



# Bob Beck's Legacy

## IONIC COLLOIDAL SILVER HEALS

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### RESEARCH AND USES

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**Many are not aware** that it was Bob Beck who renewed interest in the use of colloidal silver for health—for its ability to fight infections. It was 1995 when Bob Beck woke in the early hours one morning knowing how to readily make colloidal silver in the home. Since that time, colloidal silver has gained a lot of attention as a germ-fighter. To make colloidal silver electrically, prior to Bob Beck's inspirational moment, it was necessary to use a high-voltage. The high voltage method is not designed for home use. Some commercial colloidal silver products are made that way.

Before the era of modern-day antibiotics, colloidal silver was used medically to fight infections. Antibiotics were not available during World War I so medics relied on silver to combat infections on the battlefield. The use of silver for its anti-infective properties, has made a come back with the health industry using it in unique ways—even woven into cloth for pajamas used in some UK hospitals to combat ever-spreading infections.<sup>1</sup>

### EARLY RESEARCH IN THE UK

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**Early in the 20th Century** in the UK, a colloidal silver product called Collosol Argentum was gaining attention. In 1916, the prestigious UK medical journal, *Lancet*, reported a case-study about a woman who was dying of blood poisoning after giving birth. Since this condition was usually fatal, the doctor decided to try something different. He injected Collosol Argentum. The next day she was well on her way to recovery.<sup>2</sup>

Collosol Argentum was backed by Sir Malcolm Morris, a medical doctor. After assembling a team of scientists to study the effectiveness of this silver colloid, he formed a company to produce Collosol Argentum. Their research, however, did not gain favorable attention in the USA. In 1919, the main medical journal in the USA, the *Journal of the AMA*, criticized reports about the effectiveness of Collosol Argentum coming out of England.<sup>3</sup>

Later in 1922, the *Journal of the AMA* continued to disparage the work of Sir Malcolm Morris. The American Medical Association reported that with the help of the Council on Pharmacy and Chemistry,

they were proud of the fact that, “Collosols are not pushed in the United States today, although they are heavily advertised in the British Isles.”

As with any simpler solution for health, colloidal silver generated controversy. Despite early resistance to the use of silver in the USA, in more recent years

*... the FDA approved a breathing tube with a fine coating of silver, after it was established that it reduced the risk of ventilator-associated pneumonia. And that's just one example of the many roles silver plays in medicine today. It is also added to bandages and wound-dressings, catheters and other medical instruments ...<sup>4</sup>*

## SILVER TO COMBAT GERM WARFARE

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**With the rise** of the pharmaceutical industry, the use of colloidal silver by the medical profession fell by the wayside. Knowledge of the effectiveness of silver, however, did not die. In the 1950s, the former Soviet Union discovered their satellite state of Czechoslovakia had produced a powerful germ-killing substance that was even effective against their germ warfare agents. The substance, known as Movidyn, was a form of powdered silver. The author reporting this discovery stated, “In a study of infected wells, it completely destroyed typhus, malaria, cholera, and amoebic dysentery. Drinking containers washed in Movidyn retained their germ-fighting abilities for several weeks.”<sup>5</sup>

Use of Movidyn was never brought to public attention. Instead of being used for the public good, the facility that produced it was dismantled.

## SILVER RESEARCH IN THE USA

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**In the 1970s**, Robert O. Becker, M.D., author of *The Body Electric*, again brought the germ fighting and healing qualities of silver to public attention. It is important to point out that he did not research colloidal silver. His work, however, using electrical currents combined with silver electrodes, demonstrated the amazing health-giving properties of silver. He expressed his awe of the broad-spectrum germ-killing properties of silver, “... it's especially well suited for use against several kinds of bacteria simultaneously. It kills even antibiotic-resistant strains, and also works on fungus infections.”

The research of Robert O. Becker gave renewed attention to the amazing healing properties of silver. His research also revealed that silver ions actually promote the growth of healthy tissue: “The electrically generated silver ion was doing something more than killing bacteria—it was also causing major growth stimulation of tissues in the wound.”

He more specifically described the healing properties of silver ions stating, “It stimulates bone-forming

cells, cures the most stubborn infections of all kinds of bacteria, and stimulates healing in skin and other soft tissues.”<sup>6</sup>

When quoting Dr. Becker's work, we must remember he was not talking about drinking ionic colloidal silver. He was reporting on his use of silver rods inserted into tissue to generate silver ions using an electrical current.

## **COLLOIDAL SILVER MALARIA STUDY**

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**Colloidal silver** has also been tested for effectiveness with malaria. The report by a company that manufactures a 10 parts per million (PPM) commercial colloidal silver, called ASAP 10, describes how their product was used in Ghana to treat malaria. The report states:

*The data showed that out of 41 Malaria patients (ages 1–90 years) involved in the studies and receiving ASAP 10, all 41 people survived and there were no treatment failures. All participating patients were deemed to have achieved full recovery in an average of 4.5 to 6.5 days, with recovery time differences probably due in part to differences in total dosages.*

The report states that with the encouraging results, “... the Food and Drugs Board of the Republic of Ghana issued a Certificate of Registration of a Drug ...” for their product.<sup>7</sup>

## **NASA USES IONIC SILVER IN SPACE**

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**On the International Space Station**, Russia and the United States now rely on the same system to cleanse their water supply. Bloomberg News reported that the U.S., which had formerly used iodine, has now switched: “NASA has decided to switch to silver-ionized water on future missions ...” They report that the Russians have always used silver on the International Space Station to cleanse their water, adding that “silver ... in its ionic form is a powerful antimicrobial agent. Its use dates back to the Soviet Mir space station, which was launched in 1986.”<sup>8</sup>

## **MORE ON WATER PURIFICATION**

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**Silver mining** is a major industry in Mexico. Visitors to the country are attracted to Mexican silver jewelry ... and are warned not to drink the water. Mexico is working to solve the water problem with a product that is found in abundance in their country. You guessed it ... with silver.

The Ministry of Health in Mexico has approved a colloidal silver product called Microdyn for water purification. It is available in small bottles for citizens to add a few drops to drinking water. In addition, Microdyn can be painted on the interior of water cisterns for long-term disinfection.

*Its use is credited with a dramatic improvement in the health of the residents of the town of Cruz Azul, Lagunas, Oaxaca, Mexico, who for years had suffered rampant gastroenteritis. ... Other local water supply systems treated with Microdyn achieved similar results.<sup>9</sup>*

At a university in India a novel way to sterilize water has been developed in the form of a tea bag of pebbles. Porous pebbles have been impregnated with nanoparticles of silver. The researchers state that, "When placed in water, the purifier provides about 99 percent decontamination of microbes in the water." The tea bag can be used for a glass of water or placed in larger containers of water.<sup>10</sup>

In North America and Europe, most water filters on the market have silver impregnated in them as protection from bacteria and other pathogens.

## RESEARCH ON EXCRETION OF SILVER

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**In 1999, Dr. Roger Altman**, with a doctorate in engineering science took a keen interest in colloidal silver. He tested to see how readily his body excreted silver. He wrote a report titled: *Colloidal Silver: Where Does It Go When You Drink It? How Long Does It Stay There?*

He measured silver levels excreted in his urine and feces. He also measured levels in his hair, fingernails and perspiration to see if it accumulated in these tissues. He made his silver solution using a high-voltage unit and refers to the product as colloidal silver (CS). In a report he freely circulated, he gave his conclusions:

*Ingestion of properly prepared CS does not result in silver accumulating in the body. There is no evidence that silver deposits significantly in hair or fingernails and, in fact, the data support the conclusion that after taking more than 2 mg\* of CS per day for several months, silver seems to be purged from the body (mostly through urine) at about the same rate at which it is consumed. Furthermore, upon terminating CS intake, it appears that as much as half the silver residing in body tissue will be purged (through urine and feces, but more and more through feces as time goes on) in less than one month. Even this relatively short residence time could be reduced substantially if several liters of water were consumed daily.*

\* Equivalence for 2mg: 1 liter (approx 4 cups) of 10 ppm contains 10 milligrams (mg) of silver. To drink about 2 mg per day, as Dr. Altman did, means drinking a little less than 1 cup (about 200 ml) per day. Or if drinking 5 ppm silver solution, nearly 2 cups (about 400 ml) per day.

From Roger Altman's tests, it appears that silver in colloidal form is easily excreted from the body.

## RESEARCH ON METABOLIZING SILVER

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**A study in Poland** indicates that the body uses both selenium and sulfur to help metabolize silver.<sup>11</sup>

This study emphasizes the importance of taking selenium supplements and possibly MSM, which is a rich source of sulfur, with ongoing, long-term use of ionic colloidal silver.

Mark Metcalf, author of *Colloidal Silver, Making the Safest and Most Powerful Medicine on Earth for the Price of Water*, reported on his experience and research saying “Anyone ingesting colloidal silver on a regular basis should definitely be taking a selenium supplement.”

## GOVERNMENT STANDARDS FOR SAFE LEVELS OF SILVER

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**In Canada**, the British Columbia Ministry of Environment set water quality standards with regards to silver for the protection of marine and freshwater life. They did not set levels for humans, as they consider toxic levels would be too high to be a possibility. The report states: “...the criteria would have been about 1000 times higher than the aquatic life criteria and therefore redundant.”

It is interesting, though, that the report adds information about nutritional research: “Populations that are unusually susceptible to toxic effects from silver are those with dietary deficiencies of vitamin E or selenium, ...”<sup>12</sup>

The Environmental Protection Agency in the USA suggests the critical dose to risk argyria is 1.09 milligrams daily for a 160-pound (~73 kg) adult. One ounce (30 ml) of 5 PPM ionic colloidal silver would contain about 0.15 milligrams. This is well below the estimated daily risk for argyria.<sup>13</sup>

Silver Safety is a website devoted to information about the safe use of ionic colloidal silver. For information about the difference between ionic and colloidal silver, check:

[www.silversafety.org/education.html](http://www.silversafety.org/education.html)

For guidelines check:

[www.silversafety.org/guideline.html](http://www.silversafety.org/guideline.html)

For calculating safe levels to drink, check:

[www.silversafety.org/calculation.html](http://www.silversafety.org/calculation.html)

For a graphic to combine the two check:

[www.silversafety.org](http://www.silversafety.org)

## LABORATORY TESTS ON HOME-MADE IONIC COLLOIDAL SILVER (ICS)

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**To determine** how effective a home-made 3 to 5 ppm ionic colloidal silver solution would be in killing pathogens, a company manufacturing a unit sent two samples to a lab for “Antimicrobial Effectiveness” testing. The lab tested the solutions on a food preparation surface to determine if it was an effective sanitizing agent. In order to be deemed effective, the silver solution must kill

the pathogen within 30 seconds.

The ionic colloidal silver solution was deemed to be effective for E. coli (Escherichia coli ATCC 8739 and Pseudomonas aeruginosa as a “germicidal and detergent sanitizing agent” as it killed both pathogens within 30 seconds.<sup>14</sup> With the time limit, the silver electrolyte did not kill, but did reduce, both Staphylococcus aureus and to a much lesser extent Candida albicans. These results are posted at:

[www.sota.com/files/pdf/product\\_sp\\_ics\\_laboratory\\_tests.pdf](http://www.sota.com/files/pdf/product_sp_ics_laboratory_tests.pdf)

## COLLOIDAL SILVER AS A KEY TO HEALING

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**Paul Pitchford**, an author with a background in Traditional Chinese Medicine, has discovered that colloidal silver comes to the fore to help heal when many other remedies have not produced the results needed. In Healing with Whole Foods, Pitchford says:

*Silver colloid has few contraindications; however, it especially benefits people with a weak, deficient constitution (frail, pale, weak, and withdrawn, with a soft voice; shallow breathing and the weak pulse.) Frequently their weakness results from long-term infections with parasites and other pathogens.*

*In our experience, a number of extremely deficient people who have tried ‘everything’ yet made imperceptible progress begin improving with the use of silver colloid along with the help of a rejuvenative lifestyle. Silver colloid adds a dimension of support that is rare among remedies*

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## SILVER PRODUCTS

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### Silver Bandages

Today, major bandage manufacturers have added silver ions to their products to help reduce infections. One company in the USA has developed a unique bandage in which electrical current is used to release silver ions. The bandage consists of a silver-coated fabric connected to a miniature battery. Trials using the bandage on accident victims with severe injuries, report that it “not only encourages normal skin growth, but inactivates the bacteria that would prevent complete regeneration of the skin and nerve functions.”<sup>16</sup> The treatment resulted in faster healing without scarring.

### Silver Impregnated Hospital Equipment

The spread of infection in hospitals is a serious problem today as many germs have developed a resistance to antibiotics. Some hospitals, particularly in the UK, are using silver ion products such as bandages, pajamas, and even furniture. One hospital has replaced all bedside cabinets with plastic

cabinets embedded with silver. Several medical devices used in hospitals have also been coated or embedded with silver to help prevent infections. For example, a silver-coated catheter is available and silver is used in mechanical heart valves.

A hospital in England has taken amazing steps to stop the spread of infection. All equipment and furniture that human hands come in contact with is being impregnated with silver ions in an effort to stop the spread of a Staphylococcus germ. The report states:

*Every fixture, knob and faucet in the outpatient unit at Heartland Hospital in Birmingham, has been impregnated with silver ion powder ... The equipment and furniture were embedded with silver ions during manufacture. ... Silver ions have been proven to be 99.9 per cent effective in beating MRSA [Methicillin-Resistant Staphylococcus Aureus], E-Coli and salmonella.<sup>17</sup>*

## VIDEO

This 4-minute video shows ways that hospitals are using both silver and copper to reduce infections:

[Watch Video](#)

While staph infections have mutated so that prescription drugs are no longer effective, research in the lab in the Czech Republic using a proprietary form of nanoparticle-sized colloidal silver has shown silver to be effective against resistant Staphylococcus auerus.<sup>18</sup>

In the USA, a hospital in California is combating the increasing spread of infections by lining ducts that deliver air to patients' rooms with a silver based coating. The silver-based compound used in the coating "... helps keep hospital air ducts bacterium- and fungus-free."<sup>19</sup>

And modern hospitals continue to use silver compounds in at least two ways: 1) As a salve to speed the healing of burns, 2) As eye drops for newborn babies to prevent infection. A silver compound means the silver has been combined with another element. For example, eye drops used for newborn babies are in the form of silver nitrate.<sup>20</sup>

## SILVER IN THE MARKETPLACE

**The following uses** for silver are reported in several issues of Silver News, a newsletter published by the Silver Institute in the USA. The publication gives an idea of how extensively the anti-infective quality of silver is being utilized in the food industry and in an array of products:<sup>21</sup>

**Food Processing:** This industry is fast embracing the addition of silver to food preparation surfaces, meat processing equipment as well as food and beverage collection and storage equipment. In addition, there is a transparent food wrap on the market that uses a silver combination that has been tested to be effective against E-coli.

**More Products:** Japan is leading the charge for silver applications in industry to inhibit the build-up of bacteria. "In Japan, environmental concerns about other biocide chemicals and a culture with a greater concern for cleanliness have also led to the adoption of silver chemicals in other products, for example, automotive textiles."<sup>22</sup>

Silver has been embedded in the following products in Japan to prevent bacterial build-up or to reduce the growth of molds and mildew:

**Cars** – Steering wheels and door handles.

**Cell Phones** – Outer case of cell phones.

**Hand Calculators** – Outer case and the keys on the keyboard.

**Pens** – Pen casings are embedded with silver ions. The USA Military is buying these pens.

**Home Appliances** – Clothes dryers, washing machines and refrigerators with silver embedded in the interior finish.

**Upholstery** - Silver-embedded fabrics are used on seats in airplanes, trains and other forms of public transit.

**Floor Mats and Mattresses** – The silver apparently reduces static electricity as well as bacteria.

**Filtration Masks** – worn to filtrate infectious bacteria now have silver added as an antimicrobial feature. These can be worn by the public as well as in hospital-type settings.

**Clothing** – In addition to hospital pajamas, silver is being used in sports clothing to help prevent the growth of bacteria and keep garments odor free. Silver-embedded fabrics are gaining interest among those with skin conditions and also for military use. And, there is a line of slippers that uses silver to keep feet smelling sweet.

**Sand** – "The company's proprietary process forces tiny silver particles into natural sand." They plan to market for use in sand lots in parks as well as for cement to reduce bacterial or mold growth.

**Building Supplies** – Silver ions are being added to lumber and other building products in order to reduce the build-up of mold and mildews. One headline reads, "Silver Ions in House Frames Helps Resist Mold and Mildew"<sup>10</sup>

## BOOKS OF INTEREST

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1. *The Wonders of Colloidal Silver*, Dhyana L. Coburn & Patrick D. Dignan, Revised 2012. ISBN #13 978-0965891530

This book recognizes the role of Bob Beck in bringing the simple way to make ionic colloidal silver

into our homes. It outlines a broad array of information about colloidal silver—an everything-you-want-to-know reference.

2. *A Fighting Chance*, Gordon Pedersen, Third edition, 2008.

This book includes numerous impressive research studies using colloidal silver made with a high voltage system—referred to as silver sol. It is a handy reference as it lists applications for 219 ailments or subjects—including inhaling ionic colloidal silver with a nebulizer.

Evidence abounds about the effectiveness of ionic colloidal silver as an anti-infective both internally and externally.

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