

# A history of **SILVER** in healthcare

By Kelly Rose

Silver has been used in many different forms for centuries.

In fact, the term 'born with a silver spoon in the mouth' comes from the use of silver cutlery and utensils. Babies fed with silver spoons in the 18<sup>th</sup> century were believed to be healthier than those fed with utensils made with other materials. English nobility frequently ate with silver cutlery and drank from silver tankards, which seemed to help prolong life expectancy.

So, how can this mineral be responsible for improved health?

## Natural properties of silver

It was noted very early on that silver has natural antibacterial properties, which itself led to an improvement in health as infection causing bacteria were killed off. It has been said that silver was perhaps the most important antimicrobial compound before the introduction of antibiotics in the 1940s.

The process behind how silver works is not fully understood but it has been noted that the antibacterial action of silver was attributable, primarily, to the silver ion. Some evidence shows that silver ions can bind to the DNA of bacteria and their spores, and can interfere with their replication. It is also thought to interfere with the cell wall of bacteria and prevent oxygen transport - effectively killing them. Silver has been shown in studies to be effective against a wide range of bacteria and demonstrates effectiveness against over 650 species. It has also been shown to have antiviral properties, much like in bacteria, by binding to viral cell walls preventing replication.

## Storage and preservation uses

The use of silver as an antimicrobial agent began many years before the English nobility insisted on silver cutlery. In fact, Herodotus, the 'Father of History', accounts that no Persian king, including Cirrus, would drink water that was not transported in silver containers, which kept the water fresh for years. This was particularly important in military conflicts, where fresh water for natural sources was not readily available. During the early pioneer days on the North American continent it was common practice to drop silver coins into the water vessel to preserve it. This practice was also used to preserve milk and prevent spoilage.

## Medical uses

As silver became more versatile and effective, its use extended to the medical world. Hippocrates was known to use silver preparations for the treatment of ulcers and to promote wound healing. Prior to the development and introduction of antibiotics, silver became a reliable addition in the battle against infection.



It is reported to have been used for gum conditions such as gingivitis, eye conditions like blepharitis and corneal ulcers, infections after childbirth and many other infective diseases.

Dr William Halsted (1852–1922), an influential and innovative surgeon, pioneered the use of silver in surgery to prevent wound-related infections. Silver has since been used in suture material, urinary catheters, wound dressings and even in endotracheal tubes, which are used for keeping airways open during surgery.

The use of this versatile mineral declined following the introduction of pharmaceutical antibiotics. EU regulations on silver have more recently influenced people's choices.

**Sometimes it's worth remembering that the old remedies can be very effective, especially those with a history as successful as silver.**