

Nano silver

Available in spray bottle 15 ml, pipette bottle 100 ml, pouring bottle 200 ml and pouring bottle liter

- Most versatile natural antibiotic
- Kills more than 650 different pathogenic bacteria, fungi, viruses, yeasts and parasites
- Powerful anti-inflammatory agent for bacterial infections
- Widely applicable detoxifier for intestines, blood, brains and organs
- Helps to break down the pathogenic biofilm
- Works as a "second immune system", beneficial to flu and colds, and also strengthens the effect of other supplements
- Activates the body's own recovery process
- Can convert damaged cells into stem cells
- Works both internally and on (damaged) skin and is allowed on open wounds
- Contributes to a good bowel movement and losing weight when overweight
- Natural preservative

Composition: Purified water, nano silver 15 ppm.

Excipients: None

Usage advice:

Nano silver undiluted, best on an empty stomach.

Preferably keep in the mouth for 1 minute before swallowing. This promotes direct absorption from the oral mucosa into the bloodstream.

Can also be applied directly to the skin, mucous membranes, open wound, calcium nail or in the ear or eye.

Note: when using silver for the first time, build up slowly due to possible detoxification reactions such as a red or itchy skin or headache. With repeated use, the maximum dose can usually be used immediately. Do not put the bottle on the mouth, but use the supplied measuring cup, your own cup or a spoon. This may also be a metal spoon.

Nano silver can be used for short periods in support, for example together with D-mannose in case of a bladder infection, or together with zinc or echinacea in case of flu and colds. In the case of chronic or recurrent symptoms, we advise to use the liter bottle for a course of about 5 weeks to give the immune system a "boost" and to rid the blood and organs of excess waste products.

Silver is also the ideal basis for cleaning the intestine, for example with psyllium fibers and chlorella, followed by L-glutamine and zinc.

Dosage External

Spray: spray 1 to 3 times 1 to 3 times a day on the affected area (a bottle contains 150 sprays)

Pipette: apply 1 or 2 drops with pipette 1 to 3 times a day

Compress: soak, cotton, gauze or cotton cloth with silver and apply to the affected area

Dosage internal

Adults:

5 ml / 1 teaspoon to 30 ml / 3 tablespoons per day. Up to 90 ml / 9 tablespoons per day.

Easy to build up at first use. Depending on diversity of complaints and constitution type of the person, start with 5 or 10 ml and build up in steps of 5 or 10 ml per day to 30 or 60 ml.

The average effective dose is 30 ml per day, this can be individually different, for example 60 or sometimes 20 ml per day. When detoxification reactions occur during silver use, reduce the dose and increase it again until the desired effect is noticed. In the absence of the desired effect, increase the dose to 90 ml per day for up to 14 days. Possible increases of the indicated 30 ml dose may be desirable in case of acute inflammations, prolonged constipation, severe flu or cold sore.

For maintenance 5ml / 1 teaspoon per day

For gum problems: 2 to 3 times daily a tablespoon immediately after a meal, rinse and swallow or spray several times.

Babies and children:

0 to 2 years: a few drops to 5 ml / 1 teaspoon per day. Maximum 1 tablespoon per day

2 to 6 years: 5 ml / 1 teaspoon to 10 ml / 1 tablespoon per day. Up to 2 tablespoons per day

6 to 12 years: 10 ml / 1 tablespoon to 20 ml / 2 tablespoons per day. Up to 3 tablespoons per day

Pregnancy and breastfeeding:

Up to 10 ml per day to prevent detoxification symptoms.

For thrush on babies tongue or cracked nipples: 2 sprays 3 times daily in both babies mouth and on nipples.

Animals:

In case of infections, wounds, cystitis, abscesses, kennel cough, sneezing disease, prevention of parasites, scabies and other skin diseases.

2 x daily, depending on the condition: place 0,5-1 teaspoon per 10 kilograms of body weight in the throat of the animal or mix with the food or the drinking water.

Particulars:

People can quickly experience a reaction through rapid admission.

For example, eye inflammation, skin irritation or painful gums or sore throat can often be remedied within a day, sometimes within 10 minutes. However, detoxification symptoms can also occur quickly. Although they usually do not stay, it is good to be aware of symptoms such as headache, nausea, diarrhea, irritated skin and excessive sweating. Always build up the dose, to be sure, quietly, especially if someone has poor health or is very sensitive.

In chronic complaints, for which a liter bottle of silver is taken as detox treatment and "boost" for the immune system, there is almost always (also) a disturbed intestinal flora. We therefore recommend using a probiotic after the silver cure.

Nano minerals are generally transparent, odorless and tasteless. Sometimes very subtle color, odor and taste changes can occur.

Shelf life:

The dark violet glass protects against oxidation. The bottles therefore do not have to be stored in the refrigerator. After opening, they can be kept for at least 12 months. The product is oxidized with large color, taste or odor changes. We advise you not to do this internally anymore use. However, it can still be used for utensils for decontamination of sink, sink, telephone, refrigerator, dustbin, etc.

Indications for use:

- Acne
- Sores
- Allergies
- Allergic skin rash
- Adrenal exhaustion
- Cystitis (chronic)
- Burns
- Candida
- Caries
- Preservation of food
- Preservation of flowers
- Intestinal complaints
- Diarrhea
- Ebola
- Eczema
- Flu
- Shingles
- Herpes
- Skin complaints
- HPV virus
- Immunity weakening
- Sore throat
- Cold sore
- ENT complaints
- Leaky gut
- Scars
- Airway disorders
- Lyme
- stomach ulcer
- Mouth smell
- MRSA
- hives
- Constipation
- Eye inflammation
- Ear infection
- Disinfection (open wounds, hands, toilet seat, cutting board, telephone)
- Pfeiffer
- Psoriasis
- Rhinitis
- Rotavirus
- Scars

- Gum problems
- Transpiration smell
- Chicken-pox
- Warts
- Common cold
- Reduced resistance
- Sweaty feet (prevents smell)

Interactions:

No interactions with other nutrients or medications are known for nano silver, and in practice, for decades, other supplements and / or medication have been used without negative side effects.

Note: silver salts can have side effects. See "using safe silver".

However, it is known that selenium, NAC and vitamin E contribute to the removal and excretion of (surplus) silver.

Herxheimer reaction

Because of the biocide and antiseptic effect of silver, the body suddenly has to process more waste than normal, which can cause detoxification symptoms, also known as the herxheimer reaction. Examples include headache, nausea, sweating, itchy skin or slight skin rashes and rambles in the gut. This can easily be prevented by quietly setting up the dose or can be stopped by lowering the dosage or temporarily ceasing the intake. Supplements such as psyllium fibers, chlorella and NAC can also ensure better processing of the released waste (end-of-life pathogens).

Benefits of nano silver

Silver comes in various forms. The best known is bulk silver, as in jewelry and cutlery. For medicinal applications silver salts, silver proteins, elemental or metal silver and ionic silver are used. Silver salts and silver proteins were mainly used at the beginning of 1900, but are now seen as inferior products. They are large, sensitive to oxidation and much less powerful in their biocidal action. They can also cause argyria. All forms of silver release ions. Ions are extremely reactive and act as a powerful biocide and antiseptic because they are highly toxic to pathogens. However, ionic silver is not stable. Nano silver is the newest variant. This is metallic silver, in tiny particles, usually around 1 nanometer, with a powerful electromagnetic field. The electromagnetic charge at the interface of the silver particle and the medium in which it "floats" is called zeta potential. A high zeta potential guarantees a stable, safe and highly effective silver product with a long shelf life.

Nano silver from THF has a particularly high zeta potential due to its revolutionary production methods. In addition, the silver particles are uniformly circular. Research has shown that circular metal silver particles below 10 nm have the most powerful biocidal properties without affecting healthy cells.

PPM, particle size and color

PPM stands for parts per million, and is an adopted standard that actually says as much as mg per liter. Many people think: "The more PPM the better". This is a big misunderstanding! The effectiveness of silver mainly depends on the shape and the particle size.

For comparison: When you put 10 coffee beans in a glass of hot water, you do not have coffee yet. When you cut those same beans into pieces, you literally have a weak infusion. Only when you grind the beans into a powder with a special device and then let hot water flow through this powder with a special pressure do you have good quality coffee.

The smaller the coffee particles, the better the result. So it is with silver and other nano minerals. The smaller the particles, the easier they can "dissolve" and can be transported anywhere to do their work there. Moreover, due to small particles you have to deal with the same quantity of silver, much more particles or 'soldiers' for your body.

The color of a good quality colloidal silver must always be transparent. Particles under 20 nm cannot reflect color according to the Tyndall effect. When your silver water is yellow or blue, the particles are many times larger and therefore many times less effective and perhaps even toxic. Silver can also turn yellow through oxidation. This is also not suitable for intake.

More about the effect of nano silver

The effect of silver is based on different mechanisms. A number of mechanisms are known, but it is not always easy for science to unravel the intelligence of the body.

Silver enters the cell and deactivates replication

Nano silver particles can attach to the surface membrane of pathogenic bacteria and other pathogens and there block their oxygen supply and die off. They can also, when small enough and sufficiently loaded, penetrate a bacterium or virus, destroy important proteins such as glycoproteins, RNA and DNA, so that reproduction stops and the virus or bacterium dies. Yeasts and fungi are also rendered harmless by silver in these and other ways [4,5,9,15,18].

Stem cells

Several studies confirm what Dr. Becker said in the 1970s: silver induces de-differentiation of cells, which can then form back to stem cells. Stem cells can take any desired form, thereby stimulating healing [15,17].

This makes silver not only effective as a biocide and antiseptic, but also actively initiates healing.

Cancer cells

Various studies show that nano silver particles inhibit certain types of cancer cells in their growth and stimulate apoptosis (suicide of the cancer cell), without affecting healthy cells. Dr. Becker and many other doctors like Dr. Nordstrom from the Karolinska Institute in Sweden, described decades ago the beneficial effects of silver against cancer. Possible explanations for this were the strengthening of the immune system and the influence on stem cells. Exactly how it works, the researchers are still unclear. According to oncologist and scientist Dr. Gary Smith cannot de-differentiate cancer cells without silver, causing them to grow further [11,12,15].

E. Coli and S. Aureus

Several studies have shown that silver ions neutralized bacteria from, among others, gram negative Escheria Coli bacteria, and gram-positive Staphylococcus Aureus (including MRSA), by dislodging the cytoplasm of the membrane and inactivating the protein in the cell. The DNA in question lost its ability to replicate. Different temperatures and PH values made no difference [4,9,18].

Ebola, HIV-1 and other viruses

American research, which was interestingly denied at the time of the Ebola outbreak, revealed that silver nanoparticles were able to neutralize hemorrhagic (bleeding-paired) fever viruses, including Ebola, in the cells by stopping gene expression and reproduction of the virus. For the effectiveness of the silver treatment it was important that the silver was either used preventively or was taken within a few hours after contamination.

The researchers also discovered that an enzymatic protein called Cathepsin plays an essential role in the replication of the Ebola virus. Silver nanoparticles undermine the activity of cathepsin, limiting viral replication in the cell and subsequent spreading of the virus.

Of particular interest here is that it was found that concentrations of only 10 ppm seemed to work better than concentrations of 25 or 50 ppm. In addition, the smallest silver particles proved much more effective than the larger silver particles. This again confirms that the particle size is much more important than the ppm (mg / liter) [13,18].

In a two-year study in subjects with chronic recurrent respiratory and knee complaints, usually caused by viruses, respiratory infections remained and sinus complaints were within 1 to 2 weeks when 1 to 6 tablets of nano silver were consumed daily. Surprisingly, unexpected observations of increased mental alertness, increased energy and improved vision for near and distant vision were also reported [8].

Yeasts and fungi

Silver inhibits candida and other yeasts and fungi as well as the biofilm. A number of studies showed that silver was absorbed by traces of fungi, after which the germination of these fungi was completely inhibited, within 1 minute [16,18,19].

"Zombies Effect"

Very interesting is also the "zombies effect". In 2015, Scientific Reports published that silver-killed bacteria, before they are cleaned up by the immune system, could kill other, living, pathogenic bacteria! The sickening bacteria have become a biocidal agent for their co-mates, after being killed. Silver is not only a biocide and antiseptic that can do its work over and over again until it is excreted, but also enlarges its own army [14].

Circular nanoclusters most effective

In 2005, J.R. Morones J.L. Elechiguerra JL showed that only metallic silver colloids smaller than 10 nm were able to adhere and then penetrate into the gram negative bacteria that were inoculated on agar plates (grafted on nutrient medium). They reported that these silver nanoclusters were circular. The overall effect of the metallic silver nanoparticles was different from the effect of silver ions, which mainly occurred on the surface of the membrane and caused a protective mechanism in the bacteria. The metallic silver nano clusters did not cause this protective mechanism and could penetrate into the bacteria and subsequently disrupt functions such as permeability, replication and respiration [8].

Historical and contemporary use of silver

Silver coins, cutlery and bowls have been used since ancient times as a natural antibiotic and preservative for food and beverages. Both the ancient Greeks and Romans as well as the

ancient Chinese cooked silver and gold coins with their food to promote their health. The first cowboys, vaqueros, who were long-term in Spain and Mexico to feed the cattle, used around 1,600 silver coins to keep milk and other foods fresh for longer. They also pressed the silver on their injuries to protect themselves against bacterial infections. The nobility also used silver tableware to keep diseases out of the door. There was one disadvantage: the relatively large silver particles that they received from porous tableware could pile into tissues, which under the influence of sunlight could produce a blue-gray discoloration of the skin and mucous membranes, argyria called. Although argyria is not toxic, it is aesthetically speaking a nasty condition that gave the nobility the term "blue blood".



Improvement of quality

Colloidal silver was discovered at the end of the 19th century. A form of silver in which super small particles in water continued to "float" through their electromagnetic field.

Until then, the silver was still mechanically ground into small particles and added to water. To keep the product stable and in suspension, silver salts were used, proteins or a dispersant added. This meant that silver products from that time were less effective and safe than now. Nevertheless, there were already achieved great health-promoting results.

In 1893, Carl von Nägeli discovered the "oligodynamic effect". The phenomenon whereby metals such as silver, copper and tin, already in very small doses, have powerful biocidal properties when they consist of tiny particles. Nägeli found that oligodynamic silver (nanoparticles) was already working at less than 5ppm (5 milligrams per liter). Of these nanoparticles you needed much less for the same effect, which virtually eliminated the chance of any side effects. Nägeli's research led to the improvement of technology, using nanoparticles for many antiseptic, medicinal applications. Still, it took several years before completely safe and very powerful silver products came on the market without any side effects.

Since 1900 colloidal silver has been used extensively in a wide variety of complaints from skin irritation to meningitis! Doctors and pharmacists prescribe colloidal silver water for eye and ear infections, allergies, virus infections, conjunctivitis, bladder infections, ulcers, inflammation of the intestines, gastroenteritis, diarrhea and constipation, candida, septicemia, pleural inflammation, burns, bronchitis, eczema, shingles, psoriasis, acne, red dog and ringworm, flu, colds, sore throat, bronchitis, whooping cough, hepatitis, herpes, legionella, lymph node inflammation, malaria, multiple sclerosis, salmonella, fungal infections, thrush, Lyme disease, tuberculosis, gum disease and depression. A panacea!

Many researchers from that time showed that silver and mercury were highly effective biocides. The work of Henry Crookes, from 1910, showed that *B. coli communis* was killed by colloidal mercury in 2 minutes and by colloidal silver in 6 minutes.

The statement: "no pathogen is known that is not killed in a laboratory with colloidal silver within 6 minutes" comes from this time, following the many test results.

The Lancet published the work of Simpson and Hewlett in 1914, showing that they could kill the Typhoid bacillus bacterium in 15 minutes with a 500 ppm colloidal silver solution, but with only 5 ppm in just two hours. This was a breakthrough because 5 ppm was completely safe for human use. Silver gained an unprecedented popularity.

Penicillin

In Europe and America silver was so popular that as many as 94 different silver preparations were registered as an official medicine in a short time.

However, in 1938 this registration was withdrawn. In the same year came the introduction of penicillin, which could be patented by isolation. The publications on silver were drastically reduced and the research on silver became much more difficult to find.

In 1941, the commercial production of penicillin, aided by pressure from the war situation, got off to a good start and this resulted in a lucrative business that is still the most lucrative trade worldwide! In 1995 alone, 13,550 infections of the bacteria *Staphylococcus aureus* took place in hospitals in New York, which involved costs of no less than \$ 435 million! A gem for the pharmaceutical industry.

Silver again under the attention

From 1960/1970 there was another revival regarding colloidal silver. In 1966, the magazine "Surgical Forum" published a very remarkable report from Brentano showing that colloidal and ionic silver solutions as well as combinations of those two had very positive effects in the treatment of burns. Many agents were tested and it appeared that silver was the most effective, especially in the treatment of the bacteria *pseudomonas aeruginosa*, a bacterium that is notorious as a hospital bacterium in the wound infection of burns.

Researchers and medical professionals made new discoveries, rediscoveries, wrote books and improved the production process colloidal silver. In many laboratories, glass culture dishes for bacteria were sterilized by inserting a silver plate. Since then, silver has also been used in water purification plants and in water tanks in aviation and aerospace. NASA has re-conducted Nägeli's research and came to the same conclusion: nano silver is safe and highly effective as a biocide. Since then they use it to purify their drinking water. The Swiss company Katadyn has specialized for decades in water purification and water storage both for the food industry and for private use in for example hotels in the tropics. From that moment on, there was also a lively market of home, garden and kitchen appliances to make colloidal silver at home. Although people benefited and have, the quality was and is much less high and not suitable for long-term use. Cases of argyria were again found in people who drank large amounts of home-made silver for years on end.

From about 1995, silver is also used in the textile and shoe industry as a bacteria killer and odor fighter. In 2005 silver was used as fiber in underwear by the English army in Iraq to prevent bacterial infections.

Colloidal silver has been used since 1954 to keep swimming pools sterile, prevent algae growth and purify drinking water.

Silver in the 21st century

The medical application of silver after 1938 is largely suppressed by the regular antibiotics, an industry where so much worldwide is earned that it beats every other industry on profit margin. But nowadays, silver water is increasingly being used as an alternative to antibiotics. It is even

added to existing antibiotics that will become effective up to a factor of a thousand in their operation [6]! Silver was tested positively at the beginning of 1900 on the killing of more than 650 different pathogens, and recently on o.m. Staphylococcus aureus, Escherichia coli, Sars and Ebola.

Due to the growing immunity of bacteria against pharmaceutical antibiotics, an increasing number of studies are looking for a good alternative to infectious diseases, where silver appears to be the ideal candidate.

Other (experimental) research shows accelerated bone growth after a break. This characteristic was also found to apply to other body tissues. Silver also accelerates the repair of skin cells in case of wounds and skin infections.

American researchers, looking for an effective remedy against Ebola and related viruses, found that nano silver is effective against all viruses that cause hemorrhagic fever. They also discovered that nano silver was especially effective when taken preventively or in the first hours after the infection.

Silver is now also used to color cells after which a diagnosis can be made in neuropathy. In medical devices such as pacemakers and artificial hips, silver is used to prevent bacterial spots in the body. Shampoos, patches, creams and sportswear are enriched with silver for an antibacterial effect and faster recovery of the skin. Silver is widely used in the treatment of burns. It also ensures less scar tissue.

Famous reference books on colloidal silver

Dr. Paul Farber wrote a book about colloidal silver in the last century, after he healed himself from Lyme disease and an additional fungal infection (Candida) using colloidal silver. In his book 'Micro Silver Bullet' Dr. Farber writes: "Research has shown that colloidal silver successfully used in many diseases, caused by as many as 650 different pathogens, including acne, rosacea, all kinds of allergies, athlete's foot, parasites blood, corneal inflammation, Lyme disease, Malaria, meningitis, pneumonia, psoriasis, shingles, all types of viruses, warts, whooping cough, HPV virus, Aids and the MRSA bacterium. **

The book of Dr. Josef Pies: 'Colloidal silver- A natural antibiotic' explains how colloidal silver supports our immune system. "In the US colloidal silver had a comeback and interest in this effective is growing in Europe too agent in the treatment of infectious diseases ", however, silver can be used much more widely to support the immune system, as a general detox or powerful anti-inflammatory agent for eye infections or sore gums. Both in the short and longer term.

References (most are original Dutch sources)

1. <http://www.silver-colloids.com/Book/SilverColloids-s.pdf>
2. Ions, Atoms and Charged Particles, By Francis S. Key and George Maass, PhD
3. An In-depth History of Silver, medical uses of colloidal silver through the ages, Eric J Rentz, Do, MSc.
4. Antibacterial Activity of Silver-nanoparticles Against Staphylococcus aureus and Escherichia coli, Korean J. Microbiol. Biotechnol. Vol. 39, No. 1, 77–85 (2011)
5. Viral Pathogens and Severe Acute Respiratory Syndrome: Oligodynamic Ag⁺ for Direct Immune Intervention, Renz,

6. Silver Enhances Antibiotic Activity Against Gram-negative Bacteria, J. Ruben Morones-Ramirez,^{#1,4} Jonathan A. Winkler,^{#1,2} Catherine S. Spina,^{3,4} and James J. Collins^{1,2,3,4,*}, sep 2012
7. A Pharmacological and Toxicological Profile of Silver as an Antimicrobial Agent in Medical Devices, Alan B.G. Lansdown
8. Clinical Applications of Gold and Silver Nanocolloids, Guy E Abraham, MD
9. Feng OL, Wu J, *et al.* "A Mechanistic study of the antibacterial effect of silver ions on *Escherichia coli* and *Staphylococcus aureus*." J Biomed Mater Res, 2000; 52:662-668.
10. <https://www.mddionline.com/role-antimicrobial-silver-nanotechnology>
11. Anti-tumor Activity of Silver Nanoparticles in Dalton's Lymphoma Ascites Tumor Model, Department of Biotechnology, Division of Molecular and Cellular Biology, at Kalasalingam University in India, 2010
12. Antitumor activity of colloidal silver on MCF-7 human breast cancer cells, J.Excp, clinical cancer Res, 16 nov. 2010
13. fever viruses Novel Nanotechnology-Based Antiviral Agents: Janice Speshock, Ph.D. Saber Hussain, Ph.D. Applied Biotechnology Branch 711th Human Performance Wing Air Force Research Laboratory
14. Antibacterial activity of silver-killed bacteria: the zombies-effect, Racheli ben Knaz, Waksalak, Rami Pedahzur & David, avnir, scientific reports, 23 april, 2015
15. Publicatie: Colloidaal zilver, een wonderbaarlijk middel. Marvin Lee Robey
16. Fungicides, Toxic Action of Metal Ions to Fungus Spores, L. P. Miller, S. E. A. McCallan. *J. Agric. Food Chem*, 1957
17. Induced dedifferentiation: a possible alternative to embryonic stem cell transplants. NeuroRehabilitation. 2002;17(1):23-31.
18. Adviesrapport nanozilver, in opdracht van Vereniging Leefmilieu, Anne Dullemeijer, Leon Munting, Guus Reyngoud en Lisa Spronck, 2011
19. <http://thesilveredge.com/study-antifungal-effect-against-adhered-cells-and-biofilms-of-candida-albicans-and-candida-glabrata.shtml#.WcKqiPNJbIU>