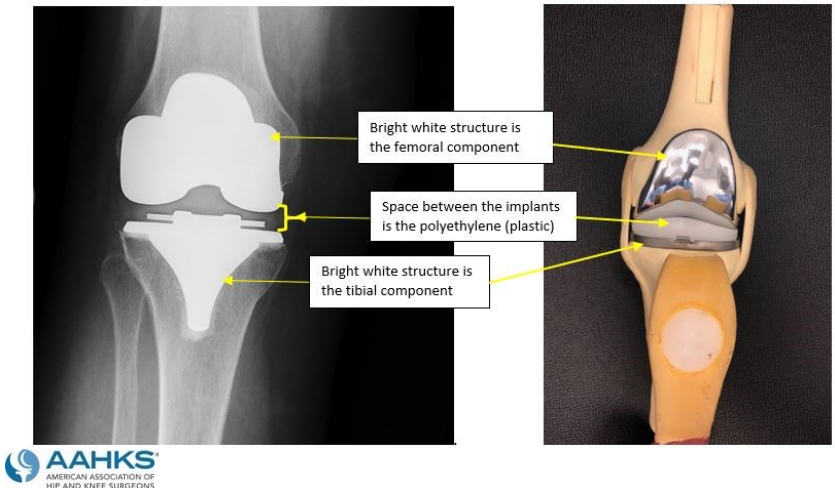
# UNDERSTANDING JOINT REPLACEMENT SURGERY

## TOTAL KNEE REPLACEMENT

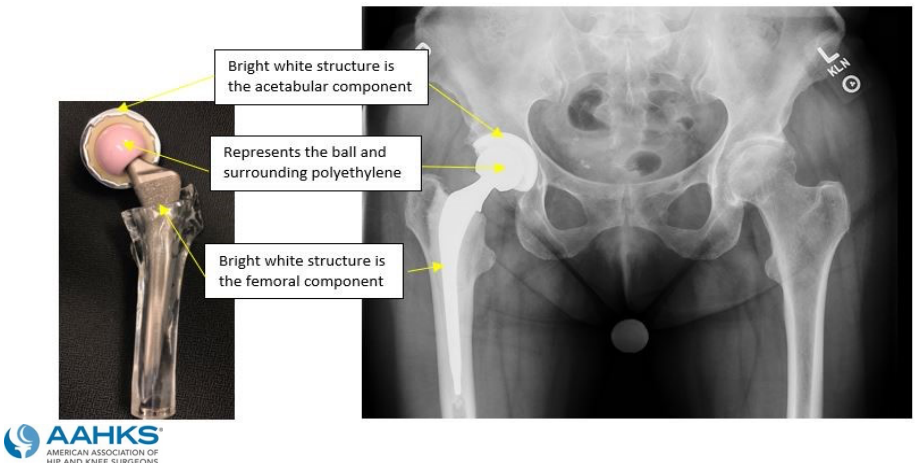
Total knee replacement is recommended when more than one knee compartment is "worn out", due to arthritis or other causes. Geometric cuts are made at the end of the femur (thigh bone), top of the tibia (leg bone) and the back of the patella (kneecap). Personalized sizing is then determined and any bone deformities corrected. Titanium components are then fixed to your bone with bone cement (similar to grout) and a plastic liner is placed in-between. This provides a friction free, painless surface for you to walk and move your knee around. For more information visit: https://hipknee.aahks.org/total-knee-replacement/




## TOTAL HIP REPLACEMENT

Total hip replacement is recommended patients with end-stage hip osteoarthritis (hip is "worn out") or a myriad of other conditions that result in destruction of the hip joint, such as fracture, avascular necrosis, hip dysplasia or even tumor. The procedure is done by making an incision on the outside of the hip. The joint capsule is entered and the femoral neck is cut to remove the worn out femoral head (ball). The acetabulum (socket) is shaped with a reamer (like a cheese-grater) to re-create the hip socket and a titanium cup is placed with a plastic liner. The femur is then prepared for a titanium stem and a ball (ceramic or metal) is placed on the top. Finally, the hip is reduced, leg lengths and stability are confirmed. This gives a friction free, painless surface to move your hip around on. For more information visit: **https://hipknee.aahks.org/total-hip-replacement/**

Dr Vaux uses both the posterolateral and direct anterior approach for hip replacement surgery, which are widely used and provide excellent outcomes. Dr Vaux will discuss with you which approach is best for you based on your bone anatomy, body habitus and medical risk factors.



# OUTPATIENT/ SAME DAY DISCHARGE JOINT REPLACEMENT

You may know someone who had hip or knee replacement surgery and went home the same day, also known as an outpatient joint replacement. Historically, hip and knee replacement surgery has necessitated a hospital stay lasting several nights. With advances in procedural techniques, anesthesia medications, pain management and rehabilitation, many patients can now have a joint replacement surgery without spending a night in the hospital. At present, approximately 80% of our patients go home from surgery the same day.

**Our surgeons, therapists, and medical team will evaluate you, your medical co-morbidities, mobility, and social factors as to whether you would be a good candidate for same day discharge.**

## *Advantages of Outpatient Total Joint Replacement*

**Familiar Environment**

Patients are often more comfortable recovering at home, with all the conveniences of being at home and having family to help. You'll be able to sleep in your own bed and not be woken up throughout the night by hospital staff for regular checks or from other noises that are part of the hospital environment.

**Control of your own medications**

Unless otherwise specified, you will be able to start back on all your own home medications

**Less risk of infection or hospital exposure (ex: COVID)**

Overnight hospitalization is a leading cause of infection after surgery.

## *Who should NOT have outpatient joint replacement surgery?*

If you have a **serious medical issue**, then it may be best to stay in the hospital for one or two days after surgery to make sure that your medical problems are stable before you go home. Patients with medical conditions such as heart disease, congestive heart failure, poorly controlled diabetes, chronic lung disease, chronic kidney disease, sleep apnea, or who take daily steroid medications will most likely not be candidates for outpatient joint replacement surgery. The same holds true for patients with **balance problems, recent stroke or chronic neurologic disease** who have had difficulty walking before surgery.

*Patients who **live alone and have no one to care for them** at home also may not be candidates.

# ***FREQUENTLY ASKED QUESTIONS AFTER JOINT REPLACEMENT SURGERY***

***What is the recovery time?***

After surgery, you will be using a walker for about the first week after surgery. When ready, you will transition to using a cane for about 1-3 weeks. By 4 weeks after surgery, many patients might not need to use any external supports. We ask that you use a walker and/or cane to help with balance, it will also help you to be able weight-bear as comfort allows. It can take up to 3 months to return to 80% function and you can continue to improve as far as mobility and function is concerned, for up to 1 year after your surgery. Just keep in mind that everyone heals and recovers at a different pace.

***When will I be able to walk?***

Our goal is to get you up and walking as soon as it is safe to do so! Your joint will structurally be able to withstand your entire weight while walking immediately after surgery. Because of normal pain after surgery, most people need some type of assistive device (cane, walker, crutches) usually for a few weeks. In rare instances, whether due to bone quality, prior deformities or surgical complications, you may have a period of partial or no weight bearing after surgery.

***When can I drive?***

Patients can usually drive around 3 to 4 weeks after surgery. It is very important that you are off all narcotics and are not using an assistive device before you start to drive. It is also important that if you are having a right sided joint replacement that you are able to press the brake down quickly in case of an emergency. You want to make sure that you are comfortable and confident that you are able to operate your car safely. We suggest practicing in a parking lot prior to driving on the road.

***When can I travel?***

You may travel after your first in clinic post-operative appointment. It is recommended that you get up and either walk or stretch at least once each hour during long trips. This is to help prevent blood clots. If you are thinking of going on a long trip within the first 3 months after surgery, we suggest you take one 81 mg of Aspirin twice daily beginning 2 days prior to your trip and complete this regimen 2 days following your trip.

***When can I return to work?***

That answer depends on your occupation. If you have a more sedentary job and are not on your feet all day, you could return after 4 to 6 weeks. If you have a more labor-intensive job, it could be 12 weeks before you can return to your job. We suggest that all patients plan to be off work a minimum of 6 weeks, and we can adjust as needed depending on your recovery and progression.

**NOTES:**

***What kind of activities are not allowed or are allowed after a joint replacement?***

This is a great question. Our goal with this surgery is to improve your quality-of-life so I want you to get back to the activities that give you joy! That being said, this isn't your 20 year old joint again. So while your joint is structurally sound, strenuous activities might cause you more discomfort. Additionally, high impact activity like running or jumping can also wear out the plastic liner and other components sooner, leading to a potential need for "re-do" surgery. However, there is no way to know exactly how much activity will do this. Regardless, I do ask that all my patients avoid trying any impact activities for a minimum of 4 months after surgery due to the need for your body to fully heal. Low impact actives that are safe to do, and encouraged, include walking, gardening, golfing, doubles tennis, hiking, cycling and swimming. Please discuss with Dr Vaux if you have any questions regarding specific activities.

***Why does the skin around my incision feel numb?***

When you undergo a knee replacement, the sensory nerves are interrupted which results in the numbness around the knee. This will improve over the course of 1 year, but it could always feel somewhat different.

***Is this a minimally invasive surgery?***

This is a great question. I use minimally invasive techniques to protect your bone and soft tissues, however, "minimally invasive surgery" has no true definition. For example, some people think "minimally invasive" corresponds to the size of the skin incision, but the size of the incision varies by patient and is typically related to your body habitus. Bigger legs will get bigger incisions. The worst thing you can do is have an incision that is too small because the stress on the incision from the surgeon "forcing" the implants into a smaller space can place your incision at risk for wound complications. **At the end of the day, our goal is to perform a procedure that is safe, precise, and associated with less postoperative pain, good wound healing, and a quicker recovery.**

***Is Outpatient/ Same-Day Discharge an option for me?***

If you are healthy, do not use assistive devices, and have lots of help at home, you may be a good candidate for outpatient or same-day discharge total joint replacement. Please see the section on outpatient/ same-day discharge joint replacement and talk with Dr Vaux or Megan Hebda, PA about whether this is an appropriate option for you.

***Will I be able to kneel on my operative extremity?***

For knee replacements, after a few months you may try kneeling on your operative extremity. It can be painful at first, but it will not harm your knee. The discomfort is coming from your incision and the healing tissues. Kneeling will become more comfortable as time passes. Often beginning with kneeling on a pillow or something soft can help to desensitize the incision.

***My knee replacement makes a clicking or bumping noise. Is this normal?***

Yes, this is NORMAL as the metal articulation is contacting the plastic. This is not harmful to you.

**NOTES:**

***I think my leg feels longer now. Is this possible?***

For the majority of people, this will not happen. In the case of a knee replacement, this is usually the result of straightening out a knee that pre-operatively had a significant bow to it. In hip replacement surgery, there can be a slight leg length discrepancy post operatively, which is accepted in order to achieve a stable hip replacement that does not dislocate. Most people are born with a leg length discrepancy that averages from ¼ inch to 1 inch. Over time your body will adapt and your gait will normalize. Occasionally, we can consider a shoe lift if needed.

***Which approach will be used for my hip replacement?***

There are multiple different approaches or ways to perform a hip replacement. The most common are the posterolateral and direct anterior approach. Both have an excellent track record and no difference in outcomes long term. Dr Vaux will discuss which approach is right for you based on your bone geometry, body habitus and other factors.

***What type of anesthesia will be used for my joint replacement?***

In most cases, a spinal anesthetic will be administered by the anesthesiologist. This is typically accompanied by light medical sedation. A spinal anesthesia gives us the ability to decrease the amount of general anesthesia you get so you wake up with less pain, nausea, and other issues that some patients can get with general anesthesia. However, some patients are not good candidates for spinal anesthesia and instead receive general anesthesia. In outpatient surgery and in some hospital cases a general anesthesia is used. Please discuss with Dr Vaux and your anesthesiologist if you have further questions or a strong preference.

## What Results Should I Expect?

You should plan for and expect a successful outcome from your joint replacement surgery. Generally, patients experience less pain and more mobility in their joint, and can resume most of the activities they enjoyed before the onset of arthritis. Long-term studies show that over 90% of artificial joints are intact and fully functional after 10-years and 80-85% at 20 years. Your artificial joint will last longer if you maintain your ideal weight, low impact exercise, and undergo routine follow-up examinations.

**For more information please visit:**

-Total Hip Replacement: https://hipknee.aahks.org/total-hip-replacement/

-Total Knee Replacement: https://hipknee.aahks.org/total-knee-replacement/

**NOTES:**

## *What to Expect After Surgery / Post Op Recovery*

**Day 1-2**

Out of bed, ambulating with walker, working to bend and straighten knee and hip independently. In some situations, a home nurse and Physical Therapist will visit to review wound care instructions, check vital signs and guide you through a progression of post-operative exercises and activity.

Take pain medications as recommended.

**2-3 Weeks**

Continue with motion exercises and ambulate as much and as often as your joint will allow, use your pain as your guide
Progress from walker to cane as tolerated.
Home physical therapy comes to a close.

First post-op follow-up visit at the office
Begin outpatient physical therapy after first post-op visit.
Resume driving if no longer taking narcotic pain medication and can comfortably handle vehicle in an emergency situation.

**6 Weeks**

Continue outpatient physical therapy.
Progress from cane to no longer using an assist device for walking.
Progress activity as tolerated.
Avoid submersion in baths, hot tubs and pools until you are cleared by one of our healthcare providers.
Second post-op visit in our office with x-ray evaluation.

**3 Months**

Complete outpatient physical therapy.
Endurance and stamina continue to improve.
Return to most activities of daily living without significant difficulty (cooking, driving, light cleaning and yard work).
Progress activity as tolerated.

**6 Months** Resume routine dental work, antibiotics are required prior to ANY dental procedure including routine cleanings.

**1 Year**

Full recovery

# RISKS ASSOCIATED WITH JOINT REPLACEMENT SURGERY

All surgical procedures have risks. Despite pre-operative testing and optimization, utilizing less invasive surgical techniques, and novel pain and rehabilitation management, every joint replacement is still a major surgery. Although advances in technology and medical care have made the procedure very safe and effective, these risks do exist. The risks associated with a joint replacement surgery should be considered carefully before you decide to undergo surgery. We encourage you to discuss the potential risks with your surgical team, primary care provider, and your support system (such as family or friends). Additionally, we will work with you and your medical doctors to ensure you have the safest joint replacement journey possible. Overall, complications are rare and we will do our very best to avoid the most common risks, which are listed below. ***If you have questions, please reach out to our team to discuss them and use the NOTES section below to keep track of them as you go!***

**Pain after surgery:** These are artificial joints and unfortunately are not as good as the joints you were born with. It is normal to have MILD discomfort even after you have recovered completely from surgery, especially with more strenuous activities. Unfortunately, we can't give you your 18 year old hip or knee back again. **Our goal when performing a joint-replacement surgery is to give you a joint that will allow better function than your current arthritis bone-on-bone joint, and only after we have tried helping your pain without surgery.**

**Blood clots:** blood clots can form in a leg vein and in your lungs after knee or hip replacement surgery and at times can even be fatal. Blood clots are more common in older patients, patients who are obese, patients with a history of blood clots, those with pulmonary disease, and patients with cancer. We will evaluate your risk for a blood clot and develop a preventative treatment plan for each patient, which will include a blood thinning medication after surgery for 5 weeks. Additionally, we recommend the use of compression socks after surgery for 4 weeks. In order to reduce the risk of blood clots, we also recommend moving frequently after surgery.

**Hematoma**: Bleeding into the joint can occur either immediately after surgery or at a later time. This is accompanied by acute pain and swelling and is sometimes confused with infection.

**Infection**: infection can occur both in the early post-operative time period or even many years after a joint replacement. Despite doing everything in a sterile environment and giving you antibiotics at the time of surgery, infections still occur approximately 1-2% of the time. Most infections are caused by the billions of bacteria on that patient's own skin. It is important to adhere to all the recommendations given by your surgeon and maintain good health before and after surgery to decrease the risk of infection. Patients who are diabetic, smokers, have autoimmune disease or other chronic health problems, are at higher risk of developing a post op infection. An infection can be treated successfully 75-80% of the time, but this usually requires one, and often two, surgeries along with long-term IV antibiotics to treat. Please see section on 'revision for prosthetic joint infection for more information'.

**Drainage:** A small amount of drainage is normal to notice after surgery, but larger drainage can sometimes require a return to the operating room to stop

**Wound Healing**: Sometimes the surgical incision heals slowly, particularly if you take corticosteroids or have a medical condition that affects the immune system, such as diabetes. Smoking can cause serious complications, which is why we ask you to stop smoking prior to surgery. Talk with your surgical team or your primary care physician if you need help with smoking cessation.

**NOTES:**

**Nerve, Blood Vessel, and Ligament Injuries:** Damage to the surrounding structures including nerves, blood vessels and ligaments, are possible but extremely rare. More commonly there is numbness in the area of the incision which usually, but not always, resolves in 6-12 months. It is not uncommon to have some small residual numbness in one or more of the areas around your incision.

**Limited Range of Motion**: Within a day of surgery, you will begin exercises to help improve the flexibility of your knee or hip. Your ability to bend your knee after surgery often depends on how far you could bend it before surgery. The motion before surgery can also affect the motion of your hip or knee following recovery. Even after physical therapy and an extended recovery period, some people are not able to bend their hip or knee far enough to do normal activities such as reaching your feet to put on socks or tie your shoes.

**Implants can fail:** Your new joint replacement is a mechanical device. Sometimes the metal, cement, or plastic liner can get loose or your bone – particularly weaker, osteoporotic bone – can fail to grow into the metal sufficiently. While we hope that this does not occur for at least 15 years, it can happen before that, even in the first year or so. This can require a repeat surgery to fix.

**Failure or Loosening of the Joint Replacement Components**: loosening of a joint replacement is an associated risk that can occur many years after risk associated with joint replacement. Loosening may occur when tissue grows between the artificial joint and your bone, or if there is a failure of the implant to grow into the bone.

**Fracture around the implants:** A fracture around the implants (peri-prosthetic fracture), can occur after a trauma, fall or if there is weaking of the bone surrounding the implants. If this occurs, often surgery is required to replace the parts and reinforce the bone.

**Medical or Anesthetic Complications:** These can include heart attacks, strokes, pneumonia, kidney damage, or even death etc. These are VERY RARE. We will perform a number of tests and any necessary clearances before surgery to make sure you are fully optimized and that it is safe for you to undergo surgery with us, but even then, bad things can happen with any surgery.

***The risks above occur rarely. But we want all of our patients to know ahead of time that this surgery is a major surgery, and that even for the healthiest and fittest patients, things can unfortunately go wrong. Again, despite all of the risks and potential complications, 80-90% of patients are happy they had their surgery done and consider their quality-of-life improved.**

**NOTES:**

# ***WHAT HAPPENS IF I NEED A "RE-DO"?***

**REVISION TOTAL JOINT REPLACEMENT:**

Joint replacements are generally very successful at relieving pain, restoring mobility, and improving function for patients. Unfortunately, despite excellent overall results, there are times when a joint replacement surgery needs to be re-done (revised). This can be indicated if you have increasing pain, swelling or stiffness. In these situations, often a revision joint replacement is necessary for a variety of reasons. These can include: infection, loosening, instability/dislocation, polyethylene wear, fracture, failure of the implant or other causes. In order to diagnose the cause of pain or failure, often an extensive workup is required with blood tests, imaging and physical exam.

**Revision Joint Replacement for Prosthetic Joint Infection (PJI):**

An uncommon, but dreaded complication after a total joint replacement, is a prosthetic joint infection (PJI), which is an infection deep in the joint replacement. Many of our pre-surgical optimization strategies are aimed at reducing this risk. Despite these efforts, some patients still may develop a PJI, even many years after a successful joint replacement. Patients who are diabetic, smokers, have autoimmune disease or other chronic health problems, are at higher risk.

If this occurs, you may require what is called a "revision with antibiotic spacer". This involves complete removal of all the joint components and placement of an antibiotic spacer. You will then be placed on IV antibiotics for 6 weeks, in conjunction with an infectious disease specialist, often with longer oral antibiotics.

## ***For more information, please visit:***

https://hipknee.aahks.org/revision-knee-replacement/

## Patient Education & Information: https://hipknee.aahks.org