

The background features several wireframe models of viruses, including a large one with prominent spikes and others of various shapes and sizes, all rendered in a light blue, semi-transparent style.

**USING  
COLLOIDAL  
SILVER  
AGAINST  
DEADLY  
VIRAL  
INFECTIONS**

By Steve Barwick, author  
*The Ultimate Colloidal Silver Manual*



## Is Colloidal Silver Really the “Silver Bullet” Against Potentially Deadly Viral Infections?

While there’s no argument that colloidal silver is the world’s most powerful natural [antibacterial](#) and [antifungal](#) agent, the ability of [colloidal silver](#) to protect against viral pathogens has, until recently, not been fully embraced by the medical community.

*Fortunately, startling new medical research reveals that silver may well be your #1 defense against viruses as well. Here’s what the medical evidence demonstrates...*

### Safe, Natural, Highly Anti-Viral

In spite of the fact that it has not yet been fully embraced by the medical community as an anti-viral agent, nevertheless, safe, natural *mineral silver*, in a variety of forms, including *colloidal silver*, has nearly three decades worth of solid medical research behind it, demonstrating its powerful anti-viral qualities.

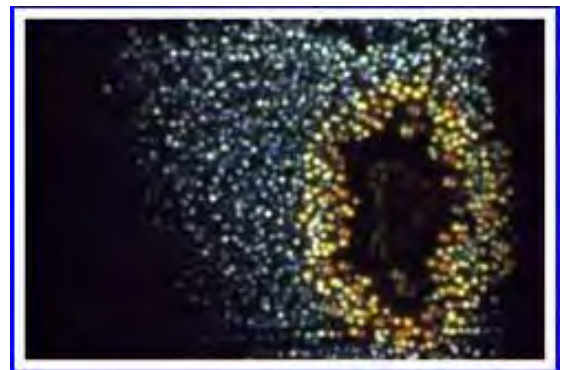
Indeed, newer clinical laboratory research demonstrates that silver is so powerfully effective against viruses, it even stops the deadly HIV (i.e., the AIDs virus) from infecting human cells. And older research dating back to the 1980’s demonstrates that silver can stop numerous types of viruses from replicating, simply by bonding to them.

In fact, silver altogether decimates many viruses, ***simply by being in close contact with them.***

### Tiny Nano-Particles are the Key

The key, as you’ll discover throughout this report, is in the size of the silver particles.

They must be very small silver micro-particles – i.e., what is more commonly known as “nanosilver” – in order to exhibit such powerful anti-viral qualities.



Medical science has now demonstrated that tiny silver nano-particles are absolutely deadly against many forms of viral pathogens.

In this special report, you'll discover some of the most convincing medical evidence demonstrating that nano-scale sized silver particles – which is to say, very small particles of silver measured in nanometers (nm) – are ***the single-most effective all-natural anti-viral substances on the face of the earth.***

### Colloidal Silver to the Rescue

What's more, you'll come to understand why [colloidal silver](#) – the popular nutritional supplement known as the world's most powerful natural [anti-bacterial](#) and [anti-fungal](#) agent – is very likely your #1 best bet for all-natural, non-drug protection against potentially deadly ***viral*** agents, too, as long as it contains tiny, nano-scale sized silver particles.

Finally, you'll also learn the 6 critical steps you must take ***now*** in order to keep yourself and your family protected against viral infections of all kinds. And you'll learn how to be fully prepared in case the global flu pandemic – or some other nasty mutant hybrid viral pathogen – rear its ugly head in your area.

But first, let's start with the clear, factual growing body of medical ***evidence*** on behalf of the powerful antiviral qualities of safe, natural ***silver***.

### The Famous HIV Study

In June 2005, the prestigious journal ***Nanobiotechnology*** published a ten page study that rocked medical science.

The study was the result of seven scientists' exploration into the virus inhibiting qualities of nanosilver – very tiny, invisible particles of silver measured in nanometers. (A nanometer is one-billionth of a meter, or one-ten thousandth of a hair's breadth.)

What the study demonstrated is that these tiny nano-scale particles of silver were able to inhibit HIV-1 (i.e., the AIDS virus) from binding to host cells, in ***vitro***.

What this means is that in the test tube, when the researchers placed the AIDS virus alongside human cells in a medium that would normally allow the virus to bind with the cell (and thus cause viral infection), the introduction of tiny nano-particles of silver into the medium prevented the binding from taking place.

In other words, the silver particles ***stopped the infection from taking place.***

The study abstract reads as follows:

### **Abstract**

*“The interaction of nanoparticles with biomolecules and microorganisms is an expanding field of research. Within this field, an area that has been largely unexplored is the interaction of metal nanoparticles with viruses.*

*In this work, we demonstrate that silver nanoparticles undergo a size-dependent interaction with HIV-1, with nanoparticles exclusively in the range of 1-10nm attached to the virus.*

*The regular spatial arrangement of the attached nanoparticles, the center-to-center distance between nanoparticles, and the fact that the exposed sulfur-bearing residues of the glycoprotein knobs would be attractive sites for nanoparticle interaction suggest that silver nanoparticles interact with the HIV-1 virus via preferential binding to the gp120 glycoprotein knobs.*

*Due to this interaction, silver nanoparticles inhibit the virus from binding to host cells, as demonstrated in vitro.”*

While silver’s well-known toxicity to a wide range of bacterial and fungal pathogens has been thoroughly documented in previous research by many leading research facilities, this study takes the previous research to a whole new level.

For the first time, the long-proven antimicrobial properties of silver nanoparticles were applied to a highly infectious form of **virus** with no known cure. And the interaction between the metallic particles, the virus and the cells were studied.

The scientists tested a variety of particle sizes. And they also tested the idea of coating the tiny silver particles with several different surface chemistries including a “foamy carbon matrix,” a polymer and a protein molecule. The goal was to determine if any of these substances would help stabilize the silver particles and aid the silver’s anticipated reaction with the virus.

What they discovered, however, is that only the “free surface” silver nanoparticles in the range of 1 to 10 nanometers interacted with the HIV-1 cells.

### **Silver Nanoparticles Rule!**

This basically means the silver needed no help from the other substances. In fact, anything added to the basic silver nanoparticle served only to prevent the metal’s interaction with the viral microorganism!

What's more, according to the study, only the very smallest silver particles inactivated the virus' ability to bond with the host cells. Larger particles did not.

Ultimately the study found that the tiny silver nanoparticles no larger than 10nm were able to bond to the deadly viral microorganisms and prevented the virus from bonding with the host cell. No bonding to host cell, no viral infection!

### **Colloidal Silver Beats the Smallpox Virus**

But HIV is not the only virus silver has been demonstrated to be effective against.

In a study published in the *Pharmaceutical Chemistry Journal* back in September 1992, it was found that that several different preparations of colloidal silver showed amazing efficacy against the smallpox virus.

Two medical colloidal silver preparations were used, one called Collargol, and one called Protargol. The latter was apparently a diluted preparation.

The study showed a 700 times reduction in the concentration of viral particles when Protargol was applied, and a whopping 11,000 times reduction in viral particles when the more highly concentrated Collargol was applied.

### **Silver Inactivates Herpes Simplex Type I and II Viruses**

Going back even further, a study conducted in 1972 at Department of Microbiology, Tohoku University, Sendai, Japan demonstrated that the Herpes Simplex Virus types I and II were totally *inactivated* by low concentrations of silver nitrate, which is a more caustic, chemical form of silver.

According to the study, silver nitrate caused so much damage to the viruses, they simply could no longer cause infection.

### **EPA Approves Use of Colloidal Silver Spray Disinfectant that Kills Viruses on Surfaces**

Moving forward to recent years, even the Environmental Protection Agency (EPA) has now approved silver for certain antiviral purposes.

As reported by the Silver Institute (a group which keeps silver investors apprised of all of the new uses for silver in business and industry), the EPA has recently approved the use of a product called Axen30, a liquid spray disinfectant similar to colloidal silver, for use in child day-care centers, preschools, schools, gymnasiums and children's activity centers.

Axen30 is a dilute formula consisting of 30ppm silver used as a spray disinfectant. But here's the interesting part:

The EPA-approved advertising claims for Axen30 include a 30-second kill time and a 24-hour residual kill time on standard indicator bacteria, a two-minute kill time on the resistant bacteria MRSE and VRE, a 10-minute kill time on fungi, a **30-second kill time on HIV Type I, and a 10-minute kill time on other viruses.**

Now that's amazing – a **proven** 30-second kill time against HIV (i.e., Human Immunodeficiency Virus, aka the AIDS virus), and a ten-minute kill time against other viruses!

### **Silver Compound in Countertops Eliminates SARS Virus**

One of the most feared viruses now being studied by scientists is the SARS (Severe Acute Respiratory Syndrome) virus – an upper respiratory virus that causes severe acute respiratory syndrome, leading to death in a large preponderance of cases.

It has been found that while SARS spreads through the usual routes, such as the airborne route caused by coughing and sneezing. But a large percentage of infections by this virus are caused when the virus simply lands on a countertop and sits there, awaiting someone to come by and touch that countertop, then touch the virus to their eyes, ears, nose or mouth.

Perstorp, a Swedish manufacturing company based in Italy, manufactures a special polymer from which countertops are made. What makes the Perstorp countertop unique is that extremely tiny nanosilver particles are impregnated into the polymer.

Upon human contact, the nanosilver-impregnated polymer begins emitting silver ions. This unique silver ion-emitting polymer was developed for use with products such as toilet seats, door knobs, and other common contact surfaces.

According to news reports, the compound was successfully tested by the Chinese Centre for Disease Control against SARS, which has a particular interest in public safety due to the numerous SARS virus outbreaks of the past few years in China.

Zhang Panhe, professor at the Academy of Military Medical Sciences in China, recently stated,

***“We tested the compound against a four-hour, eight-hour, and 24-hour exposure period and found no surviving SARS virus upon 24 hours of exposure to the polymer...”***

In other words, when the polymer was purposely contaminated by the SARS virus, it began killing the virus within four hours, and had killed all SARS viruses on the surface within 24 hours.

This special silver-impregnated polymer is now in use in many hospitals, laboratories and medical research facilities throughout China.

What's more, many variants of silver-impregnated polymers are being used in similar medical-related facilities around the world, in order to help stop the spread of potentially deadly bacterial, fungal and viral pathogens.

### **Monkeypox Virus Inhibited by Silver Nanoparticles**

Even some of the most exotic viruses have been demonstrated to be sensitive to silver.

According to a study published in volume 3, number 4, April 2008 edition of **Nanoscale Research Letters**, very small silver particles (10nm in size) significantly inhibited the infectivity of the Monkeypox virus.

The study was conducted in conjunction with the Applied Biotechnology Branch, Human Effectiveness Directorate of Wright-Patterson Air Force Base in Ohio.

The study's authors concluded,

*“These results demonstrate that silver-based nanoparticles of approximately 10nm inhibit Monkeypox Virus infection in vitro, supporting their potential use as an anti-viral therapeutic.”*

According to Wikipedia.com, monkeypox virus is usually transmitted to humans from rodents, pets, and primates through contact with the animal's blood or through a bite. Its symptoms can be difficult to distinguish clinically from smallpox (to which it is closely related) and chickenpox (to which it is not related).

You may remember news headlines back in 2003 regarding an outbreak of monkeypox virus in the U.S. Midwest, among owners of pet prairie dogs.

What this demonstrates is that very tiny micro-particles of silver, known as nanosilver, are even effective against exotic viruses such as those coming from animals! If that doesn't put you in mind of the recent “Swine Flu” scare, in which the infectious agent was shown to be a hybrid of swine, bird and human viral parts, I don't know what will.

### Silver Prevents Replication of Hepatitis B Virus

In a recent study conducted by scientists at the University of Hong Kong, it was demonstrated *in vitro* (i.e., in the test tube) that very tiny silver particles have the ability to interact with viral DNA in such a way as to prevent replication, whether the virus was *inside* the host cells (i.e., inside human cells, where viruses would normally replicate) or *outside* the host cells.

This is especially important, because it implies that silver can not only prevent viruses from infecting cells, but can also stop cells that are already virally infected from spreading the infection.

According to a research abstract from the University of Hong Kong, the scientists examining the action of silver particles on the Hepatitis B virus “hypothesize that the direct interaction between these nanoparticles and HBV double-stranded DNA or viral particles is responsible for their antiviral mechanism.”

The scientists point out that this only demonstrates the effectiveness of very tiny silver particles against the HBV (i.e., hepatitis B virus), and not necessarily other viruses. Nevertheless, once again we have a study demonstrating conclusively that very tiny particles of silver have the ability to interfere with viruses, preventing them from interacting with human cells and causing infections.

According to a news article about this study, the researchers discovered that:

*“...ultra-tiny silver particles could reduce the extracellular DNA formation of HBVs by over 50 percent, and could check their intracellular RNA formation, too.*

*‘Silver nano-particles have special properties such as larger active surface and porosity so that they can easily bind with small molecules,’ China’s XINHUA news agency quoted Lu as saying, referring to a hypothetical explanation they had put forward on the new antiviral mechanism.*

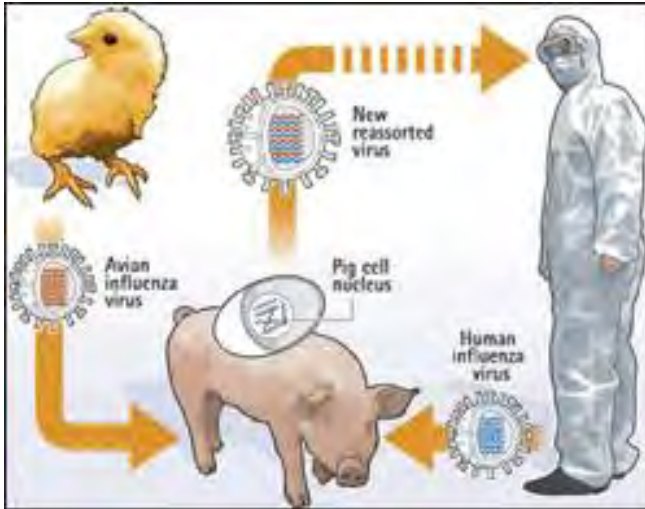
*‘The finding provides a new direction for developing new anti-HBV drugs, with nano-particles used as drug carrier to enhance the antiviral efficacy while minimizing the undesirable side effects,’ Lu told a press conference Monday.*

*The young researcher said there are currently only two kinds of drugs approved for treating chronic HBV infection, namely immunomodulators and nucleoside analogues. But their uses are affected by side effects and drug-resistant mutations.*

*Hepatitis B is one of the worst killers as it chronically infects over 400 million people worldwide, with certain developing countries and regions hit hardest.*

*Lu said silver nano-particles have an additional distinct advantage. It is unlikely that HBV can become resistant to silver nano-particles because the interaction is determined by the physiochemical properties of the tiny particles.”*

### Is Colloidal Silver the “Final Solution” to the Coming Viral Plagues?



Finally, two highly respected researchers, Dr. Eric Gordon, M.D. and Dr. Kent Holtorf, M.D., writing in the prestigious **Townsend Letter for Doctors**, believe colloidal silver is the answer to many forms of viral infections, including serious upper respiratory viral infections such as flu pandemics.

**They point** out in their article titled ***A Promising Cure for Upper Respiratory Tract Infection Pandemics, Including the Avian Flu: Has the Final Solution to the***

***Coming Plagues Been Discovered?*** that, “the collective authoritative medical literature has documented efficacy of silver’s virotoxicity against over 24 viruses.”

What’s more, the authors state that the 200-plus viral strains known to cause upper respiratory tract infections, including most flu viruses, will also most likely succumb to the powerful antiviral qualities of very small particles of “oligodynamic silver” (i.e., a medical reference to silver being extremely powerful even in small quantities).

In fact, the authors point out that silver is likely going to be **the** answer to any future global viral pandemic, stating,

*“A broad-spectrum anti-viral agent that really works is needed to combat over 200 viruses that cause Upper Respiratory Tract Infections. Undoubtedly oligodynamic silver fits this bill...Emerging medical studies confirm the stellar, broad-spectrum virotoxic efficacy of oligodynamic silver both in vitro and in vivo.”*

Indeed, the authors state, not only has silver been demonstrated to decimate many of the viruses associated with deadly viral flu infections, but it has also been proven to decimate most of the well-known bacterial pathogens that cause serious secondary infections during a viral infection, including the following:

- Streptococcus pneumonia
- Corynebacterium diphtheriae
- Neisseria gonorrhoeae
- Klebsiella pneumoniae
- Haemophilus influenzae
- Bordetella pertussis
- Mycobacterium (Tuberculosis)
- Inflammatory conditions of the eyes, ears, nose, and throat
- Spring Catarrh
- Pneumococci
- Pneumonia

It is these secondary bacterial infections that often kill the infected individual, once the flu virus has sufficiently weakened the body.

But colloidal silver's powerful, broad-spectrum anti-pathogen qualities covers such a wide range of pathogens you can easily see why the report's authors – both respected medical doctors – refer to it as *“the Final Solution to the Coming Plagues.”*