

Cobalt Exposure: What You Need to Know

What Is Cobalt?

Cobalt is a naturally occurring metal that supports human health as part of vitamin B12. However, excess cobalt can be toxic—affecting the heart, thyroid, lungs, ears, eyes, and nervous system.

Common Sources of Exposure

Research shows that vape aerosols may contain more than 14 toxic metals, including:

- **Supplements and B12 injections:** High-dose or overuse
- **Metal implants and prosthetics:** Especially metal-on-metal hip replacements
- **Industrial exposure:** Mining, battery manufacturing, and metalwork
- **Paints and ceramics:** Blue pigments and glazes
- **Food or water contamination** near industrial sites

Symptoms of Cobalt Toxicity

- Fatigue, weakness
- Ringing in the ears or hearing loss
- Vision changes
- Cardiomyopathy (heart muscle weakness)
- Nerve pain, tingling, or numbness
- Thyroid dysfunction
- Cognitive issues or mood disturbances

Cobalt & Medical Implants

Metal-on-metal joint replacements may release cobalt particles, leading to tissue inflammation and elevated cobalt in the bloodstream. Symptoms may appear gradually. Patients with such implants should have blood cobalt levels monitored regularly.

Testing for Cobalt Exposure

- **Blood test:** Best for detecting ongoing exposure
- **Urine test:** Reflects recent cobalt excretion
- **Hair analysis:** May indicate chronic or long-term exposure

Cobalt in Food

Cobalt in trace amounts from food—especially as part of vitamin B12—is generally safe. However:

- Avoid unnecessary high-dose B12 supplementation
- Monitor symptoms if you have a cobalt-containing implant

Organs and Systems Affected

- **Heart:** Cardiomyopathy
- **Nervous system:** Neuropathy, memory changes, mood issues
- **Thyroid:** Hormonal imbalance
- **Ears and eyes:** Hearing or vision changes
- **Lungs:** Inhaled cobalt dust can cause lung inflammation

How to Reduce Exposure

- Use B12 supplements only as directed
- Request cobalt-free implants when possible
- Use protective gear in workplaces with cobalt exposure
- Have regular checkups if you have a metal implant
- Choose paints and ceramics labeled as cobalt-free