

Arthritis of the Hip

THA vs. BHR

Arthritis is often thought of as an explanation of any ache or pain in the arms, legs, or spine. However, it is really only in joints and is from the loss of cartilage off the end of the bones.

In a normal joint, the cartilage is smooth, white, and relatively thin – often ¼ inch or less. It provides a nearly frictionless surface for painless movement. On an x-ray, the cartilage looks dark giving the appearance of a “space” between the bones.

In an arthritic joint the cartilage becomes cracked, gouged out, dried out, and in advanced cases, the cartilage is completely worn off (no space seen on x-ray, “bone on bone”). Spurring occurs as the bone tries to reduce stress on the joint. In other words, spurring is the body’s response to the pain, not the cause of the pain.



Normal Hip
Good joint space



Arthritic hip
Spurring and no joint space left

As the cartilage is lost, the hip will start to hurt with activities. At first, pain occurs during high demand activities like running, squatting, and climbing stairs. As the cartilage loss progresses, even walking on level surfaces or standing for any length of time can cause pain. Arthritic hips are often stiffest in the morning and most uncomfortable in the evening. As the arthritis gets worse, it can become very difficult to lay flat in bed and straighten the hip, put on your shoes, and get in and out of a car. Often people need pillows under their knees or have to lie on their side at night. If the hip is moved “wrong” it can catch and waken you. In advanced cases the pain can last all night long and even while sitting.

Unfortunately, cartilage cannot be replaced. As a result, treatment of arthritis is treatment of the pain, not correction of the problem. One must keep this in mind when looking at the options we will discuss.

Treatment options for the Arthritic Hip

- ❑ **Live with it.** Obviously, this will not make the pain better. However, it must be kept in mind that all we are doing is treating pain. If you just want to put up with the pain, that's a reasonable choice. You are not burning any bridges.
- ❑ **Lifestyle modification.** Basically, avoid activities that makes your hip(s) hurt. Unfortunately, this option only works if the activities you are stopping are not important to you.
- ❑ **Walking aids.** Grocery carts, canes, crutches, trekking poles, scooters, wheelchairs, etc. can all reduce the stress on the hip. If using a cane, it is most helpful to have it in the hand on the opposite side of your sore hip.
- ❑ **Physical Therapy.** In certain instances, the arthritis in your hip can lead to weakness and/or imbalances in strength that can be improved with a guided exercise program – reducing pain.
- ❑ **Weight loss.** If you are heavy, losing some weight can reduce the stress on your hip(s) and help with pain. In addition, if you end up having a hip replacement or resurfacing, being significantly overweight can increase your chances of infection, blood clots, and other complications. Losing weight before surgery can reduce that risk.
- ❑ **Anti-inflammatories and/or analgesics.** Some people get a great deal of help from oral medications. There are a wide variety of types available over-the-counter and by prescription.
- ❑ **Total hip replacement (THA) or Birmingham Hip resurfacing (BHR).** These options should only be considered when your hip pain is so severe or your function is so poor that you can't live your life the way you want and you've tried every other reasonable option. There are different advantages and disadvantages for each of these surgical options that will be discussed later. Both surgeries are major procedures and involve risks.

Risks of surgery include, but are not limited to:

- Anesthesia complications including the possibility of death from heart attack, stroke, or other cause. This is very uncommon, but not impossible.
- There is a chance of infection that lasts as long as you have the hip. If an artificial hip becomes infected, it is a huge problem. Bacteria can attach to the artificial joint in a way that the infection cannot be eliminated as long as the hip remains in place. As a result, if the hip becomes infected, it usually has to be completely removed, have a temporary hip put in place, you will need to go on several weeks of antibiotics, and then - assuming the infection is cleared - you will have another hip put in. We will do everything we can to prevent this complication but the risk of infection is between 1-4% in your lifetime depending on other medical problems you may be dealing with.
- Bleeding up to the point of needing a transfusion happens in about 10% of THA's and about 20% of BHR's.

- Nerve injury is relatively rare, but not impossible. The sciatic and femoral nerves are very close to the surgical site.
- Blood clots in the legs and/or lungs can occur. We will give you medications and use devices to reduce this risk, but it still can happen even with proper precautions taken.
- There is a risk of incomplete pain relief. Pain relief is the goal of surgery, but it is not a guarantee. The vast majority of my patients are extremely happy with the amount of pain relief they achieve with surgery, but they are not all pain free. You have to remember that we can't make a hip as good as the one you were born with.
- If you have chosen to have a BHR but your hip anatomy is either too small or the bone quality ends up being weaker than expected, we will convert to putting in a THA. This decision will be made interoperatively.

Then there are the things that are different between THA and BHR.

- I do the vast majority of my THA's with a minimally invasive approach. This is possible because the first thing we do after exposing the hip is remove the head and neck of the femur. Since the head and neck of the femur are not removed with the BHR, minimally invasive surgery is not possible. Instead, the standard hip replacement incision is needed. Ironically, less of the bone is cut with the BHR, but more of the muscles have to be detached/ split.
- Significant post-operative leg length inequality is uncommon in my practice, but if your legs are equal before surgery, is more likely to happen with THA than BHR because of the removal of the head and neck of the femur. If your leg lengths are not equal before surgery, it is easier to make corrections with a THA than it is with the BHR. The most important thing during the surgery is to make your hip stable. If your leg length has to be different to make the hip stable, we will have to see if it bothers you after 4-6 weeks of living with it. If it does, a lift in a shoe usually is all that is needed. In my practice, it has been very uncommon for patients to need a lift after surgery.
- Dislocation after THA happens in 1-3% of cases. The dislocation rate after BHR is approximately 0.3%. For the first 3-months after either surgery, you have to follow "total hip precautions" which limit some positions you can get into. During this initial 3 month period, your risk of dislocation is very high. The tissues need to heal and give the hip some stability. After 3-months with the BHR – those restrictions are lifted and your only limitation is to avoid high impact activities (running, jumping) until 1-year after surgery. At one year after your BHR, there are no limitations. With THA, to avoid dislocations after the first 3-months, I recommend keeping total hip precautions in mind for life and I do not recommend high impact activities.
- There is the risk of not knowing how long the hip implant will last. Artificial hips do not last as long as real hips. The THA I currently use has

- been lab tested to 30 years, but it is unknown how it will do in humans. The BHR has had excellent results in men with most studies showing over 90% still doing well after 10 years. Obviously, the younger you are when you have your first hip replacement/resurfacing, the more likely it is that you will need a hip revision surgery in the future. Infection, fracture, or misuse can drastically shorten the life of the hip.
- The BHR is made of cobalt-chromium stainless steel. As a result, your blood levels of those ions will be increased if you have a BHR put in your hip. The kidney clears those ions from the blood, so if you have kidney disease, it is unlikely you will be able to have a BHR. At present, there is no indication that these elevated ion levels increase the risk for developing other diseases. However, some people develop sensitivities/illnesses to the ions produced and can need to have the BHR removed. Please review the information sheets you were given about metal ions. The THA has no cobalt-chromium stainless steel and instead is made of titanium, Oxinium and plastic. There are no significant elevations of ion levels with the THA.
 - The manufacturer of the BHR, Smith & Nephew, in May, 2015 decided to begin limiting the number of sizes available for implantation and decided to stop allowing the implant to be put in women. Please see above for how this could affect your surgery.

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