wind up with a murky grey/black solution that usually has puddles of clumped silver floating at the top. If that happens, just throw it out and start over again, after cleaning off the electrodes and the glass.

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Brownian Movement

Held in true solution, instead of actually dissolving, the "aqueous metallic silver" particles remain suspended in the liquid. They can remain in suspension almost indefinitely, animated by what is called the Brownian Movement. The colloidal particles have phenomenal mobility and velocity. They can move many thousands of diameters in a fraction of a second. Their stability depends on the size of the particles, the medium used and the process of manufacturing. The number of particles varies according to their size, so that if the size of a particle is reduced by one half, its number is multiplied by eight. The smaller the size of the particles, the more active they are and the longer they stay in solution.

The addition of a stabilizer to the solution inhibits this energy. In addition, sunlight, cold temperature, magnetic fields, and time can cause the Colloidal Silver to lose its charge and fall out of solution. This "falling out" or "plating out" shows that the electrical charge, although long lasting, is not permanent. Falling out occurs when the metallic silver particles either attach themselves to the sides of the container or settle on the bottom of the container. The problem with this is that it renders the solution less potent, or worse, inert.



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Ionized Water

We want the water solution to be as pure as possible to prevent the suspended silver particles from forming into undesirable silver compounds with minerals and other matter found in tap water, well water, spring water, etc. Therefore, use Distilled Water when making colloidal silver. It's available in most supermarkets. Using distilled water creates one difficulty though. In order for electrolysis to readily occur, the solution is usually ionized. An ionized solution allows the electrons to easily and quickly move through the solution. Sometimes a small amount of table salt is added to a solution to increase its ionization, but ordinary tap water or well water already contains enough dissolved minerals and salts to make an ionized solution, but if we decide to use tap water or well water, we'll also get those undesirable silver compounds.

The Solution? Simple Heat up the distilled water. Boil it, in fact. The heated water will permit enough electron movement to get the electrolysis started. As silver particles begin to become suspended in the solution, these particles themselves will act as ionizing agents and will further increase the conductivity of the solution. However, as more and more silver particles become suspended in the solution, two things begin to happen:

1. the silver oxide on the positive electrode will build up faster than in the beginning of the process and
2. the current flow of electrons will increase as the solution becomes more ionized with each passing minute.

Therefore, you need to monitor the reaction very carefully after the first 10 or 12 minutes in order to control excessive oxide buildup on the positive electrode, and prevent runaway current flow which will result in a larger sized silver particle going into your solution.

Merlin Wolf pointed out to me that a current flow of around 50 milliamps (50ma) at 30 volts is just about perfect for making colloidal silver. When the current flow starts getting substantially above that figure, the silver particles become larger than desired and change the color of the silver colloid from the ideal golden yellow to green, red, or worst yet, grey and black-which usually contains a lot of silver oxide residues.

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Merlin's Magic

I originally found out about making your own colloidal silver and tips for usage from physicist/inventor, Dr Bob Beck. Tips on improving the colloidal silver generator and Bob's technique for making really pure colloidal silver -every time- were given to me by health researcher/inventor, Merlin Wolf.

Merlin Wolf gave me a *great tip* for making superlative colloidal silver, with less concern for oxide buildup and runaway current flow. He suggested placing *one tiny drop* of honey into the solution at the beginning of the process. Honey is a saccharide (sugar) which structures the electrical and magnetic properties of water in a very unique way. This structuring allows the silver colloid to form at a *faster rate*, while at the same time reducing the buildup of silver oxide that would normally occur without the addition of the honey. Why this happens, I am not sure-but it works! You wind up with a higher density silver concentration (measured in parts per million {ppm}), made in a shorter period of time, with *less buildup* of silver oxide on the positive electrode! What a guy!

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Generator

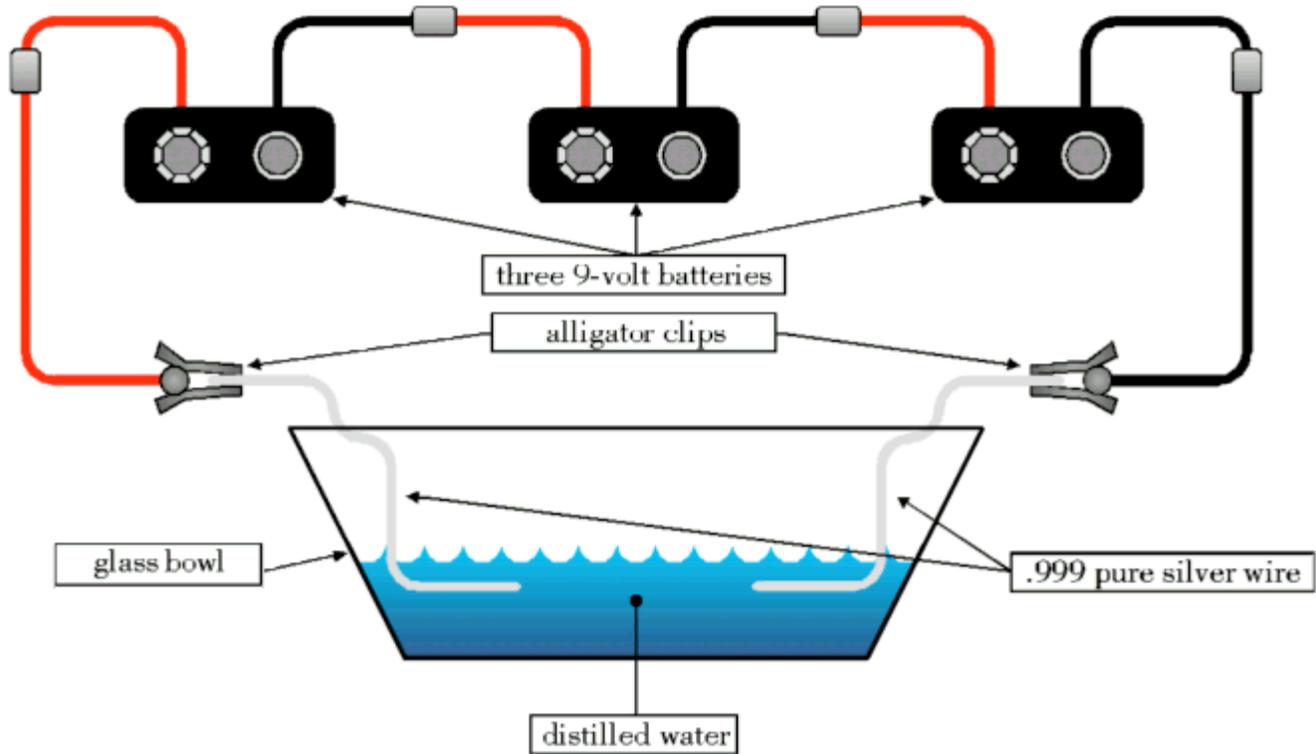
Merlin told me that he had successfully produced colloidal silver with DC voltages ranging from 5-130 volts. Therefore, in an emergency situation, you only need a single 9 volt battery (Mallory MN 1604) and 2 pieces of pure silver wire to make colloidal silver. Everything else mentioned in this section on generator construction is useful and convenient, but not essential.

A typical generator uses three 9 volt batteries hooked up in series because it works well, it's convenient, and provides a high enough voltage that allows the reaction to take place in a reasonable span of time (lower voltages would require more time to make an equivalent batch of colloidal silver. Higher voltages work too, but you get a more rapid buildup of the silver oxide on the positive anode, and somewhat larger particles). In a pinch, you could connect your batteries with ordinary hookup wire, but using three of those snap-on caps with wire pigtails designed for 9 volt batteries is much easier (Philmore Battery Connect, 3" Leads-9V. Flat, No. BC9). You can buy a package of 5 snap-on battery connects with wire leads at any electronic store for a buck. The red wire coming off the snap-on is connected to the positive terminal of the battery and the black wire is negative. For convenience, we'll label our batteries A, B, and C.

The simplest (and cheapest) set up is as follows, resulting in a circuit configuration that looks like figure 1:

1. Connect the red and black wires of the three snap-on caps as follows: after stripping off a ¼" of insulation, take the red wire from battery A's snap-on and connect it with the black wire from battery B's snap-on (twist and solder together).
2. Take the red wire from B's snap-on and connect it to the black wire of battery C's snap-on.
3. Finally, take a pair of wires (approx. 20 - 24 gauge stranded copper) and connect one end to the black wire of battery A's snap-on.
4. The opposite end of this wire is either soldered or alligator clipped to one of the silver electrodes.
5. Do the same with the remaining wire, connecting it to the red wire of battery C's snap on (see figure 1) and attaching the opposite end to the remaining silver electrode.
6. After you place the electrodes in a glass of heated distilled water, you will have a complete circuit which will allow electrons to flow from the negative terminal of battery A to the positive terminal of battery C and set the electrolysis in motion.

Colloidal Silver



A more sophisticated generator design could include the following:

1. A SPST (Single Pole, Single Throw) tiny (on/off) toggle switch (Augat Inc part #70001)
2. A small 24volt, 40mA sub-miniature incandescent 'grain of wheat' indicator lamp to help indicate the amount of current flow and condition of the batteries (Precision Lamp, Inc part #10238)
3. A 'mini' mono plug and jack (2.5mm or 3.5mm) for plug-in electrode convenience (Switchcraft Audio Connectors: 2.5mm "Mini-Plug" part # 850, 2.5mm chassis mount "Mini-Jack" part #800, 3.5mm Phone Plug part #750, 3.5mm chassis mount Phone Jack part #650)
4. A DPDT (Double Pole, Double Throw) miniature flat toggle switch (Augat Inc part #75003-AG) used to reverse electrical polarity to the electrodes (optional).
5. A 2¼" x 4" x 1" plastic 'project' box to house everything.

(For those who tinker with electronics, you could always add more bells and whistles like an a/c adapter, low battery voltage indicator, current limiting circuitry, etc.)

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Graphic by [Joe](#).



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Parts & Supplies

The toggle switches, mini jack and plug, snap-on caps, project box, indicator lamp, etc. can easily be obtained at any electronics store. The silver wire should be at least 99.9% fine silver wire (labeled as .999 fine silver {"three nines"} in the precious metal business). # 14 gauge round wire is a good choice. Do not use sterling silver wire. It contains nickel and copper. Nickel can be toxic to the body. Many dealers and refiners of precious metals can be found in The Yellow Pages or Business to Business directories.

One of the biggest dealers in precious metals is **Handy & Harmon** (1100 Nerge Road, Suite 211, Elk Grove Village, IL 60007 Tel 800-410-5272, Fax 630-893-3721). They will sell you any purity of silver that you want out to "six nines" which is 99.9999% pure silver. They quote the cost of silver based on the troy ounce. Depending on who you get over the phone, you may be able to purchase a small amount (below 10 oz) and not be charged an additional "sample fee" of \$100, but it's not guaranteed. Orders of 500 or 1000 oz silver wire is priced cheaper than smaller lots. The price changes daily, so you'll have to call to get the current quote.

In southern California, **David H. Fell & Company, Inc.** (6009 Bandini Blvd., City of Commerce, CA 90040 Tel 213-722-9992, 800-822-1996, Fax 213-722-6567) will sell you 99.9% fine silver with a minimum order of \$35.

Peter Lindemann recommended **Academy Metals and Supply** (3201 Th St. NW, Albuquerque, NM 87107 Tel 505-344-8323) in his article on colloidal silver mentioned earlier.

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Box Construction

Open the box, and drill the appropriate sized holes for the toggle switches, indicator lamp, and mini jack in the short end of the project box. Attach the toggle switches and mini jack with the threaded rings supplied. Glue the indicator lamp in place (from inside the box) with silicon caulk. Wire up the battery snap-ons as indicated above. Wire all the components together as shown in figure 2. To connect components, use a low wattage, 25-30 watt soldering pencil and standard 60/40 electronic rosin solder. Use a small dab of silicon caulk for insulation where you've soldered the battery wires together (or wrap with a small piece of electrical tape).

After you've soldered everything together, place the three 9 volt batteries inside the box and keep them in place with plastic dividers slid into the box's preformed circuit board slots. Screw the box cover back in place. You can check the condition of the batteries by plugging in the electrodes, turning the unit on and momentarily touching the electrodes together. The indicator lamp will light brightly if the batteries are in good shape. When the lamp is pale or dim yellow, it's time to change the batteries.

(figure 2 to follow)

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Production

It's best to boil the distilled water in either a glass (E.g. Corning's Visionware) or Pyrex pot. If you don't have a Pyrex pot, stainless steel is OK, but don't use any other type of pot. After boiling, pour the hot water into a tall glass (no other material) and place the glass inside an insulated sleeve to try and keep the water as hot as possible during the procedure. I use a large plastic mug that's designed for hot or cold drinks as an insulated sleeve, but you could make your own by hollowing out a Styrofoam block from discarded packing material. I use a small ceramic bowl that fits neatly as a top, but Styrofoam block could be cut to serve the same purpose. Before starting, clean the silver electrodes using Scotchbright™ so they are shiny and free of sediment. Bend the electrodes into a 'J' shape and place inside the glass, shaping them parallel to each other about 1½" apart. The silver electrodes should extend about an inch above the top of the solution.

If you wish to use Merlin's honey trick, take a toothpick or a chop stick and dip it in honey. Let the majority of the honey drip back into the honey jar. The small glob that remains on the end of the toothpick will fall off as a tiny droplet when you hold it an inch over the steaming hot glass of water. You want the smallest drop of honey possible.

Be sure the electrodes are not touching each other and place your ceramic or Styrofoam cover on top, fitting the wires under the lip of the bowl. Turn the unit on. If the indicator lamp lights up brightly, it means the electrodes are touching each other and short circuiting. Rearrange the electrodes so they don't touch and the lamp should go out. Check your watch, write down the time, and come back in 10 or 12 minutes. Upon returning, take the top off and pull the glass up so you can see the electrodes and the color of the solution. If the solution is still completely clear and the positive electrode has only slightly discolored, you can let it go for another 3-5 minutes and recheck. When the solution has begun to turn a very light shade of yellow, the positive electrode will begin to darken. The negative electrode will also begin to "grow" a fuzzy, brownish residue around it. At this point you can do one of two things:

1. You can turn the unit off, remove the electrodes and clean them both off using a small square of Scotch Brite and wiping clean with a paper towel. Reinstall and start the unit again. Repeat the cleaning process as soon as the brownish fuzz begins to build up again Or
2. If you had installed the optional polarity reversing toggle switch, you should flip the polarity switch now (with the unit still on). The brownish fuzzy stuff around the negative electrode will seem to vanish in a puff as the electrodes reverse their polarity. Continue to monitor the reaction and when the brownish fuzz just starts to build, hit the reversing switch again. Continue this process until the solution reaches a golden yellow color. If your electrodes get too black before you're done, take a moment to clean them off, and continue until you get a golden color.

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Quality Control

To make a really nice colloidal silver solution, you have to prevent the silver oxide and the brownish residue from building up to a point where they will migrate into your solution. You accomplish this by diligently monitoring the reaction after the first 10 or 12 minutes into the procedure. As the solution starts turning more yellow, the cleaning or switch reversal process takes place in shorter and shorter intervals because the current flow is steadily increasing as more silver particles go into the solution. If you don't use Merlin's honey trick, you usually have to clean the electrodes 4 or 5 times for a given batch of colloidal silver. The process can take anywhere from 15 to 40 minutes.

As Peter Lindemann points out in his article on colloidal silver, there are other unknown factors affecting the rate at which colloidal silver will form, even when the water temperature, voltage, etc. are standardized. As the solution begins to take on the yellow color, you will notice that your indicator lamp will begin to glow very slightly and gradually become brighter as the solution turns more yellow. This is normal, since the glow of the lamp is dependent upon current flow. As already mentioned, the current flow is steadily increasing as more and more silver particles go into solution. After you've achieved a nice golden color, turn off the unit, remove and clean the electrodes, and store the generator.

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Density

You can learn to judge the relative concentration and purity of your solution by viewing the back-scatter of a laser beam as it passes through your finished solution. It's known as the Tyndall/Rayleigh effect. You can buy a laser pointer that will demonstrate this for about \$30. at a discount computer store. You'll need a 1 to 5 milliwatt laser diode pointer of 630 to 670 nanometer wavelength. The unit looks like a fat ink pen with a shirt pocket clip. This is a true laser pen. Don't confuse it with a mere "light emitting diode".

Shine the laser beam through your solution and view it from about a 15 degree angle. Never point a laser pointer pen directly into anyone's eyes. It can cause injury. Point the beam through the glass containing your solution, and let it hit the wall or some other non-living surface. Observe the portion of the beam that is running through the solution. The greater the back scatter (the more 'solid' looking the beam appears), the denser is the concentration of silver particles. With practice, you can become quite adept at judging relative concentration.

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Storage

Over time, strong light will react with the silver particles and cause them to gradually lose their positive charge . Therefore, after making your solution, pour it into a brown or cobalt blue glass bottle or jar (photography supply stores) and store in a dark, cool place (do not refrigerate or freeze). If only plastic is available, you can use cleaned brown plastic bottles that 3% Hydrogen Peroxide is sold in. However, other types of plastic bottles should be avoided. Never store the colloidal silver in a metal container or use a metal pump mechanism. Label and date the bottles. Bob Beck recommends to always shake the container thoroughly before using. Merlin's honey-drop colloid seems to degrade much slower than regular colloid in the presence of strong light. He once told me that he put a clear glass quart of golden colored, honey-drop colloid out in the full southern California desert sun for over two weeks straight and didn't get any change in color or fallout of silver whatsoever!

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Commercial

It utterly rankles the commercial producers of colloidal silver when people like Dr Bob Beck tell others how easy it is to make their own colloidal silver at home for pennies-to-the-gallon using their own homemade generators. You will read or hear the most preposterous statements from these producers decrying the “inferiority” or “sub-standard” quality of homemade colloidal silver. Most of them are really angry because they are rapidly losing the ability to gouge the public for this marvelous product, which in fact is extremely cheap to produce. The truth is that homemade colloidal silver is every bit as good, and in most cases, *better* than commercially purchased colloidal silver! Why?

Many producers will add yellow food coloring to low density colloid to make it appear that it is a high density, small particle product. Other producers will charge exorbitant prices for what they claim is a highly concentrated solution (E.g. 300-500 ppm) but is often, upon analysis, a low concentration solution (E.g. 3-5ppm). Bob Beck once analyzed a group of 8 different colloidal silver products purchased at a health expo. He found the majority of them to be of extremely poor quality, low concentration, and with undesirable additives such as EDTA, coloring, and gelatin for suspension.

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Usage

The list of minor and serious conditions that can be resolved using colloidal silver is practically endless. Colloidal silver has the capacity to help you rid yourself of an untold number of infections, disease conditions, or environmental concerns caused by or aggravated by the growth of bacteria, viruses, parasites, fungus, or molds that are either inside or outside of your body, or in your living environment. Paradoxically, this extremely wide breadth of applications has the tendency to overwhelm most readers. The list is so long that people tend to de-focus and unwittingly minimize the full range of therapeutic possibilities that colloidal silver offers. They might rinse their gums with colloidal silver before swallowing, but not think about using it for anything else!

So, besides drinking it, put it into a small atomizer pump bottle (2 or 4 oz size) and carry it in your pocket. I obtained mine by rinsing out a bottle that originally had eyeglass cleaning solution in it, but there are dozens of products utilizing this type of fine sprayer bottle that are found in any drug store. By spraying it externally, you can clear up everything from **Acne** to **Athlete's Foot & Diaper Rash** to **Poison Ivy**. You'll be amazed and pleasantly surprised by the results. The ideas listed below are designed merely to stimulate your imagination. Don't limit yourself by assuming that this list is exhaustive. It's only the beginning! Remember, you need to try it in order to see for yourself what silver colloid can do.

If you're a mother with young children, watch how quickly diaper rash, eye infections and ear infections clear up with colloidal silver. For diaper rash, spray directly on the body and into the fresh diaper. You can apply it with an eye dropper for any type of eye infection. **Ear infections** quickly heal after spraying colloid in the ear, saturating a small piece of cotton for an earplug and then periodically re-spraying. Spray it on band-aid pads to shorten healing time. Spray immediately on **burns** (sunburns too) to prevent infections, lower pain, and promote faster healing with less scarring. Add to bath water, gargles, colon irrigation and Water-Pic solutions. Added to douches, women will find that it will rapidly clear up **vaginal/yeast infections** and most cases of cystitis.

Older folks who are bedridden can especially benefit from silver colloid. Rinse all sheets, pillow cases, towels, blankets, etc by pouring a large cupful into your washer during its rinse cycle. Naturally, spray it directly on festering **bed sores, skin rashes, psoriasis**, etc. and watch what happens! Add to soaks for dentures and dental appliances.

Allergic reactions to certain foods or other irritants can cause **hives or welts** to appear on any area of the body of susceptible people shortly after exposure. Instead of running off to the doctor's office for a steroid prescription of topical Cortisone or worst yet, Prednisone, spray colloidal silver on the affected area and watch the hives completely disappear in 15 minutes or so!

I never come down with a bug after long plane trips because I always spray silver colloid in my mouth and inhale the mist through my nose and lungs every 30 minutes or so while on the plane. Oral spraying also eliminates bad breath and reduces **gum inflammation** or abscess pain.

Pet lovers need to add a cupful to their pet's drinking water and spray inside opened cans of pet food that are stored in the refrigerator. Add a cupful to birdbaths, the dog's bath or your bath. Of course, spray it into Fluffy's fur and skin if she has any type of **eczema, skin sore**, abrasion, or a wound that won't heal, etc. Spray bedding and let it dry.

Put the colloidal silver in a larger pump bottle for use around the kitchen and bathroom. Mist sponges,

towels, counters and cutting boards to eliminate odors (especially when preparing sea food), **salmonella**, **E.Coli** 0157:H7, (the tainted beef bug that you've been reading about in the newspapers lately) and other food-borne pathogens. Spray on fruits and vegetables before storing. Use when canning, preserving or bottling. Add to milk to slow **spoilage**. Spray garbage cans and refrigerator shelves to eliminate unpleasant odors. Add to dishwasher and mopping solutions.

In the bathroom, spray shower stalls, toilets, bath mats, and pour a couple of cups into hot tubs or Jacuzzi. Add to water poured over saunas rocks or utilized in steam baths. Use in gymnasium foot dips. Spray it on urinals, bidets, toilet seats and sinks.

Around the house (or barn or survival area), add a capful to a gallon of water and use as a plant spray to stop **fungi, molds, rot**, and most plant diseases. Eliminate unwanted organisms in planter soils (E.g. Square Foot Gardening) and hydroponics systems. Add it to suspected drinking water when traveling or camping. It will neutralize all disease causing pathogens within six minutes. Spray it in your shoes or sneakers to eliminate **foot odor**. Household repairmen can add it to water based paints, wallpaper glues, and sizing compounds and never worry about mildew and mold again. If you live in a humid environment, spray it on carpets, drapes, and stored clothing and free yourself of musty odors and mildewed clothes.

Dr Bob Beck has repeatedly pointed out in his many lectures, that there are literally thousands of other beneficial uses for colloidal silver that need to be attempted and explored. So this is your chance. Do your part and experiment with this marvelous gift of Nature.

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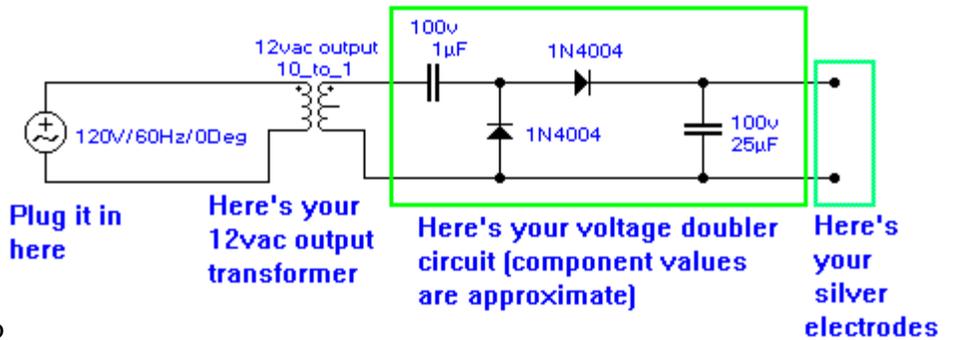


Spare Parts

You can get .999 fine silver wire at a lapidary or rock shop or jewelry makers supply shop. Having made my own colloidal silver solution, might I recommend flat bezel material instead of wire. Bezel has more surface area and is easier to work with. Also, instead of three 9V batteries, I used a small plug in transformer and used a very simple voltage doubler. Batteries are fine if you have nothing else but we still have the grid and I'm using it. For now, 12V AC supplies are plentiful, most people have one or two in their homes left over from old answering machines or tape players. The circuit consists of two capacitors and two diodes and puts out suitable current and voltage for the purpose of making fine golden colored colloidal silver solution.

Here's a schematic of the doubler, a colloidal silver generator circuit which I have built out of junk parts for free which produces a beautiful golden colored solution in a few hours or less. Be aware that various oxides form around the electrodes and must be filtered out (I use coffee filters) before you use the solution. So far, I have only used it topically on myself. The solution does seem to impede the formation and growth of mold on bread. I'm still experimenting with it.

Offered by [Gordon](#).



**Save your batteries. I built this out of scavenged parts for free!
Find an electronic tech or go to radioshack (or equivalent) for parts.
The parts should cost under ten dollars. from bigfoot/misohapy**

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Color

I have been producing HVAC CS since the summer of 1998. HVAC and DC CS are completely different in their appearance. HVAC CS is clear (due to extremely small particle size) and remains clear for over two years. Discussions of color do not apply to CS produced by the HVAC method.

Offered by [Michael](#).



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Effectiveness

Current thought on colloidal silver, as well as all colloidal solutions, is that particle size is the more determining factor in effectiveness. With smaller particle sizes comes increasing bio-availability, hence greater effectiveness. In other words, a 10 PPM solution at .001 to .004 micron may be just as effective as a 100 PPM solution at .01 to .04 micron. PPM by itself is a measure of the weight of silver in the water and NOT the particle size. Unfortunately, the only method of which I'm aware to determine particle size is through scanning electron micrograph. Not exactly cheap.

Any discussion of PPM is meaningless without a corresponding measure of particle size. Under the circumstances, it would be safe to assume that PPM could be used as a general guideline, however, the body's reaction should be the ultimate factor in determining dosages of a particular CS solution. When giving dosages, the user should allow the body to be the ultimate judge of proper dosages.

Offered by [Michael](#).



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Lead

Lead Safety Information site offers information on the following Lead topics:

- Lead Leaching From Submersible Well Pumps
- Hazards of "Do It Yourself" Lead Removal
- Heavy Metal Toxicology
- Inorganic Lead: Safe Habits
- Lead and It's Inorganic Compounds
- Arnot Ogden Medical Center
- Lead Exposure in Construction
- Lead Poisoning Prevention Tips
- Food and Drug Administration
- Lead in the Home
- Lead Based-Paint in Your Home
- Air Sampling Methods
- Lead Hazard Control

Hosted by [Bob Farmer](#)



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Symptoms

The symptoms of chronic lead poisoning vary within very wide limits, from colic and constipation up to total blindness, paralysis, convulsions and death. They are thus [described](#) by Dr J. T. Arlidge (*Diseases of Occupations*) The poison finds its way gradually into the whole mass of the circulating blood, and exerts its effects mainly on the nervous system, paralysing nerve-force and with it muscular power. Its victims become of a sallow-waxy hue; the functions of the stomach and bowels are deranged, appetite fails and painful colic with constipation supervenes. The loss of power is generally shown first in the fingers, hands and wrists, and the condition known as "wrist-drop " soon follows, rendering the victim useless for work. The palsy will extend to the shoulders, and after no long time to the legs also. Other organs frequently involved are the kidneys, the tissue of which becomes permanently damaged; whilst the sight is weakened or even lost.

Offered by [Mike](#).



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Lead Intake

The lead burden coming from bone demineralization of undernourished survivors will add to the volcanic lead intake. The lead blood level of the population is already so close to the toxic threshold that even well prepared communities could be affected. To avoid poisoning, lead should be prevented from entering the body. Dust mask can be used to reduce inhalation of lead containing volcanic dust particles. Drinking water will certainly be a major source of lead poisoning and will require to be depleted of lead. Although there are several ways to achieve this, distillation is probably the easiest method. When it is not possible to treat water to remove lead, filtered mineral rich water, containing calcium, magnesium and not acidic is preferable. There are many ways to reduce ingestion of lead from food.

Offered by [Jean](#).



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Diet

An appropriate diet can minimize lead bio-availability. Food rich in vitamin C, iron, calcium, and magnesium reduce lead assimilation. Weeds or plants containing these chemicals can be identified and selected from existing databases. Dietary supplements of these components are a good way to reduce assimilation and to help the body to get rid of absorbed lead. If the first measure to prevent contamination is avoidance of exposure to lead, the second one is to use mineral supplementation. Mineral supplements and vitamins should be stocked and more importantly, natural sources should be identified. Alimentary chelator, either synthetic (EDTA, Succimer) or found in plants (citric acid, oxalic acid) could be used as oral additives to prevent lead poisoning.

Additional steps to prevent lead contamination, which is always possible in high tech, hydroponics type, food production systems, can be implemented without too much difficulty. In indoor recycling food production systems, lead biosorption using plants or microorganisms can be used to keep the system safe. A plant or microorganism biosensor, also compatible with this kind of food production system is useful to monitor the lead level of the system.

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Farming

Gardening practices and plant selection in outdoors lead contaminated environment can minimize lead incorporation in crops. The addition of organic matter to the soil as well as a pH higher than 6, decreases lead incorporation by vegetables. Fruiting crops should be preferred to root crops and leafy vegetables should only be grown inside. Lead concentration in soil will be higher than in plants, therefore, vegetables should be carefully washed before consumption. Animal food tends to have lower lead levels than plants. Lead is more or less incorporated depending on animal species. When eating animals, poultry should be preferred; pigs, goats and rabbits come next, and finally cattle and sheep.

Adult animals are also safer, since young animals concentrate more lead than adults. Lead concentrating organs such as bones, liver, kidney, bone marrow, brain and testes should be avoided. Lead in seawater is very dilute and the concentration of lead in seafood should remain low.

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Treatment

Lead blood tests will not be available after the pole shift. Recognition of lead poisoning will essentially be based on the observation of the symptoms. Several forms of treatments will be possible. Provided that the appropriate compounds (such as DMPS and DMSA which are administered orally) have been stocked, chelation therapy will be possible. There are also alternative treatments such as essential metal ions supplementation, heat depuration and homeopathy. Medicinal plants (rich in essential metal ions or natural chelators) might also be effective. Since the body has, to some extent, the ability to get rid of the lead it has assimilated, avoidance of any additional incorporation is the first treatment that should be applied. Ideally, every individual presenting symptoms of lead poisoning should be treated, especially when life is threatened but to avoid permanent neurological damages, children should be treated in priority. Some lead poisoning genetically susceptible individuals will also require special attention.

Offered by [Jean](#).



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Lead Testing

Suburban Water Testing Labs, Inc/, (800)433-6595, will test for lead, but they assume that you will send them samples to test. [Hach](#) sells a standalone unit requiring power that gives a digital readout for \$399 (ouch!). Remembering back to high school days, I recall testing water samples in class for different elements using reagents only. I was thinking lead was one of them. Does anybody know the reagents needed to test for lead (without the need for powered equipment)?

Offered by [Steve](#).

This may not be the best way but it is a way to test for presence of lead.

Lindsay Publications 815 935-5353, item 4198

Blowpipe Analysis \$10.95 Shows how one can use a candle, oil lamp, or Bunsen burner, a blowpipe, charcoal, and/or Borax. From the color and the properties one can tell if lead is present. Can't tell the percentage but can tell the presence of lead. One would need to get the book and practice, looks like a bit of detailed observation is needed.

Money spent on a good filter is probably more appropriate than a lot of money spent on testing equipment. One simple way would be to use a series of reverse osmosis filters. A pre-filter for small particles would be used. For example with a Seven stage filter and an activated charcoal filter before the last stage one can get very pure water, often times much better than commercially available distilled water. One only needs to use as many stages as necessary to get the PPM level down below what one wants. Often times this is much less than 7 series filters. One can assume on an average about 5x reduction in mineral content for each filter. 2 filters would give about 25x reduction. 3 filters 125x and 4 filters 500x, 5 filters 2500x, and so on. Reverse Osmosis filters waste a lot of water at each stage. One could use the full 7 stages for distilled water equivalent. and one or 2 or 3 stages for drinking and plant water. This approach would only be practical if one had a lot of water to waste. As far as I can tell right now rebuilding these filters is not practical. One would need to stock up on a life time supply. The membrane is prone to leak if too much pressure is applied. There may be other filters that are better.

However, having said all this if one can find an easy way to test for lead then we will definitely want to use it. So keep your eyes open.

Offered by [Mike](#).



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Live Earth

Toxic Metal Elimination by [Mineral Substitution](#)

Lead, mercury, cadmium, and aluminum are toxic metals to which we are becoming increasingly exposed. Lead is considered the most dangerous due to the extent that it is distributed in the environment as a polluting element. A regimen of Formula ACX, taken three ounces per day is effective in reducing body loads of lead, mercury, cadmium, and aluminum, as evidenced by repeated hair analysis. Formula ACX is a proprietary colloidal suspension of natural minerals found in humic shale. The product supplies over 40 grams of minerals per quart of product. In addition, it contains one gram of vitamin C per ounce, a broad spectrum of vitamins and free amino acids with supplemental amounts of calcium, magnesium, and potassium.

Live Earth™ Animal Mineral Feed Supplement, is an all-natural humic shale ore source derived from prehistoric plant matter.

Offered by [Mike](#).



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Chelation

There are different methods for riding the body of lead. Natural methods include certain herbal blends and Vitamin C. But this process is *slow*. The fastest way is using a product called EDTA (Ethylene-Diamine-Tetra-Acetic Acid) which is in a solution, applied intravenously, that consists mostly of distilled water and a few additives (Vitamin C, Magnesium, heparin, among others) in a process known as Chelation therapy. Chelation therapy grew out of German industrial research in the 20's looking for a way to make water really free of minerals for the electroplating and metal-etching industries. Later in the 50's in Detroit, a physician named Dr Clark who was treating lead-poisoned auto workers, found that Chelation with EDTA not only removed lead, but also freed many of his auto-worker patients from their symptoms of cardiovascular disease! EDTA has the ability to bind with metals in the blood and soft tissues and allows the body to excrete them, thus detoxifying the patient.

Offered by [Educate-Yourself](#).



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Epsom Salts

Acute lead poisoning results from ingesting soluble lead compounds. The symptoms were called "painter's colic" since painters, covered with white lead, were at risk. The damage appears to be mainly to the nervous system, and the effects not as acute as those of mercury poisoning. Lead is an accumulative poison, building up until it reaches a toxic level.

An [antidote after swallowing](#) a soluble lead salt is a stiff drink of Epsom salts, $MgSO_4$, which precipitates insoluble $PbSO_4$.

There is no risk at all in handling lead metal. It cannot be absorbed through the skin or the respiratory tract. Dilute hydrochloric acid has little effect on it, so the lead would pass through the stomach before any damage was done. Eating lead is probably safe, but not encouraged. Carbonated water dissolves lead to some degree. Food and drink should never touch lead, since organic acids, such as acetic acid, may dissolve lead. Lead is, on the whole, very much less a hazard than mercury. It was made dangerous by its widespread use in paint and motor fuel, and that is now past.

Offered by [Mike](#).

