



TOTAL KNEE REPLACEMENTS

FREQUENTLY ASKED QUESTIONS (FAQ'S):

WHAT TYPE OF JOINT COMPONENTS DOES DR. GALLIVAN USE?

- Mako Robotic Total Knee Arthroplasty: Stryker Triathlon Knee
- Robotic Unicompartmental Knee Arthroplasty: Stryde Implant or Smith & Nephew Knee
- Metal Allergy Patients Total Knee: Zimmer NexGen Knee or Smith & Nephew Non-Nickel Implants

These components are made of high-grade metal alloys (nickel, chromium, and cadmium), and high-grade cross-linked polyethylene plastic.

Stryker knee replacements are different than traditional knee replacements because they are designed to work with the body to promote easier motion, and a study has shown a more rapid return to functional activities after surgery. This is due to the *single radius design* of the knee implant. Single radius means that as your knee flexes, the radius is the same, similar to a circle, requiring less effort from your quadriceps muscle.

Dr. Gallivan specializes in ***minimally invasive robotic total joint replacements***. This equates to a smaller incision, less blood loss, reduced hospital stays, decreased complication rates, and quicker recovery times.

For more info, reference: www.AboutStryker.com, or our website: www.GallivanMD.com.

WHAT APPROACH/TECHNIQUE DOES DR. GALLIVAN USE?

Dr. Gallivan uses a quadriceps-sparing/mini-mid vastis approach for Total Knee Arthroplasties and Unicompartmental Knee Arthroplasties.

Dr. Gallivan uses the Stryker Mako robot to perform his partial and total knee replacements. This allows him to achieve optimal alignment of the lower extremities and is analogous to tire alignment in the automobile industry. Using infrared technology to communicate positioning of the bones and joint angles to a computer matched with a pre-operative CT scan, robotic arm-assisted cuts are then made with increased precision to within a degree, resulting in improved alignment, better wear of the prosthesis, and improved function.

The Mako robot allows for less invasive and more accurate surgery resulting in less post-operative pain, quicker rehabilitation, lower risk of complications and smaller incisions.

AM I A CANDIDATE FOR PARTIAL (UNICOMPARTMENTAL) KNEE REPLACEMENT?

A total knee replacement is the most common surgical treatment for advanced osteoarthritis of the knee. Dr. Gallivan will determine whether partial knee replacement is right for you. Partial knee replacement involves the resurfacing of only a portion of the knee and is reserved for patients whose disease is limited to just one region. If Dr. Gallivan determines you are a candidate for a partial knee replacement maintaining your own ligaments and normal compartments often results in a more natural feeling knee.

HOW LONG IS THE INCISION?

The incision for a total knee is about 4 to 5 inches long and smaller for unicompartmental knees. Normal puckering of the scar may occur. Patients will also have two small portal site incisions to place navigation pins above and below the knee. Mederma or Kelo-Cote may be applied to the scar for aesthetic reasons and can be purchased at most pharmacy/drug stores.

HOW LONG WILL I BE IN THE HOSPITAL?

- The majority of our patients undergoing a total knee replacement now go home the same day as surgery. However, some patients stay in the hospital for one night and are released to go home the following day. We do require that the patient has someone to help out at home during the first week post-operatively. If you have special concerns and need to stay more than one night, please address these concerns with Dr. Gallivan and staff.
- Isn't it safer to stay longer in the hospital? No studies have shown that home is the safest place to recover unless there is a medical reason for the hospitalization.
- May I go home the **SAME DAY** as surgery? Yes, Dr. Gallivan has had many total knee patients go home the same day as surgery. If you are considering going home the same day, please discuss this with Dr. Gallivan prior to surgery to allow for appropriate post operative planning.

WHAT TYPE OF ANESTHESIA WILL BE USED?

Dr. Gallivan prefers to use *spinal anesthesia*. Therefore, the patient is numb from the waist-down for the surgery and feels no pain, but may be awake during the procedure. This helps with recovery. If necessary, a sedative may be used in conjunction.

SHOULD SOMEONE BE WITH ME AT HOME AFTER SURGERY?

Yes, Dr. Gallivan recommends someone stay with patients for 7 days or until the patient has demonstrated adequate independence and stability.

WHEN CAN I WALK AGAIN?

Our patients are encouraged to walk within three hours of surgery with full weight-bearing status.

WHAT TYPE OF ANTI-COAGULATION IS USED AFTER THE SURGERY TO PREVENT BLOOD CLOTTING?

- **For Arthroplasty Patients:** Aspirin (Enteric Coated) 81 mg twice per days is used for approximately 30 days post-operatively.
- For patients taking a blood thinner such as Coumadin or Xarelto, we will speak to your primary care provider prior to surgery. For these patients, Coumadin (Warfarin) may be used post-operatively. We will monitor the INR values via a blood test. At some point we will transfer the medication monitoring back to your Primary Care Provider or Cardiologist.
- Please let us know if you are using any of the following medications *at your pre-op appointment*: aspirin, ibuprofen, other NSAIDs, Coumadin (Warfarin), Pradaxa, Lovenox, Heparin, Vitamin E, Vitamin K, or Fish Oil.

Reference: Raphael IJ, Tischler EH, Huang R, Rothman RH, Hozack WJ, Parvizi J. Aspirin: an alternative for pulmonary embolism prophylaxis after arthroplasty?. *Clin Orthop Relat Res.* 2013;472:482–488 American Academy of Orthopaedic Surgeons. "Statins may lower blood clot risk following joint replacement surgery." AAOS, 11 March 2014. <http://www.aaos.org/news/acadnews/2014/AAOS19_3_11.asp>. Silver – Parvisi JBJS 2016

WHAT IS THE RECOMMENDATION FOR ANTIBIOTIC PROPHYLAXIS FOR DENTAL PROCEDURES?

Avoid any routine dental cleaning or non-urgent procedures for 6 months post-operatively. For all patients with a total joint replacement (knee or hip), each time the patient visits the dentist for any procedure, including dental hygiene (cleanings), the patient is required to take an antibiotic one hour prior to the procedure. This is currently recommended for life. Please inform us of any dental issues.

I HAVE A HISTORY OF SKIN INFECTIONS. IS THIS A PROBLEM?

Part of your pre-operative testing will include special swabs to see if you are a carrier of staphylococcus bacteria. If you test positive, you will need to scrub from the chin down, once daily for 5 days prior to your surgery with an over-the-counter *Hibiclens wash*. You will also need to apply *Mupirocin (Bactroban)* ointment to each nostril twice per day for 5 days prior to your surgery. A prescription will be provided. **ALSO NOTE, if you or your partner or spouse has a history of skin infections, you will be prescribed the Hibiclens wash and Mupirocin ointment.**

WILL I NEED PHYSICAL THERAPY/REHABILITATION?

Yes! Each patient will need to work with their therapist on range of motion, strengthening, and balance several times per week until you are independent. The physical therapist is a very important part of your team and your recovery.

HOW CAN I OPTIMIZE MY SURGICAL OUTCOME?

- There are numerous ways to optimize your surgical outcome along with improving your overall health at the same time. Having a BMI (body mass index) under 35.0 is required for elective knee replacement

surgery with Dr. Gallivan. To calculate your BMI, use a trusted online BMI calculator such as this one by the NIH: https://www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm

- Training for your surgery and approaching your ideal body weight is even better.
- To calculate it yourself, BMI is your weight in kilograms divided by your height squared in meters.
- Not smoking tobacco is a requirement for elective knee replacement as well. For assistance on quitting smoking please contact your primary care physician. Smoking can delay healing and greatly increase the risk for infection.
- Having an addiction or dependence to narcotic pain medications such as Norco, Percocet, or Dilaudid can increase post-operative pain and decrease the likelihood of a successful surgical outcome.
- Having a nutritious and balanced diet is also a great way to help the surgical outcome.
- For diabetics, a HgbA1C of below 7.0 is required for elective knee replacement surgery. Please discuss this with your endocrinologist if you need help.
- Major dental work such as root canals and dental abscesses should be taken care of prior to surgery. Dr. Gallivan prefers patients do not visit the dentist for at least 6 months following a joint replacement due to the increased risk of infection. Any time a patient has dental work bacteria are released in the blood stream and may cause an infection post operatively. Therefore, Dr. Gallivan prefers major dental work is completed prior to surgery.

HOW LONG WILL IT TAKE TO RECOVER?

The typical patient will be walking the day of surgery, with a walker, provided by the hospital. Most patients are fully weight bearing on the replaced joint. Most patients rapidly progress to using a cane with physical therapy, and then to normal walking. Some patients recover quickly, in a matter of several weeks, but total recovery can take 4 to 6 months, or longer.

IS THERE ANY SPECIAL EQUIPMENT OR CLOTHING I WILL NEED?

After the surgery, while in the hospital, the patient will wear **T.E.D. Anti-Embolism Hose Compression Stockings** from the feet to the thighs on both legs. This helps with swelling. The T.E.D. Hose need to be worn all day, every day until both legs are the same size, which takes about 1 month. These may discontinued sooner if they are not tolerated.

After a *total knee arthroplasty*, patients will also require **Pneumatic Sequential Compression Devices (SCD's)** to wear 18 hours per day every day for 3 weeks to help prevent dangerous blood clots. If your insurance does not cover the pneumatic SCD's, they are offered at a discounted price of \$195 from the supply company. The pneumatic SCD's are analogous to wearing a seatbelt in a car ride to improve safety.

Most patients will require use of a walker in the post-op period, and then progress to a cane, then independent ambulation at a variable rate. Using bike gloves may reduce hand pain while using a walker.

HOW LONG WILL I WEAR THE BANDAGE AFTER THE SURGERY?

You need to wear the **Acticoat** bandage/dressing for approximately 1 week after total joint replacement surgery. We will remove it in the office at your post-operative visit. This is a special post-operative, occlusive, waterproof dressing with silver anti-bacterial properties. *Do not remove it at home unless instructed to do so by a provider in our office or if water becomes trapped in the dressing.*

WHEN CAN I SHOWER AFTER TOTAL JOINT SURGERY?

You may shower 2 days after your operation, if no drainage is present at the incision. You will be wearing the **Acticoat** occlusive and waterproof dressing that protects your incision from the shower, as described above. If the incision gets wet, pat it dry.

WHAT ARE GOOD POSITIONS FOR MY KNEE? ARE THERE CERTAIN POSITIONS I SHOULD AVOID?

You should spend some time each day working on straightening your knee (extension) as well as bending your knee (flexion). A good way to work on extension is to place a towel roll underneath your *ankle* when you are lying down face-up, on your back. A good way to work on flexion is to sit on a chair or stationary bicycle and bend your knee. *Avoid using a pillow behind the knee for any length of time.*

WHEN DO MY STITCHES OR STAPLES COME OUT AFTER TOTAL JOINT REPLACEMENT SURGERY?

The main incision contains stitches that are absorbable and do not need to be removed. The steri-strips that have been applied can be kept in place until they fall off on their own. They will help keep the skin edges together. If they have not fallen off by 3-4 weeks, it is OK to peel them off. The navigation pin portal sites above and below the main incision contain vicryl sutures that will be removed at your 1 week post operative appointment. If you have staples, they should be removed 1- 2 weeks post-operatively in the office.

WHEN CAN I DRIVE AFTER A TOTAL JOINT SURGERY?

If you have had surgery on your right knee, you should not drive for at least 4-6 weeks after total joint replacement surgery. After 6 weeks, you may return to driving as you feel comfortable. If you have had surgery on your left knee, you may return to driving as you feel comfortable as long as you have an automatic transmission and are off pain medication. Be careful getting into and out of a car, and avoid crossing your operated leg over the other. **DO NOT DRIVE IF TAKING NARCOTICS.**

WHEN CAN I TRAVEL AFTER TOTAL JOINT REPLACEMENT SURGERY?

You may travel as soon as you feel comfortable after total knee replacement surgery. It is recommended that you get up to stretch or walk at least once an hour when taking long trips. This is important to help prevent blood clots.

WILL I SET OFF THE SECURITY MACHINE AT THE AIRPORT AFTER A TOTAL JOINT REPLACEMENT? DO I NEED A DOCTOR'S NOTE ABOUT MY SURGERY?

You may set off the machines at airport security, depending on the type of knee implant you have and the sensitivity of the security checkpoint equipment. A wallet card or letter is not helpful or required to travel.

CAN I DRINK ALCOHOL AFTER A TOTAL JOINT REPLACEMENT SURGERY? WHAT ABOUT SMOKING?

If you are on Coumadin, avoid alcohol intake. Otherwise, use alcohol in moderation at your own discretion. You should also avoid alcohol if you are taking narcotics or other medications.

Of course, you should not smoke at all, as this jeopardizes the healing and success of your total joint replacement and significantly increases risks of complications. This includes marijuana smoke or vaping. Ingesting marijuana is not likely to impair healing.

CAN I GO UP AND DOWN STAIRS AFTER A TOTAL JOINT REPLACEMENT SURGERY?

Yes. Initially, you will lead with your non-operated leg when going up stairs and lead with your operated leg when going down stairs. You can use the phrase, "*Up with the good, down with bad*" to help you remember. As your leg gets stronger, you will be able to perform on stairs in a more regular pattern.

WHAT SHOULD I EAT THE DAY OF THE SURGERY?

Nothing! Please do NOT eat or drink anything after midnight, the day prior to your surgery. If you take medication, such as blood pressure medication, you may take your pills with a small sip of water.

WHAT ABOUT ALLERGIC REACTIONS?

Please let Dr. Gallivan and his staff know if you have any **ALLERGIC REACTIONS** to any *medications or metals/jewelry*. Let us know *when* you had the reaction and *what type* of reaction (e.g. 1999 Penicillin: rash, shortness of breath, hives, trouble swallowing, etc).

HOW LONG WILL MY KNEE FEEL WARM?

Your total knee replacement will typically feel warmer than the other side for up to a year as the tissues continue to heal. Please let us know if you experience any unusual drainage, increased redness, severe pain, fevers, chills or sweats.

HOW LONG WILL MY KNEE REMAIN SWOLLEN AFTER SURGERY?

Swelling is a nature part of your body's healing process. Swelling commonly improves by day 10 after surgery. Using the TED hose (details in FAQ #14) helps with reducing swelling. Foot and ankle swelling is normal.

Elevating your knee above hip height may help, but remember to not place anything under the knee for extended periods of time.

WILL I HAVE A FOLEY CATHETER DURING SURGERY?

A Foley catheter may be used during knee replacement surgery and overnight. Urinary retention may occur requiring recatheterization. Patients that wish to go home the same day as surgery will not receive a catheter.

IS IT COMMON TO HAVE INCREASED URINATION AT NIGHT FOLLOWING SURGERY?

Yes, sometimes patients may experience increased urination after surgery. Certain types of anesthesia, surgery, analgesics, anticholinergics, and underlying medical conditions may predispose patients to development of urinary retention after surgery.

Janet D. Pavlin, Edward G. Pavlin, Dermot R. Fitzgibbon, Meagan E. Koerschgen, Terryn M. Plitt; *Management of Bladder Function after Outpatient Surgery* . *Anesthesiology* 1999;91(1):42-50.

WHAT WILL MY RANGE OF MOTION (ROM) BE AFTER THE TOTAL KNEE ARTHROPLASTY?

We anticipate your knee to have a normal ROM of 120 to 130 degrees after 4-6 months of recovery and physical therapy. The knee requires a minimum of 115 degrees of flexion to perform normal activities of daily living, such as climbing stairs. At 6 weeks post-op, the minimum ROM should be 90 degrees. **Your knee may click after having it replaced. This is normal as it is made of metal alloy and plastic. The clicking should not be painful.**

CAN I DANCE AGAIN? OR SURF? OR HIKE?

Yes! Dancing, surfing, skiing, hiking, and playing doubles tennis are common and very achievable goals after knee replacement surgery.

CAN I HAVE AN MRI SCAN AFTER MY JOINT REPLACEMENT?

Yes, you may have an MRI scan following a total joint replacement. However, MRI studies that include joint replacements may not provide quality images due to metal artifact.

WHY CAN'T I TAKE NSAIDS SUCH AS IBUPROFEN (MOTRIN/ADVIL) OR NAPROXEN WITH ASPIRIN?

According to the U.S. Food and Drug Administration (FDA), ibuprofen/naproxen (non-specific COX inhibitor) can interfere with the anti-clotting effect of aspirin, potentially making the aspirin less effective.

Aspirin works by inhibiting platelet aggregation; thus, working as a blood thinner decreasing the risk of blood clots post-operatively. Aspirin binds to the COX-1 Enzyme.

Ibuprofen (active ingredient in Motrin and Advil) and Naproxen work as an anti-inflammatory by binding to both the COX-1 AND COX -2 Enzymes. As a result, when Ibuprofen is taken concurrently with aspirin, the COX-1 enzyme can be blocked thereby reducing the anti-clotting effect as intended.

However, CELEBREX DOES NOT BIND TO THE COX-1 ENZYME. CELEBREX DOES NOT INTERFERE WITH ASPIRIN'S ANTIPLATELET AFFECT. For this reason, we use Celebrex concurrently with Aspirin and NOT NSAIDS such as Ibuprofen and Naproxen post-operatively. Celebrex is also less likely to cause stomach problems such as ulcers.

WILL I HAVE ANY NUMBNESS AFTER THE SURGERY?

Following a Total Knee Arthroplasty, it is normal to have some *localized numbness* lateral to the surgical scar (just to the outer half of the knee). The sensation may improve over time. Most patients get used to the numbness and are able to live with it.

WHEN CAN I SWIM?

You can swim when your surgical wound is healed and there are no scabs. This varies from patient to patient.

WHEN CAN I RESUME HAVING SEX AFTER SURGERY?

Please wait until you have arrived at home and avoid kneeling until wounds are healed.

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