



Colloidal Silver, a Natural DIY Antibiotic, Antiviral

Give Yourself a Second Immune System

A hundred years ago, silver was a part of our diet. It was one of the trace minerals in all our foods. Today, our soils have been destroyed by poisonous chemicals and our crops no longer take up enough trace minerals. Commercial non-organic agriculture destroys the soil organisms that prepare mineral nutrition for plant roots. Now, it takes 26 apples to equal the iron content of just one apple from 1950! Trace minerals, like iron, iodine, cobalt, selenium, and silver are an essential part of our diet. We don't need much, but like iodine, if we don't have these trace minerals, it's a major problem. A lack of silver is a major problem because it was one of the trace minerals that gave us a second immune system.

Silver is a broad spectrum antiviral-antibiotic that has been used for thousands of years. Silver was used in ancient India and Egypt medically. The settlers of America used pure silver coins to prevent milk from spoiling. Sucking on a pure silver spoon prevented babies from dying from infectious diseases. It was the primary antibiotic in the 1930s and is still used to prevent infections in burn patients. As a colloid, silver can be used topically and internally. There is no known bacteria or virus that can live in the presence of silver. It disrupts the respiration process and no resistance can be built up against it. It appears to be effective against pathogenic single-cell organisms, but it has no negative effects on human cells.

Early versions of colloidal silver were created mechanically by grinding, and were expensive – \$100 per ounce in 1930 dollars! Russians created a capsule of powdered silver as an antidote for biological weapons by exploding thin silver wire with high-voltage. Now, it can be produced with low-voltage electricity, practically free. For more information, you can download a collection of articles I've posted at the end of this article. These articles will answer a multitude of questions.

Make Your Own Colloidal Silver

Since we don't get enough trace minerals in the typical commercial diet, you can take supplemental colloidal silver to restore your immune system. It's very simple and inexpensive to make yourself. However, if you buy it at natural food stores, it can be expensive, 8 ounces for \$25-\$30. You can make it at home for about a dollar a gallon (the cost of distilled water) using the electro-dispersion method. This could be a boon, especially for developing countries or for people who have little money to buy expensive antibiotics/antivirals. It has also been used when antibiotics fail. Later in the article, I'll explain exactly how to do it. First, a little explanation about what it is.

What is Colloidal Silver?

A colloid is nothing but small particles in suspension, like fine clay in water. The particles are so small, they'll never settle to the bottom. They're kept in suspension through the imperceptible motion of the water. They're generally invisible. In order to be effective, the silver particle size should be .015 microns or less. Being so small, they can enter into cells, bacteria, and viruses. Large particles are ineffective. Using a mechanical grinding process, it was very difficult and tedious to make such small particles. Plants take up particles that are extremely small in size. We can create similar sized particles through electro-dispersion, essentially using voltage to blast particles off of a silver wire (or strip) that is submerged in water. It only takes 30-40 volts, so it's not dangerous. Three 9 volt batteries will do it. Details coming up, but first let's look at WHY you want to make it.

Uses of Colloidal Silver

Colloidal silver has been used in small quantities daily as a preventative, to prevent infections such as the flu, similar to how we used to get silver in our foods. In larger quantities it's been used to destroy the single-cell pathogens such as bacteria and viruses that cause diseases. For instance, it could be a preventative against malaria and has been used to cure malaria. Since there is no known single-cell infectious pathogen that can withstand colloidal silver, many authorities claim it can cure every known infection from Lupus to Lyme disease to some cancers that were caused by pathogenic bacteria, viruses, or other single-cell pathogens. Diseases not caused by or abetted by single-cell infectious agents such as bacteria, viruses, fungi, mold, and yeast, won't be cured by it. These would include diseases caused by congestion, toxins, constrictions, nutrient deficiencies, or insufficient life force energy. Also, multi-cellular pathogens such as worms and flukes are not affected and require another approach, such as therapeutic herbs.

As a preventative, people often take 1-2 tsp daily of 10ppm (parts per million) colloidal silver. As a therapy, people have taken as much as 4-6 ounces 3 times a day. There is no known toxic limit for 10ppm colloidal silver.

Even taking a gallon a day for years would not be toxic, (but not recommended!). It has been used in the eyes, ears, sinuses, mouth, swallowed for systemic protection, sprayed on wounds, and inhaled into the throat and lungs with a spray mister, or nebulizer, for lung diseases like tuberculosis. There are reports of it saving many lives threatened by numerous pathogens.

I have used it for over 30 years with no side effects. I never get the flu or colds. If I get some intestinal bacterial infection while traveling overseas, I use colloidal silver to get rid of it. It's a good idea to travel with a portable colloidal silver maker. It takes up less than 3 cubic inches of space and weighs about half an ounce, not counting the batteries, which you can purchase anywhere.

Make Your Own Colloidal Silver Generator

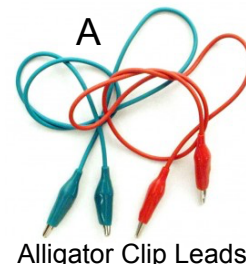
It couldn't be easier. It may seem intimidating at first, but once you've done it, you realize it's really easy and absolutely safe. You don't need to be technical to do it. Although if you have a technically minded friend, you could make several units together to give to friends and family. It could be a great neighborhood or village project. It could save many lives. Here's what you'll need. (Metric system users, just use something similar.)

1) Distilled water, one gallon (ozonated - all distilled water I've seen is)

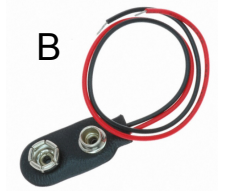
2) A pint jar (16 oz), funnel, and paper towels or coffee filters.

3) Three 9V batteries. You can use either alkaline or regular batteries.

4) Wires with alligator clips to make connections (A) or a 9V battery connector (B). If you use a 9V connector, you will need to cut it in half to reach the outer battery terminals on the ends of a string of 3 batteries. (Cut carefully around the lead that goes to the end. Don't cut the wire!)



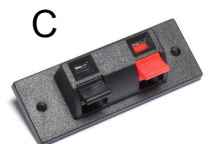
Alligator Clip Leads



9V Battery Connect

5) Two 1/8 inch wide, 4 1/4 inch long strips of silver, (.999 pure silver).

NEVER use sterling silver, it's poisonous. You could also use heavy gauge silver wire with an equivalent surface area (#12). Pure silver can be gotten from silver manufacturers, distributors, metals suppliers, and jewelry suppliers. Any jeweler will know all about precious metals.



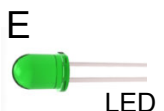
Speaker Terminal

6) You will need something to hold the two silver strips so they dangle in the water. Even popsicle sticks will work, but I like to use a speaker terminal connector (C), the kind used on some stereo speakers, where you press a button to insert the wires. In this case, you insert the silver strips into the connector and solder leads to the other side. You can attach the terminal connector to a popsicle stick or tongue depressor so it rests on top of a jar with silver strips dangling in the water (see photo below).



Resistor

7) A 1/4 watt resistor (D) and an LED (E). The resistor should be anywhere from 3.3k to 6.8k ohms. Ohms are a measure of resistance. The "k" means "thousand" as in kilo. So it's 3300-6800 ohms. I use 3.3k. A larger value will slow the process a little, but not much. Resistors values are color coded with color bands on the resistor. 3.3k is orange-orange-red with gold or silver tolerance (5% or 10%).



LED

3.3k=OOR, 4.7k=YVR, 5.6k=GnBuR, 6.8k=BuGyR – see chart.

Most resistors have 4 bands. Two numbers, a multiplier, and tolerance. Look up resistor codes on the net for more info on color codes. You can ask at any electronics shop for a resistor.

I use a 3mm green LED (E), but any LED will work. You might find one in some discarded electronics (that goes for the resistor as well). It takes about 20-22 minutes to make a pint (16 oz) of colloidal silver. The resistor keeps the current in the range to make very fine colloid particles. The current will generally not exceed 0.5 milliamps which is ideal (half of one thousandth of an amp, hardly any power at all). You can measure by putting an ammeter in series with the circuit if you have one. Harbor Freight and many other places sell nice meters for about \$5-6.

8) A brown storage bottle. Glass is a little better than plastic, but both will work.

9) Electrical solder and soldering iron if you want to solder the parts together (recommended). Any ham radio operator will have a soldering iron and solder. They're friendly people, so just ask around. You ought to be able to

4-Band-Code

2%, 5%, 10% 560k Ω ± 5%

COLOR	1 ST BAND	2 ND BAND	3 RD BAND	MULTIPLIER	TOLERANCE
Black	0	0	0	1Ω	
Brown	1	1	1	10Ω	± 1% (F)
Red	2	2	2	100Ω	± 2% (G)
Orange	3	3	3	1KΩ	
Yellow	4	4	4	10KΩ	
Green	5	5	5	100KΩ	± 0.5% (D)
Blue	6	6	6	1MΩ	± 0.25% (C)
Violet	7	7	7	10MΩ	± 0.10% (B)
Grey	8	8	8		± 0.05%
White	9	9	9		
Gold				0.1Ω	± 5% (J)
Silver				0.01Ω	± 10% (K)

5-Band-Code

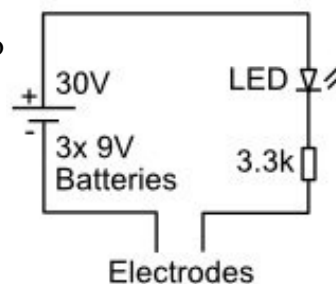
0.1%, 0.25%, 0.5%, 1% 237 Ω ± 1%

buy all the parts for \$2-3 or so, not counting the silver. ebay.com has everything if you don't have local sources. Get extras and make several units. Teach a class.

Silver (.999 pure) is a commodity. The silver should cost under \$4. Silver flat wire will last for many years and make hundreds of batches. Silver coins and bars are also .999 pure silver and cost under \$20/oz (2016). Coins and bars could be melted and flattened if necessary. Anyone with jewelry skills could do it. Silver flat wire (1/8") weighs .016 oz per inch. The 8.5 inches needed for one unit weighs 0.136 oz and therefore should cost under \$3. In small quantities and with handling it may cost up to \$10. Round wire (12 gauge) is also good. Hammer it flat if you like. Pure silver is very malleable.

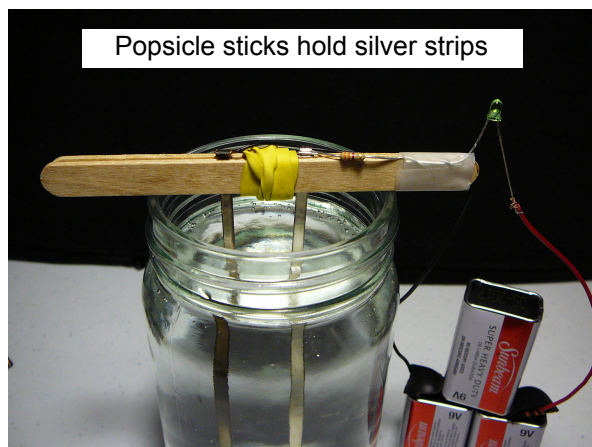
The Circuit

The circuit is a simple series circuit. The three 9V batteries are snapped together in a row, alternating up and down, (see photo). Then one side of the batteries is connected to one silver electrode and the other side is connected to the other electrode after passing through the LED and resistor. The resistor can come either before or after the LED. All LED's are diodes so they only pass current one direction. Look at the circuit and photo of a completed unit. Note that the bottom edge of most LED's have a flat side. The flat side is indicated by the bar on the LED icon in the circuit diagram. If the LED doesn't light up when the electrodes are shorted (or put in water), reverse the LED leads. The LED is not going to light up very bright because there is very little current.

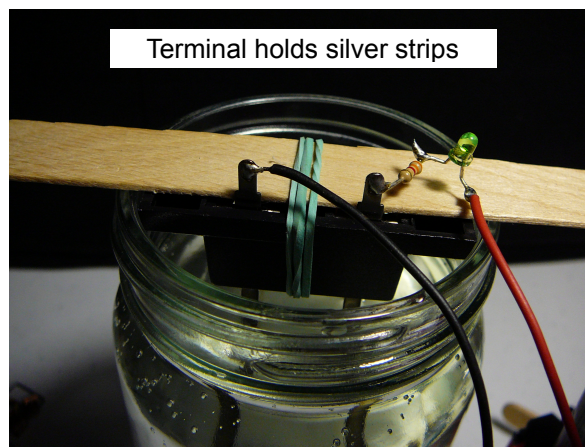


Making a Unit

Initially, you could test the circuit just using several wired alligator clips, (or an electronics breadboard if you have one). But the circuit is so simple that you could wire it up directly without even soldering as shown in the photo with two popsicle sticks (held together with the yellow rubber band). The rubber band holds the silver strips in place, poking above so you can wrap wires around them. The circuit is wired by simply wrapping the black or negative wire around one electrode and either end of the resistor around the other electrode. (Of course,



Popsicle sticks hold silver strips



Terminal holds silver strips

you need to remove an inch or so of insulation from the ends of the power leads so the metal wire can make contact.) You could also connect to them using alligator clips.

The other end of the resistor is wrapped around the flat side lead of the LED and the red, positive, lead is wrapped around the remaining lead of the LED. The black and red terminals are then attached to the battery pack. This approach is simple and OK for occasional use, but twisting wires together doesn't make a very robust device. It's better to solder them. But don't solder anything to the silver strips. Wrap or use alligator clips so that later, you could immerse the other end of the strips in the water or change the electrodes.

The other photo shows a terminal connector suspended above the water supported with a tongue depressor or popsicle stick. You can use a rubber band or hot glue the wooden stick to the terminal connector. This approach is better because you can solder everything and still swap electrodes or remove them for traveling.

It sounds a little complicated at first, especially if you don't have any electrical background. Once you understand this simple circuit, it's really easy to make a unit. I could have made more than 50 units in the time it took to write this article. Conceptually, all you're doing is immersing two silver wires or strips, 3/4" apart, in distilled

water. Then putting about 30 V across them, limiting the current with a resistor, and adding an LED to confirm that it's powered on and working.

Making Colloidal Silver

Making colloidal silver is really easy, just follow these steps. Again, this may seem overly complex, but it really isn't. Soon you will see that it REALLY IS easy and it becomes a fun, even automatic process.

- 1) Insert the silver wires or strips into the terminal connector (or sandwiched between a couple of wooden sticks). They should be 3/4 of an inch apart, and parallel.
- 2) Fill a 16 oz jar with distilled water, nearly to the top, (where the jar begins to curve inward to form the screw top). You want as much of the silver in the water as possible (without touching the terminal connector, if you use one). Tap water is too conductive, runs too fast, and produces large particles, so use only distilled water.
- 3) Snap three 9 V batteries together in a line, with one opposite the other two.
- 4) Place the unit on top of the jar so that the silver dangles into the water. Only silver should touch the water.
- 5) Attach the red wire to the positive battery terminal and the black wire to the negative battery terminal by snapping them onto the opposite ends of the battery pack. Or use alligator clips to make connections to the unit.
- 6) The LED should glow dimly, indicating that the circuit is complete and the water is energized.
- 7) Set a timer for 15 minutes, or notice the time on a clock or watch. It takes awhile before you can see anything happening.
- 8) After 12-15 minutes, shine a flashlight from the side of the jar. Between the electrodes you will see fine wisps of smoke-like particles coming off one of the electrodes. To see these smoky particles, shine a flashlight from the side. Use low ambient light and a dark background. Very fine particles of silver are ejected off one of the silver electrodes from the beginning, but they are so fine and so few that you can't see them. After a while, invisible particles of silver build up and make the water more conductive. Then the ejection of silver into the water becomes more rapid and obvious. Especially between the electrodes, the water can become very conductive. If it becomes too conductive, larger particles are created that are not ideal. Unchecked, threads of silver can even directly connect the electrodes, which you don't want. It stops the process.



Colloidal Silver "smoke"

The solution to overly rapid production is to simply rock the electrodes back-and-forth a couple of times to gently stir the water. The visible silver will then disperse into the water, becoming invisible. The production of silver colloid will slow again because of the reduced conductivity between the electrodes. The production of very small particles will resume, but then accelerate faster than before. After a few more minutes you may need to rock the electrodes again. You may even see a ragged edge of black particles on the negative electrode. This is silver hydride and is not useful. It usually comes out with the electrodes when you remove them from the water. You also filter the final product to remove any silver hydride. After 20-22 minutes, you are done. Disconnect the battery and lift the electrodes out of the water.

9) You now have ~10 ppm colloidal silver. The only thing that remains is to filter it. Any particles of silver hydride will be quite large and easily filtered with a coffee filter or a paper towel. Fold a paper towel and put it in the funnel. Insert the funnel into your storage jar and pour the colloidal silver through the filter. Colloidal silver should be perfectly clear, or after a day or two, it might turn very, very light yellow. Any product which is dark yellow, orange, brown, gray, or silver should be discarded. You may see such pictures of dark CS on the Internet. This is really bad stuff and is useless.

10) You can now make more 16 ounce batches. Colloidal silver will easily store for six months to a year or more. Use a dark container so light cannot reach it. Light causes it to agglomerate into larger particles that could settle to the bottom. Large particles are also ineffective because they cannot get inside viruses and some bacteria.

As always, you are responsible for your own health. I don't prescribe or diagnose. I simply educate. You choose what you would like to do. I personally have used colloidal silver for over 30 years. Colloidal silver has been grandfathered into the medical system and is available for anyone to use as they see fit.