

# Medicine is going for gold as experts rediscover the ancient properties of the precious metal

By [Caroline Bellamy](#)

Last updated at 9:38 PM on 07th June 2008

Throughout history, gold has been revered for its health-giving properties.

It is thought Cleopatra slept in a pure gold face mask to enhance her bewitching beauty, and in ancient Rome, gold salves were used to treat a variety of skin problems.

They may have been on to something. Today, the precious metal is becoming increasingly important in many modern medical - and beauty - treatments.



---

**Golden remedy: The precious metal is coming into its own as a curative**

---

'Gold is very resistant to bacteria and so is often the material of choice for implants that are at risk of infection, such as in the inner ear,' says Dr Richard Holliday, of the World Gold Council.

'It's used in wires for pacemakers and for stents that help support weak blood vessels in the treatment of heart disease. In fact, many surgeons prefer gold-plated stents because they have the best visibility under X-ray.

'A new surgical procedure for prostate cancer involves inserting three gold grains into the prostate. The position of the gold grains can be detected using X-rays, allowing doctors to target the prostate position within one or two millimetres.'

The use of gold compounds in medicine is called chrysotherapy. Since 1929, when a French doctor discovered its anti-inflammatory properties, gold compounds in drugs have been used to treat rheumatoid arthritis.

Scientists do not know how it works but some believe gold - injected with the drug Myocrisin, usually through the buttocks or thigh - modifies the immune response in those with the disease.

However, as an injectable treatment, it's only ever recommended if all else has failed, as some people have suffered side-effects, including mouth ulcers, kidney problems and skin rashes.

In the past few decades, gold compounds have also been found to be useful as potential HIV agents and even cancer treatments.

'Although not all cancer drugs contain metal, the most widely used treatments for many types of cancers are drugs such as cisplatin, whose chemical formula contains platinum.

'The drug, which is injected into the patient, kills the cancer cells but also harms some of the healthy cells, which is why side-effects such as hair loss occur,' says Dr Holliday.

'But researchers at a US biotech company have found that potent anticancer drugs can be safely targeted directly at a tumour using tiny gold particles to deliver the drug with reduced side-effects. Clinical trials are already under way.'

Another US company is developing a therapy using gold nanoshells (tiny particles of gold wrapped around silica) that are injected into the body and then accumulate in the cancerous tumour.

The area is then illuminated with a laser and the gold nanoshells convert the light to heat. This destroys the tumour. The company is hoping to commence human trials for the treatment of head and neck cancer soon.

As for HIV treatments, last month researchers at North Carolina State University discovered that tiny gold particles added to a previously failed HIV drug could rekindle the drug's ability to stop the virus invading the body's immune system.

But as well as its health benefits, gold has been used for centuries in beauty treatments for younger looking skin.

Although there are few scientific studies to support its benefits when it comes to beauty, advocates of gold therapies claim it works wonders.

'Gold appears to slow down collagen depletion and the breakdown of elastin to prevent sagging skin,' claims Kathryn Danzey, who supplies salons with the Umo 24 Karat Gold Facial Treatment, developed in Japan.

She adds: 'It stimulates cellular growth of the deepest layer of the skin to regenerate healthy, firm skin cells and provide a tightening effect.

'Its anti-inflammatory properties are also thought to decrease skin inflammation and seem to slow down melanin secretion and thus reduce age spots. The skin looks wonderful afterwards.'

In 1999, a Russian doctor at the Vishnevsky Institute in Moscow conducted a series of studies on the long-term effects of implanted gold threads. This procedure has gained popularity in Russia and in Japan.

Today, Dr Alexandra Chambers, a cosmetic doctor in Harley Street, is one of the few surgeons in Europe to provide Gold Thread Lift skin rejuvenation treatment that can be used on the face, neck, décolletage, hands, arms, legs, abdomen and even the buttocks.

Under local anaesthetic, gold filaments are threaded within the skin to create a 'net-like' structure under its surface.

'This network provides a mechanical support to the overlaying skin and triggers production of collagen and elastin fibres around the thread,' she says.

'New blood vessels appear in the area, skin becomes firmer and thicker with a better blood supply. It can be effective for up to ten years.'

For a less drastic procedure, London-based facialist Linda Carter offers anti-ageing acupuncture facials using gold-plated needles.

'My clients say they are much more comfortable during treatment,' she says. 'I also like to use them on those who are allergic to stainless steel.'

Find this story at [www.dailymail.co.uk/health/article-1024865/Medicine-going-gold-experts-rediscover-ancient-properties-precious-metal.html](http://www.dailymail.co.uk/health/article-1024865/Medicine-going-gold-experts-rediscover-ancient-properties-precious-metal.html)

Published by Associated Newspapers Ltd

Part of the Daily Mail, The Mail on Sunday & Metro Media Group

© 2009 [Associated Newspapers Ltd](#)