The BIRMINGHAM HIP Resurfacing (BHR™) System
A safe and effective metal-on-metal hip resurfacing implant

The BHR Hip is made from metal. How does that compare to other options, like plastic or ceramic?
All bearing materials used in hip implants have advantages and disadvantages. For instance, metal-on-metal implant surfaces are very durable. The largest independent follow-up study showed that greater than 95% of BHR Hips remain fully functional after ten years of use. The BHR Hip is made from a special “as-cast” metal that’s been proven in long-term metal-on-metal hip implants, and it doesn’t carry with it the fracture risk of ceramic hips or the reduced wear properties of a plastic component.

What are metal ions?
Metal ions are tiny particles of metal released over the lifespan of the device. All hip replacement implant materials (plastic, metal and ceramic) release small particles during typical use, but differences lie in the amount and types of particles. The BHR Hip releases mostly cobalt and chromium ions in very small amounts. These elements are already in your body, even before you receive a BHR Hip (cobalt is a cofactor in vitamin B12, while chromium is involved in insulin uptake), and your kidneys filter them from your system.

The amounts of these metal ions released from a properly implanted BHR Hip are so small that they’re measured in a unit called a micron. For perspective, a human hair is about 100 microns in diameter. In a properly implanted BHR Hip, the typical rate of release is about three to five microns during what’s known as its initial “run-in” phase, then only a few microns per year thereafter.

I’ve heard about “pseudotumors.” Is this a risk?
“Pseudotumor” is a term that’s used to describe local swelling or masses. It’s been discussed more widely recently due to a paper published by a group of surgeons in Oxford, England, following a series of benign tissue masses found in resurfacing patients who had mostly improperly placed components. These tissue reactions can occur with any hip or knee replacement or resurfacing implant—they are not cancerous tumors.

Additionally, these reactions have occurred in less than 0.09%-0.32% of BHR Hip patients and it’s believed that they could be caused by either the patient’s metal allergy or sensitivity or by excessive wear caused by poor implant positioning. For perspective, studies show that the risk of dislocation following a patient’s first hip replacement surgery is many times greater than the risk of a tissue reaction. So while an adverse tissue reaction may be considered a potential risk, it is a very rare occurrence for BHR Hip patients.

How long will the BIRMINGHAM HIP Resurfacing implant last?
It is impossible to say how long your implant will last because so many factors play into the lifespan of an implant. In the case of the BHR Hip, for instance, the metal-on-metal bearing surfaces of your new joint may extend its life longer than that of a total hip replacement made from traditional materials, but failure to comply with your physical rehabilitation regime may cause your implant to fail prematurely. A clinical study showed the bone-preserving BHR Hip had a survivorship of 95.4% at the ten-year mark, with 98.6% of patients saying they were “pleased” or “extremely satisfied” with their implant.

1. Robinson E, Richardson JB, Khan M. MINIMUM 10 YEAR OUTCOME OF BIRMINGHAM HIP RESURFACING (BHR), A REVIEW OF 518 CASES FROM AN INTERNATIONAL REGISTER. Oswestry outcome centre, Oswestry, UK.