

Our Medical Supply Chain Needs a Strong Domestic Mining Industry

THE MEDICAL AND HEALTHCARE APPLICATIONS OF MINERALS

Minerals and metals are essential to our modern medical world and are key to many of the medicinal innovations we see today, serving as the buildingblocks of the life-saving medical devices and medications that doctors and patients rely on every day. The antimicrobial and antiviral properties of minerals have never been more relevant or needed.

Copper

Not only can it be found in MRI scanners, copper is also critical to inhibiting the spread of viruses and is therefore used across a variety of medical equipment and applications.

When influenzas, bacteria like E. coli, superbugs like MRSA, or even coronaviruses land on copper, they begin to die within minutes and are undetectable within hours.



Gold



Including life-supporting devices, pacemakers, heart stents, CAT Scan devices, and it is used in the treatment of heart disease.

Lithium

Lithium is widely utilized in pacemakers, defibrillator machines and other types of portable electronic equipment.

Silver

Silver is an active ingredient in medical products as it prevents bacterial growth and accelerates the healing process. Because of this, silver is a present ingredient in a number of antibiotics. In fact, a small amount of silver makes E. coli bacteria significantly more sensitive to commonly prescribed antibiotics like penicillin.

MEDICAL TECHNOLOGY

X-RAYS
Silver X-rays are integral to healthcare in developing countries where resources are scarce because they are:
• **Extremely accurate**
• **Cost effective**

ANTIBIOTICS
• **Prevents bacterial growth**
• **Accelerates the healing process**
Silver prevents bacterial growth, accelerates the healing process, and can heighten the effectiveness of certain drugs. For instance, a small amount of silver makes bacteria like E. coli significantly more sensitive to antibiotics like penicillin.

Silver interrupts bacteria's ability to form the chemical bonds essential to its physical structure and survival, and causes the bacteria to literally fall apart.

Ag

Silver nanoparticles sterilize up to **650** TYPES OF BACTERIA

Platinum

Platinum group metals help fight cancer as active ingredients in chemotherapy drugs and in implants for radiation therapy. And because of their resistance to corrosion, they are also often found in medical devices such as pacemakers, implantable defibrillators, catheters and stints.

Titanium

Titanium, which is resistant to bacteria, is a critical component in surgical equipment.