

# Recycling Prosthetics Generates Environmental Ease

By Paul Rahill

Recycling has clearly become an accepted and embraced practice in most North American communities. The practice is credited with extending the long-term availability of natural resources, reducing the impact of industrial production on the environment and conserving energy. When we think of recycling, it's of opportunities at home: glass and plastic containers, newspaper and aluminum cans, etc. Recycling at the crematory most likely ranks far lower on the list, if at all.

The use of orthopedic prosthetics in North America has boomed. More than 80 million North Americans suffer from some type of orthopedic condition. The number has clearly led to the skyrocketing use of implants and their frequent appearance in U.S. crematories. Current implant technology uses metals such as stainless steel, titanium and cobalt chromium which are believed to have an approximate 15-year life.

Metal components from the body and container are not destroyed by the heat and atmosphere of the cremation process. They remain in the cremation chamber among the cremated remains when the cremation process is completed. In addition to the metal remains from the caskets and containers (staples, screws, hinges and plates), orthopedic prosthesis or implants such as hip joints, knee joints, plates, rods and screws are left. The metallic orthopedic remnants are fabricated from high-grade metals such as stainless steel, titanium and cobalt chromium—all of which have recyclable value.

Currently, most crematories separate metal remnants from the cremated



remains prior to processing them which reduces the size of the bone fragments. These metallic parts are placed into metal waste bins until there is sufficient quantity to dispose. Disposal of the parts is either performed at a cemetery where they're buried, or more commonly, sent to the landfill with the other residential, commercial and industrial waste. Whether buried in a cemetery or at a landfill, the materials do not decompose with time, but rather take up finite land space permanently.

Current disposal practices appear very inefficient, inadequate and environmentally unfriendly. So what are our options?

Recycling orthopedic prosthesis implants left from the cremation process is now a common practice in many European countries where it began over six years ago. The process, if adopted in

North America, would probably look something like this:

Cremated remains swept from the cremation chamber → metallic items separated from the cremated remains → placed into recycling shipping bins → shipped to collection centers → metals sorted and re-melted → ingots sold to orthopedic and other manufacturers → metal re-enters the material supply chain → new products for the marketplace.

It's plausible that recycled metal from the crematory can be remanufactured into new hip joints and end up at the crematory once again. Recycling these materials appears to be dignified and environmentally sound, reduces mining requirements for new metal, as well as reduces landfill space that would be occupied forever.

What are some of the pros and cons of recycling orthopedic prosthetics?

## Pros

- Good for the environment at many levels (air, water, land).
- Extends natural metal mining resources.
- Reduces industrial production impact on the environment.
- Dignified alternative to sending prosthetics to landfills.
- Provides funeral homes with a “green” discussion point for families that are interested.
- Offers an industry-wide solution to a common problem.
- Supplies monetary resources that can be gifted to charities.

## Cons

- Most state and provincial regulations are unclear on recycling prosthetics.
- Uncertain family response to the concept of recycling implants.
- May require updating cremation authorization forms to be certain that families are informed and give consent.
- Stigma of generating monetary resources from recycling these metals.

Concern over state and provincial positions on recycling is, without a doubt, valid. In discussions with two CANA members who are prosthetic recyclers, they began the process of identifying where the different states stand so they can advise and guide clients.

Michigan-based Implant Recycling LLC consulted with Harvey I. Lapin, one of the deathcare industry’s most widely respected legal authorities on obtaining opinions for individual states. Mr. Lapin advises to carefully check state law to ensure it is permissible to recycle implants and obtain consent from the deceased’s authorized representative. The consent can be a part of the routine cremation authorization each family completes. He also advises to determine whether or not your individual state allows the

crematory or funeral home to receive any proceeds directly as a result of the recycling process.

A suggestion is to establish a charitable fund by the cremation association to receive and distribute funds on behalf of the cremation industry. The step eliminates any concern over funeral homes or crematories receiving compensation from the recycling program.

CANA member Ortho Metals, based in the Netherlands, met with officials in California to help gain support for recycling in the crematory. Both of these companies also provide clients with free shipping containers and prepaid shipping costs to make recycling even more attractive.

Where do we go from here? There is no current cremation-industry-endorsed solution to this issue—and we need one. Every business today benefits from being active in reducing its environmental impact in its communities.

CANA is clearly the leader in educating, informing and training the cremation industry’s professionals. CANA’s Board of Directors tasked a team of industry leaders to gather available information on prosthetics recycling and make a recommendation to the board for action. Expect a formal position by CANA’s Board in the near future.



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