

DMC® Orthopaedics and Sports Medicine



— A Patient's Guide to —
ACL RECONSTRUCTION

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Welcome

Tearing your ACL may cause you pain and prevent you from participating in activities you enjoy. At DMC Orthopaedics and Sports Medicine, it is our objective to provide you with the confidence you need to make your comeback. Our team of experienced surgeons has performed a high volume of ACL reconstructions, allowing you to trust in our ability to provide you with a successful outcome.

From the time of injury, until you have reached full recovery, DMC Orthopaedics and Sports Medicine team will provide you with collaborative efforts to address all of your needs. Our expertise extends beyond surgical and rehabilitative care, with specialized programs designed to meet individual wellness goals.

Thank you for allowing us to participate in your care. We will guide you each step of your recovery, to ensure you receive maximum improvement from your surgery.

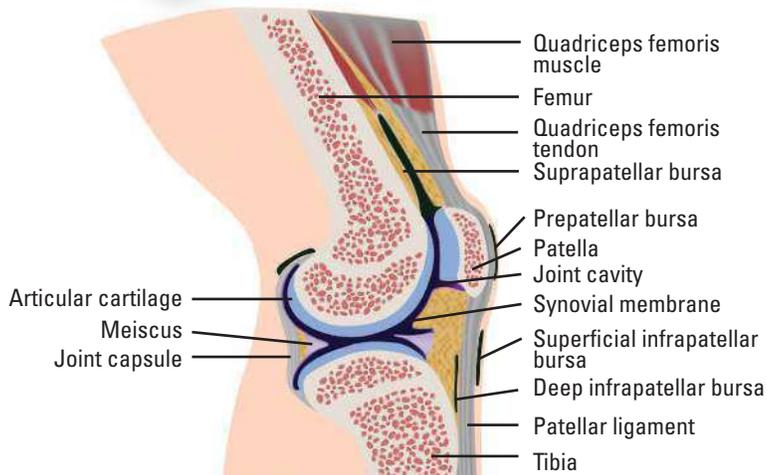


Orthopedic Surgery

DIANA R. SILAS, DO

Dr. Silas believes in looking at the whole body and a detailed patient history to assess injury and come up with a customized plan. The overall structure of the patient is crucial to their function. She realizes every patient presents a different challenge and no two injuries are exactly the same in every case. She loves being able to educate her patients and develop an individualized treatment plan right along side them. Her practice is centered around joint preserving procedures and treatments that can prevent or extend the need for total joint surgery.

Dr. Silas was born and raised in Metro Detroit and has a big heart for keeping her community active. When Dr. Silas is not seeing patients or in the operating room, she enjoys spending time with her family, traveling and fitness. She loves being active both in the gym and outdoors. As a former collegiate athlete, sports have always been a very big part of her non-work life as well.



The Knee

The knee is a joint that connects the femur (thigh bone), tibia (shin bone), and patella (knee-cap). Combined efforts from surrounding tendons, ligaments, and muscles provide stability.

PROBLEMS IN THE KNEE

Meniscus Tear: Repetitive motion and/or traumatic events can cause tearing of the menisci (cartilage pads in the joint that act as shock absorbers). Symptomatic portions of the menisci may need to be removed or repaired.

Ligament Sprain: In the knee there are 4 main ligaments that contribute to joint stability; Anterior Cruciate Ligament (ACL), Posterior Cruciate Ligament (PCL), Medial Collateral Ligament (MCL), Lateral Collateral Ligament (LCL). Injury to the knee can cause any of these ligaments to be over-stretched or torn. Severity of the injury will help your physician determine the best treatment plan for you.

ACL Tear: Complete tears of the ACL often occur during athletic activities, where the ligament is put in a position that causes it to be stretched to the point of failure.

Fat Pad Impingement: The fatty tissue underneath the patella can become irritated and swollen as a result of direct contact, hyperextension or repetitive strain.

Cartilage Defect: The normal wear and tear of life may eventually damage the cartilage, the material that covers the surface of bones in healthy joints. When the cartilage softens or tears, it may cause pain, reduce available motion within the joint, and limit function.

Cartilage Wear: The normal wear and tear of life may eventually damage the cartilage, the material that covers the surface of bones in healthy joints. When the cartilage softens or tears, it may cause pain, reduce available motion within the joint and limit function. The extent of damage can vary, from soft and unhealthy cartilage (chondromalacia) to high grade osteoarthritis.

Loose Bodies: Pieces of torn cartilage or bone may float around in the knee joint and cause locking or pain with certain movements.

Patellar Instability: This syndrome can be a result of trauma or abnormal anatomical alignment, where the knee does not have sufficient functional stability and the patella slides out of its normal position.

Plica Syndrome: A fold in the synovial tissue that is located in the knee can become inflamed and painful following an injury or due to overuse.

KNEE TREATMENT

Knee surgery encompasses a variety of techniques. Common procedures performed to address knee injuries include the following:

Knee Arthroscopy: A minimally-invasive surgical tool used to look inside the knee joint to gain diagnostic information and perform surgical techniques. Small incisions are used to place an arthroscope (a camera) and surgical instruments inside the knee. Arthroscopic techniques that are most commonly performed during knee surgery include:

Synovectomy: Inflamed tissue that does not resolve with conservative treatment is resected to restore motion and improve pain.

Chondroplasty: Loose cartilage flaps are removed with an arthroscopic shaver to reduce their risk of catching within the joint.

Loose Body Removal: Floating pieces of cartilage/bone within the joint are removed.

Meniscal debridement: Portions of the meniscus that have frayed or torn are removed from the joint.

Meniscal Repair: In some instances the torn piece of the meniscus is in an area with a sufficient amount of blood supply, allowing for repair of the tissue. In this case, suture(s) are used to stitch the torn piece of meniscus to encourage it to heal.

Microfracture: When cartilage of bone is severely damaged, a microfracture procedure may be performed to stimulate production of healthy tissues. Small holes drilled into the bone release new cells that may replace the damaged cartilage.

ACL Reconstruction: Injury to the ACL may require reconstructive surgery, to address pain, functional limitations, and episodes of instability. Either cadaver (allograft) or your own body's (autograft) tissue can be used to replace your ACL. Your surgeon will discuss graft options with you and help you decide which option is best for you.

If you undergo an ACL reconstruction with use of an autograft, you will have a separate incision for the **Autograft harvest** (where the tissue is removed). Most commonly a portion of the patellar tendon or hamstring tendon will be used.

Risks Associated with Knee Surgery

Hearing about the risks of surgery can be scary. Please rest assured that we exercise every possible precaution to make sure that your surgical risks are minimized. If you have specific questions regarding the risks of your surgery, please discuss them with your medical team.

INFECTION

As with any surgery, there is a risk of infection. Inspect the incisions and the area around your incisions daily and notify your surgeon if you notice any of the following signs and symptoms:

- Increased redness, swelling or pain at the incision site or surrounding areas.
- Increase in drainage or yellow/green drainage.
- An odor.
- A fever greater than 101° F (or surrounding skin that is increasingly hot to touch).

BLOOD CLOTS

Restricted mobility following surgery may cause the blood to slow and coagulate in the veins of your legs, creating a blood clot. It is important to routinely perform your rehabilitation exercises to minimize the risk. Please let your surgeon know before surgery if you or a family member has a history of blood clots or clotting disorders.

Signs of Blood Clots: Swelling in the leg/calf that does not go down (especially overnight). Increased pain, tenderness, redness or warmth in your leg. **If you notice these symptoms call your physician immediately.**

BLEEDING

Although arthroscopic knee surgery is minimally invasive, bleeding during surgery is common. Many patients experience some bloody drainage from their arthroscopic portals that may break through their dressings. This should not prompt concern. Dressings may be reinforced as needed until oozing subsides. Please call your surgeon if you notice heavy bleeding that soaks through multiple dressings.

NERVE DAMAGE

Numbness in the area around your incisions is very common. Small nerve branches that produce sensation may be injured with surgery and temporarily cause the area to lose feeling. Injuries to the major nerves that control leg function are, fortunately, very rare.

RISKS OF ANESTHESIA

Risks of anesthesia will be discussed separately by your anesthesia provider.

How Do I Prepare for Surgery?

You will be provided with a surgery date, surgery instructions and a date for a post-operative follow-up appointment.

Prior to your surgery date, your surgeon may request that you attend a pre-operative rehabilitation appointment. During this time, they will review crutch ambulation, mobility tasks, and immediate post-operative exercises for you to perform. They will also review initial movement and weight-bearing restrictions. Please ask any questions you have about functional tasks to improve your ability to care for yourself after surgery.

You will be contacted by Huron Valley Sinai Hospital for surgical prescreening within 5 days of your surgery. You **MUST** be available by phone to go through the prescreening process with the nurse, or your surgery could be delayed. If you have not completed this call within 3 days of your surgery, please call **248-937-3394**.

If your surgery is associated with a **worker's compensation claim or motor vehicle accident**, please make the office aware at the time you schedule. Please provide all paperwork that needs to be completed to your surgeon's office. This paperwork will not be completed until after your surgery is performed. The length of time you will be out of work will vary depending on the type of work you do and the procedures that were performed during your surgery. Follow-up paperwork must also be given to your surgeon's office to be completed.

QUIT TOBACCO USE

Research has shown that the use of any tobacco product inhibits healing and may delay or prevent your body from healing properly after surgery. It is strongly recommended that you quit the use of tobacco products at least 2 weeks before your surgery. If you would like help or advice, please call the Michigan Tobacco Quitline at **1-800-Quit-Now** (1-800-784-8669).

STOP NSAIDS

7 days prior to surgery, you must STOP taking any non-steroidal anti-inflammatories (NSAIDs) such as ibuprofen (Advil, Motrin), Naproxen (Naprosyn, Aleve) or Indomethacin (Indocin). Please read all over-the-counter medications before taking them, as some contain NSAIDs (i.e. cold medicines).

Note: your surgeon may provide you with alternate individualized instructions.

24 Hours Before Surgery

After 2:00 pm the day before your surgery, you will receive a call from Huron Valley Sinai Hospital informing you of the arrival time for your surgery and final instructions. If you do not receive this call by 4:00 pm, please call **248-937-3402**.

Do not eat or drink anything after midnight the night before surgery. This includes (but is not limited to) candy, gum, mints, water, coffee and juice. Failure to comply with these instructions may lead to a delay or cancellation of your surgery.

- If you need to take essential medications on the morning of your surgery, you may take your pills with a small sip of water.
- You may brush your teeth the morning of surgery, just do not swallow the water.

If you have further questions about pre-operative instructions, please call the surgery center and ask to speak with a nurse (**248-937-3402**).

WHAT SHOULD YOU BRING TO THE HOSPITAL?

Please be sure to bring your Driver's License/Photo ID, and medical insurance cards. If you have crutches, please bring them with you. If you do not have them, be sure to tell the nurse when you arrive, and they will be provided for you. Be sure to wear loose clothing that you will be comfortable in after your surgery.

Do not bring make-up, piercings, jewelry, money, credit cards, or any other personal valuables.

We are not responsible for lost or stolen property.

The Day of Surgery

When you arrive at the surgery center you will be taken to the pre-operative area where your surgeon(s) and anesthesiology team will meet with you to discuss the surgical plan. Nurses will start an IV and may give you medication to help you relax. You will be wheeled on your bed to the operating room, where the anesthesiologist will administer general anesthesia. You will constantly be monitored to evaluate your breathing and heart rate. When the surgery is complete, you will be moved to the post-anesthesia care unit (PACU). The nurses and anesthesiology team will make sure you are comfortable. Your family members will be brought in to visit you when you wake up. When you are awake and alert with controlled pain, you will be discharged to go home.



Caring For Yourself At Home

Once you are home, there will be some necessary precautions due to limitations from your surgery. Below are some suggestions that will help make your transition to home as simple and safe as possible.

DO'S AND DON'TS

- ✓ **Do** sit in a stable, high-seated chair with two armrests so that you can push off from the chair. If the seat is too low, place a pillow on the seat of the chair.
- ✓ **Do** use caution with household pets until you are in the house safely and seated.
- ✓ **Do** remove scatter rugs/hallway runners, and tape down edges of large area rugs.
- ✓ **Do** keep electrical cords and phone cords out of the way.
- ✓ **Do** keep your home well lit, including nightlights, a bedside light, and entry way lights.
- ✓ **Do** be very careful of water on the bathroom floor. It is a good idea to have a chair for sitting in the shower the first few weeks after your surgery.
- ✓ **Do practice getting around your house using crutches prior to your surgery. (REMEMBER TO PRACTICE GOING UP AND DOWN STAIRS!)**
- ✗ **Do not** bend your knee greater than 90 degrees immediately after surgery.
- ✗ **Do not** take your brace off prior to your first physical therapy appointment.
- ✗ **Do not** push yourself too hard, too fast.

Pain Control: You will be given narcotic pain medication to take home with you. Use these medications as instructed when needed for pain. This pain medication may have Tylenol in it.

Do not take additional Tylenol without first discussing with your surgeon. Pain medication may cause constipation, so remember to drink plenty of fluids, eat a high fiber diet and, if needed, use stool softening medications as directed.

You may be given an anti-inflammatory medication (Naprosyn, Indocin, Ibuprofen) to take for 3-4 weeks after surgery to prevent bony deposits. **Do not take any other anti-inflammatories in addition to this medication.**

If you are unable to take oral pain medication or have some other extenuating circumstance, this adjunctive pain treatment may be used:

Regional anesthesia involves placing long acting numbing medicine into the nerve that provides sensation to the surgical area. This can substantially reduce post-operative pain and facilitate early rehabilitation. Please discuss options for regional anesthesia with your surgeon to determine which is right for you. If you receive a femoral nerve block or spinal anesthesia, please exercise extreme caution with crutches to prevent falling, as your injured extremity may feel numb and/or weak and may not support the weight of your body. *Other ways to help reduce your pain include motion as directed by your physical therapist/athletic trainer, changing your position, and icing.*

Caring For Yourself at Home *continued...*

Brace/Immobilizer: You will wake up in recovery with a full leg immobilizer on your leg. **This immobilizer is to be worn and locked in full extension at all times, including while sleeping.** The immobilizer allows for motion restrictions to be set, to prevent you from bending beyond your allowed motion. When you begin a weight bearing progression, your surgeon may allow you to unlock the immobilizer during ambulation.

- **Bathing:** You may remove the immobilizer while you are bathing.
- **Getting Dressed:** You may wear your brace over eight fitting clothing as long as it remains secure and in proper positioning.
- **Rehabilitation Exercises:** You may perform exercises without your brace, as directed by your physical therapist/athletic trainer.

Knee Dressing/Incision Care: Your dressing will be removed at your first physical therapy appointment, 2-3 days after surgery. Do not remove this bandage or take off your brace prior to that appointment. Your physical therapist/athletic trainer will educate you on how to reapply the compression wrap. If you have stitches, they will be removed approximately 7-10 days following surgery. Do not apply any lotion, cream or antibiotic ointment to your incision.

Bathing: 5-7 days after your surgery you may shower, but you may not soak or submerge your incision for 2 weeks after surgery. In the first few days, you may take a sponge bath, but careful not to get your incisions wet.

School/Work: For a few weeks following surgery, sitting and standing for prolonged periods of time will be difficult for you. If you are currently a student, you will miss a few days of school, then will gradually progress back in to full days.

Returning back to work greatly varies on the demands of your job. You may be restricted from working for anywhere from 1-4 months.

Movement Precautions: ***Remember you are not able to bend your knee greater than 90 degrees*** until told you may do so from your physical therapist/athletic trainer. You will be wearing your brace at all times, which will limit your motion to only that you are allowed.

Icing: Until you have no pain, soreness, warmth or swelling, you should be icing frequently (at least 4 times) throughout the day. Avoid chemical ice packs, as they may cause frost-bite and skin irritation. Crushed ice in a well-sealed bag or bags of frozen peas work well.

Post-operative Rehabilitation Program

You may begin formal rehabilitation at an outpatient clinic **2-3 days after surgery**. The rehabilitation program will be designed for you and your specific surgery. All restrictions will be reviewed with you at the hospital and at your first rehabilitation appointment. You will attend therapy until you have returned to all activities you would like to do, with approval from your surgeon.

Maximizing recovery after knee surgery requires several things: protection of your healing tissue, a gradual return of range of motion and strength, resolution of swelling, and restoration of functional abilities. ***You may begin the exercises below the day after surgery if you feel able, unless you have been otherwise directed by your surgeon.*** If you attend a pre-operative appointment, a physical therapist/athletic trainer will review the program with you. It is best to have thoroughly reviewed and practiced this program PRIOR to your surgery. It is very important that you complete your program with perseverance and consistency in order to optimize your recovery.

The following exercises are to be performed **3 to 4 times per day** immediately following your surgery. You may feel some discomfort while performing some of the exercises, but as you perform the exercises your pain should lessen. **If you are not sure you are performing the exercises properly, or if you are experiencing increased pain during or immediately after you do them, stop the exercises until you consult with your physical therapist or athletic trainer.**



Exercises

Ankle Pumps

Moving the foot helps loosen the calf muscles, helps control swelling, and improves circulation.

- Pull toes back towards hip, and then push down away from you (as in using the gas or brake pedal while driving). Use a 1 count pace in each direction.

Perform 30 times, hourly.

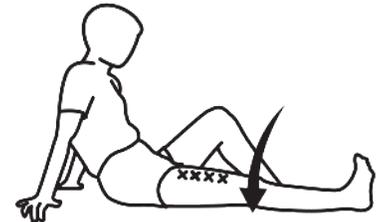


Quadricep Isometrics/Quad Sets (Front of Thigh)

With knee as straight as possible, contract the quad as if trying to straighten out your leg. Hold 5-10 sec; perform 10 times.

These cues may help you isolate the quads better:

- "Think-see-feel" kneecap being pulled up towards your hip as the quad tightens.
- Feel your quad as you squeeze to see if it is getting tight.
- Attempt to press the back of your knee into the floor.



Hamstring Isometrics/Heel Digs

Contract your hamstring by pushing your heel downward and pulling back as if trying to bend knee. You can do this while sitting up or laying flat on your back. Hold 5-10 sec; perform 10 times, increasing by 5's as tolerated until you are able to perform 30.

**Note: If your surgeon used a hamstring graft for your reconstruction, you should not perform these until you are told it is safe by your PT/ATC.*



Seated Knee Flexion

- Sitting, place your surgical leg on top of the opposite leg. Position lower leg off bed/chair. Use opposite leg to gently lower knee into a bend.
- Once your knee is bent, hold for 15 seconds then lift up with your opposite leg to let it relax.
- Perform for 5 minutes at a time, up to 15 minutes if tolerated

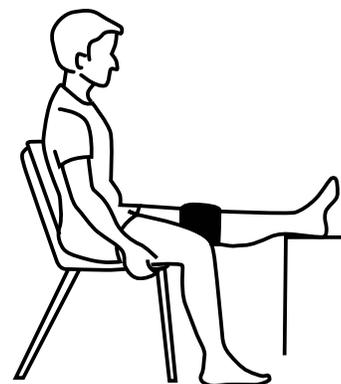
Repeat every hour.



Passive Knee Extension

- Sitting or lying on your back, elevate heel up on several pillows or a chair. Relax and allow knee to flatten down straight. Do not place a pillow under the knee.
- Hold for 5 minutes at a time, up to 15 minutes if tolerated.

Repeat every hour.



Follow Up Appointments

- **2-5 days** after your surgery you will attend your first outpatient rehabilitation appointment. *Throughout your recovery, you will continue to attend formal rehabilitation until discontinued by your surgeon.*
- **1 week** after your surgery you will follow up with your surgeon. At this appointment, they will take x-rays of your hip and discuss your surgery and recovery.
- **6 - 8 weeks** after your surgery you will follow up again with your surgeon. He will discuss with you your recovery during the first few weeks and outline a functional return to your previous level of activities.
- **4 - 5 months** after your surgery you will return to be evaluated by your surgeon, to ensure you have no concerns, and are on your way to returning to the activities you enjoy.
- **6 through 12 months, if you are physically activity and participating in sports or regular exercise**, you are encouraged to follow up with our hip rehabilitation team monthly for continued maintenance and functional progression.

**Note: follow-up schedules for individual surgeons and procedures may vary.*

When to Call Us

Please call our office **248-489-4410** or **248-937-4947** if you experience any of the following:

- Signs of infection (fever, chills, pus/increased drainage from the incision, redness, abnormal swelling).
- Increasing numbness, weakness or tingling in your leg.
- Change in bowel or bladder control.
- Increased pain that is not responsive to heat, ice, elevation, prescribed medications and modalities.

Orthopaedics After Hours: Please call our office and you will be directed to the after-hours on call physician.

Helpful Links/Resources

www.dmcmedicalgroup.com

www.aaos.org



Important Addresses and Phone Numbers

ACL RECONSTRUCTION PRESERVATION TEAM:



Diana R Silas, DO

Medical Specialties: Arthroscopy and Minimally Invasive Treatments, Hip/Knee Shoulder/Elbow Arthroscopy, Ligament Repair and Reconstruction, Joint Preservation, Biologic Joint Reconstruction, Total Shoulder and Reverse Shoulder Replacement, Orthopedic Trauma/Injuries

LOCATIONS:



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