

Thank you for contacting us and for watching the documentary, *The Bleeding Edge*, which sheds light on Dr. Tower's story, among others. We wish you well in finding an answer to your questions about your replacement implant.

In general, here's what Dr. Tower recommends to those patients who are scheduled with him-this will give you an idea of where to start your personal search for help:

1. First, to determine if cobalt poisoning does exist, Dr. Tower orders blood and urine cobalt levels on his patients. If levels are found to be high, Dr. Tower recommends these tests be done about every 3-6 months (see attached document regarding his screening program). Dr. Tower instructs his patients with an at-risk hip to be off of any supplements and vitamins for a week and then he will have them obtain a urine for a urine cobalt concentration. He asks his patients to do this lab test at Quest Labs because their level of detection is 0.2 ppb. Dr. Tower considers patients with a urine cobalt of ≥ 1 ppb to be cobalt-positive. This level roughly corresponds to the 95% of subjects that do not have an at-risk arthroplasty (any chrome-cobalt component). Dr. Tower will have cobalt-positive patients return to the lab for a whole blood cobalt level. A whole blood level of ≥ 0.4 ppb roughly corresponds to the 95% of subjects with an at-risk arthroplasty.
2. If elevated levels are found, Dr. Tower recommends that his patients take n-Acetyl Cysteine 600 mg three times daily with meals for at least 3 months. This is an over-the-counter supplement that he has found helpful in his patients who are experiencing symptoms of arthroplastic cobalt encephalopathy (ACE). Then, after 3 months, he has patients repeat the blood and urine cobalt levels. As cobalt is excreted from the body, the blood cobalt will drop and the urine cobalt will rise. **Patients should always discuss any supplements with their doctor before adding a supplement to their medical regimen.**
3. As you can see from the attached document, regarding Dr. Tower's latest screening program, each patient's cobalt scenario varies in intensity and reaction.
4. In order to diagnose possible issues with replaced hips and chrome-cobalt, Dr. Tower will sometimes order an MRI to look for tissue breakdown around the implanted hip.
5. Regarding the question of whether or not an implant always needs to be removed or replaced, each case is different. Some patients have responded to things like the n-Acetyl Cysteine, some have not, and some patient's cobalt issues have only responded after revision surgery. Some patients' cobalt and chrome levels are being monitored on a regular basis, along with their signs and symptoms. As noted in the attached document, Dr. Tower has had only two patients so far who have made the decision to delay revision surgery and had progression of the hypometabolism issue seen in his screening FDG PET brain scans.
6. As for acceptance of this information on the part of other orthopedists, it is known that research on this issue has been conducted by some orthopedists, but it is not an industry-wide accepted issue at this time. Patients often have few orthopedists to turn to who recognize or acknowledge these issues. Asking your primary care provider to monitor your cobalt and levels is a good place to start if an orthopedist does not want to monitor this for you.
7. A resource that Dr. Tower often refers people to are these pages:
<https://earlview.com/>
and
<https://earlview.com/2014/09/23/earlview-facebook-group/>
Earl Stevens, PhD, has built a web page that is a resource for many who seek help in sorting out the process of chrome-cobalt issues. Dr. Stevens also has a Facebook support group. And he has had personal experience with the issue just as Dr. Tower has.
8. In order to understand what type of implant a patient has had placed in their body, operative notes **and implant stickers** (used to report failures and used for recalls by the industry) are the best way to identify what type of prosthesis was placed. Then, a search for recalled

implants online is usually your best first choice, if not asking the surgeon who implanted the replacement part. The Earl's View web page has a link to the most common recalls.

9. For those searching for a new orthopedic physician or for someone who is board certified, he recommends going to this website:

<https://www7.aaos.org/member/directory/search.aspx?directory=public>

Dr. Tower cannot recommend specific doctors in specific states as he simply does not have the capacity to know which surgeons are doing revision surgeries at any given time. Searching the above website is your best option.

10. Another option that Dr. Tower has found that works for several patients who have contacted us is to do a Google search specifically for "revision hip surgeon in X" (X being the city where you live or wish to go have surgery). This will often return a list of those surgeons who are experienced in revision surgery, since not every surgeon is well versed in this type of operation. Look for those physicians who specifically list revision in their list of surgeries that they do.
11. Some of the symptoms that have been identified via Dr. Tower's screening process include:
- a. Poor memory,
 - b. Fatigue or exercise intolerance,
 - c. Poor balance or muscle weakness (myopathy),
 - d. Sleep disorder,
 - e. Tremor or persistent or intermittent muscle contracts causing abnormal, often repetitive movements, postures, or both (dystonia),
 - f. Mood disorders (eg: depression, easily angered, etc)
 - g. Deafness or tinnitus (ringing in the ears),
 - h. Executive function disorder (struggling to organize and regulate behaviors in such a way as to accomplish long-term goals),
 - i. Global pain (meaning multiple sites of pain throughout the body),
 - j. Peripheral neuropathy (weakness, numbness, and pain, usually in the hands and feet, although it can affect other areas of the body),
 - k. Non-refractive blindness (blindness or vision problems **NOT** due to nearsightedness, farsightedness, astigmatism, or presbyopia ["old eyes"]).

DISCLAIMER: The information contained here is not intended nor implied to be a substitute for professional medical advice; it is provided for educational/discussion purposes only. You assume full responsibility for how you choose to use this information. Always seek the advice of your physician or other qualified healthcare provider before starting any new treatment or discontinuing an existing treatment. Talk with your healthcare provider about any questions you may have regarding a medical condition or any medical procedure. Nothing contained in these emails is intended to be used for medical diagnosis or treatment.

Due to varying state regulations regarding licensing and if you are outside of Alaska (where Dr. Tower is licensed), he cannot give medical advice and interpretations unless you are his patient. Under current rules and regulations, you must be his patient to receive medical advice. We are currently unable to see out-of-state patients for their cobalt issues or for revision surgery.