

SILVER

Latin: *Argentum* – chemical symbol **Ag**

Functions: none known

Therapeutic applications: astringent when applied externally
corrosive
enhances wound granulation
bactericide, disinfectant

Negative biological effects: possible inner organ damage and
"rheumatic-like" joint complaints
when ingested

Sources: silver-containing eye drops
dental amalgam (besides Hg and Sn)
photography paper

SILVER

An ancient remedy

Silver has been used as an external remedy for a long time. At low concentrations it acts as an astringent and also kills bacteria by reacting with bacterial proteins. At higher concentrations, such as in the lunar caustic form, it is corrosive. For prevention of gonococcal conjunctivitis (infection on the membranes of the eyeball and eyelid) in newborns, one drop of a 1-2% silver nitrate solution is administered into each eye. These drops are considered necessary because gonorrheal-type eye infections following birth can lead to blindness.

In the case where silver is taken up by the body and distributed by the blood, damage can occur to the inner organs in particular, and rheumatic complaints can also arise. These negative effects can be intensified by deficiencies in zinc and copper, which are antagonistic (act in opposition) to silver. A patient is described (she is a gold and silversmith) whose rheumatic condition had previously been treated unsuccessfully at several orthopedic clinics (see Section 2). A career change was not an option, so after a working diagnosis of silver excess was made, treatment led to symptom improvement and the patient remained active in her career.

The symptoms of silver poisoning are described in the literature as follows: rheumatic complaints in the muscles, ligaments, joints and spine; headaches; nausea; memory loss; anxiety; and rapid exhaustion. Overdoses of silver can cause, among other things, argyrosis conjunctivitis – permanent pigmentation of connective tissue (and eventually corneal tissue) due to silver deposition. This most often results from the administration of silver-containing eye drops.

At the beginning of the 20th century, circuses would present the “Blue man”, who after 35 years of work in a silver mine, had accumulated silver deposits almost everywhere in his body, especially visible all over his skin.

Besides mercury and tin, dental amalgams (fillings) contain considerable amounts of silver.

Due to industrial waste, 2500 tonnes of silver were released into the environment worldwide in 1977. At the moment, environmental levels of silver do not pose a general risk to the public.