



Colloidal Gold: Discover the Benefits and Wonders

Gold is a precious metal which belongs to the transition group I in the periodic table and exists in nature in two basic forms: metallic gold and gold salts.

Colloidal gold, or nanogold, is a suspension of fine gold particles suspended in water. The therapeutic uses of gold were known to mankind since its discovery. However, it was only recently that mainstream medicine approved the use of gold for treating medical conditions. Colloidal gold is the most convenient form of administering gold in the body. There are abundant benefits and only a few side effects.

Benefits

Calmness

Nanogold induces a feeling of tranquility and calmness amongst the users. It relieves stress, and is a great remedy for anxiety and depression. Although the exact mechanism for this is not yet known, it is believed that colloidal gold increases the supply of energy to brain, thereby soothing the nerves and inducing the feeling of calmness. This probably is the reason why it is recommended as an alternative medicine for brain disorders like Parkinson's disease.

Arthritis

Nanogold is a good remedy for joint pain due to arthritis and rheumatoid arthritis since it reduces inflammation and relieves arthritis pain. Regular consumption of this suspension is reported to have eased the movement of arthritic joints. It is also available in cream formulation so that it can be applied topically over the affected joint.

Higher IQ

Interestingly, colloidal gold is also somehow known to elevate the intelligent quotient of a person. Although the mechanism for this is yet unknown, it can again be attributed to the rush of energy to the brain. It also increases mental alertness by stimulating the brain cells. It can be safely given to small children to increase their IQ levels.

Skin Disorders

Those who do not have any skin problems find that their skin becomes radiant and glowing after regular intake of colloidal gold. Topical nanogold can also be applied for rejuvenation of skin, since it readily gets absorbed in the skin. Besides, people affected by skin disorders such as eczema, fungal infections, skin rash or wounds, skin burns, etc., can also benefit from the application of this suspension. It also prolongs the aging of the skin and retains its collagen content.

Digestion

It improves the health of digestive system by assisting the elimination of toxic waste materials from the body. Thus, it is often recommended for weight loss since the weight gained can be a result of malfunctioning digestive system.

Gold nanoparticles kill lymphoma without chemotherapy

Lymphoma can be starved to death by depriving it of what appears to be a favorite food: high-density lipoprotein (HDL) cholesterol. A new nanoparticle appears to the cancerous lymphoma cell like a preferred meal of natural HDL. When the particle engages the cell, it plugs it up and blocks cholesterol from entering. Deprived of an essential nutrient, the cell eventually dies.

B-cell lymphoma is dependent on the uptake of natural HDL, from which it derives fat content, such as cholesterol. The nanoparticle, which was originally developed as a possible therapy for heart disease, closely mimics the size, shape, and surface chemistry of natural HDL particles. Its key difference is a 5-nm gold particle at its core. When the nanoparticle is incubated with human B-cell lymphoma cells or used to treat a mouse with a human tumor, the spongy surface of the gold particle sucks the cholesterol out of the cell, and the gold core prevents the cell from absorbing more cholesterol that is typically carried in the core of natural HDL particles.

Natural HDL does not kill the cells or inhibit tumor growth. The nanoparticle is essential to starve the lymphoma cell.

C. Shad Thaxton, MD, of Northwestern Medicine, the original developer of the HDL nanoparticle, gave a lecture that was attended by Leo I. Gordon, MD, also of Northwestern. Gordon knew that patients with advanced forms of B-cell lymphoma sometimes have diminishing levels of cholesterol, and he was looking for new ways to

deliver drugs to patients. He contacted Thaxton, and they began the collaboration that led to this publication in *Proceedings of the National Academy of Sciences* (2013;doi:10.1073/pnas.1213657110).

They tested the HDL nanoparticle alone and the HDL nanoparticle transporting cancer drugs. Surprisingly, the nanoparticle without drugs was just as effective at killing the B-cell lymphoma cells.

“We thought, “That's odd. Why don't we need the drug?” Gordon recalled.

That's when the scientists began delving into the mechanism by which the HDL nanoparticles were sticking to the HDL receptors on the lymphoma cell and manipulating cholesterol transport. In addition, patient samples analyzed by collaborators at Duke University for the study showed that lymphoma cells in patients had an overproduction of these HDL receptors compared to normal lymphocytes.

Thaxton and Gordon are encouraged by their early data showing that the HDL nanoparticles do not appear toxic to other human cells normally targeted by HDLs, normal human lymphocytes, or to mice. Also, because gold nanoparticles can be made in discreet sizes and shapes, they are excellent scaffolds for creating synthetic HDLs that closely mimic those found in nature.

“Gold has a good track record of being compatible with biologic systems,” Thaxton said, and added, “Like every new drug candidate, the HDL nanoparticle will need to undergo further testing.”

Source:

