

Living with Knee Osteoarthritis



Knee arthritis is a common condition that leads to degeneration of the knee joint and surrounding tissues. It can cause joint pain and stiffness, but there are many things you can do to improve your symptoms. The UNC Sports Medicine Institute (SMI) is here to help you manage this condition and live your most active lifestyle possible! We will provide you with the highest quality care while keeping up with best practices, new research and cutting edge procedures to share with you.

Here are a few ways you can reduce the pain and stiffness from knee arthritis:

- 1.) **Stay active!** We love to say: “Motion is lotion”! You may notice an increase in stiffness if you stay still for too long. After moving for a few minutes, joint stiffness can start to subside. You can try taking a walk, riding a bike, or even marching in place. And remember, getting stronger helps you move better too.
- 2.) **A healthy diet is important!** Eating healthier can help. Try to reduce your intake of processed foods and sugary drinks. These may contribute to your achiness by increasing inflammation in your body. We also encourage drinking plenty of water and eating whole foods.
- 3.) **Weight matters!** Try reducing your weight. Each pound lost reduces the load on the knees by four pounds! So, a reduction of 5 pounds of weight equals 20 pounds less on your knees, which may reduce your pain. Start with a small goal and get started.
- 4.) **Everyone will have peaks and valleys!** It is normal for pain from arthritis to go up and down over days or weeks. Sometimes there may be no or little pain. When you are feeling good, continue to be active. When the pain becomes bothersome, try some at home treatment options. If that is not enough, contact us to discuss next steps.

Websites with additional information and resources:

Arthritis Foundation: <https://www.arthritis.org>

Osteoarthritis Action Alliance: <https://oaaction.unc.edu/individuals/>

Movement and Healthy Weight

A few short (10 minute) movement breaks throughout the day can make a difference! Inactivity will lead to more stiffness and pain, muscle weakness, and difficulty doing the things you enjoy most.

Aerobic exercise increases blood flow throughout your body and has many beneficial effects. Any activity that you perform at a pace that elevates your heart rate counts. This can be walking, cycling, swimming, dancing, gardening, tennis or pickleball. You should do this type of exercise 3-5 days of the week.

We recommend doing **strength and balance exercises** 2-3 days per week. The stronger the muscles that surround your joint are, the more supported the joint will be. When performing standing exercises try not to lean on your hands so that you work on balance at the same time.

There are many different exercises that can help your knee. If you need more guidance, you may benefit from seeing a physical therapist to make an individualized plan for you. *Let us know if you want a referral to PT and we will make that happen!*



We want you to eat better to feel better. If you think about food as fuel rather than something to calm your growling stomach or make you feel better, you can begin to make choices that will help you have less pain and more energy. Rather than starting a diet, try to eat healthy foods, be aware of the calories you consume and try to avoid processed foods that cause inflammation. Start with a small change, and add more changes over time.

Here are some recommendations to get you started:

- 1.) **Drink half to two thirds of your weight in ounces of water each day.** For example, if you weigh 150 pounds, you should drink between 75 and 100 ounces of water a day.
- 2.) **Eliminate sodas and other sugary drinks.** They are calories that don't provide fuel for your body and prevent you from drinking water.
- 3.) **Eat fresh fruits and vegetables!** They are full of nutrition and antioxidants!
- 4.) **Use olive oil** on salads (instead of creamy dressing) and for cooking (instead of other oil).

If you need more guidance, you may benefit from seeing a dietitian to make an individualized plan for you. *Let us know if you want a referral and we will make that happen!*

Pain Management



It's important to understand that you will have times where your pain is increased and you should know what to do when this happens. Here are some home management options to get you through a flare up.

1.) Over-the-counter medications:

- Acetaminophen (Tylenol): Follow dosing instructions on your bottle and ***do not exceed 3000mg a day***. You should avoid alcohol intake while taking Tylenol.
- NSAIDs: This medication category includes medications like Ibuprofen (Motrin, Advil) and Naproxen (Aleve). ***Do not multiple NSAIDs! For Ibuprofen, do not take more than 800 mg at a time or 2400 mg per day. For Naproxen, do not take more than 440 mg at a time or 880 mg per day. Always take these with food.*** Check with your medical provider if you need to take them on a regular basis because there can be serious side effects. You should also check with your primary provider if you have a heart condition, history of stomach ulcer, kidney disease, or take a blood thinner.

2.) Topical: applied directly to the knee area; all are found in the pharmacy area of a store.

- Voltaren Gel: This is an alternative way to use a NSAID for relief. It is now available without a prescription. Make sure you follow the dosing directions for safe use.
- Lidocaine, Capsaicin, or Menthol products: These are other options to apply directly to your knee to reduce your pain.

3.) Ice and Heat: We generally recommend applying ice for arthritis pain flare ups. However, some people prefer heat or alternating ice and heat. You can experiment to find the best combination that works for you!

- Ice: 15-20 minutes, 3-4 times a day. Wrap your ice in a pillow case first so it's not directly on the skin. This may be good after a more active day than normal for you.
- Heat: 10-15 minutes in the morning can reduce stiffness. It can also help to relax the muscles and warm them up to be ready for the day.

4.) Brace/compression: Some people find that wearing a "sleeve" on their knee provides relief and stability with activity. There are also special braces for certain kinds of knee arthritis that may reduce pain. You can talk to you medical provider about options.

5.) Cane: If your knee pain bothers you with each step or you feel unstable, you may want to try walking with a cane. The handle should be set to the height of your wrist and be used on the opposite side of your body as the painful knee. You move the cane and painful leg forward at the same time.

6.) Epsom Salt baths / Hot tubs: Many people find Epsom salt baths or hot tubs to be soothing and helpful to their aching joints. Be sure to adhere to time limits allowed in hot tubs and they should be avoided by certain people (heart disease, pregnancy).

Medical Treatments for Knee Osteoarthritis

There are times when your knee pain is going to need us to intervene to help settle it down. When that happens, we are here to help you get back to your best! Here are some treatment options that we have success with for patients with knee arthritis:

- 1.) Cortisone injections: This is a common treatment for joint pain. Steroid injections can be a safe and effective treatment for pain and inflammation, but when they are done too often, it can increase the loss of cartilage. We prefer that you get these done only when you feel you really need them and pain isn't improving with above treatments. We cannot repeat these more than every 3-4 months. It can take a few days to a couple weeks for maximum benefit.
- 2.) Hyaluronic Acid injections: Also called "gel injections" and "visco-supplementation". These injections are designed to help lubricate the knee joint. The hyaluronan in your joint declines over time and with osteoarthritis. These injections can be repeated every six months but **HAVE TO BE AUTHORIZED** by your insurance. If you are interested in this treatment, you should reach out to us so that we can advise you and start the authorization process.
- 3.) Platelet Rich Plasma (PRP): Our blood (composed of platelets and plasma), carries many of our bodies' growth factors and proteins which promote tissue growth and healing. PRP cannot cure arthritis but may reduce pain and improve function of your knee.

We draw your blood, spin it in a centrifuge, and extract the concentrated platelets and plasma. This PRP is injected into your knee joint, sometimes along with a hyaluronic acid injections. We have found this combination treatment to work well for knee arthritis. Some patients feel discomfort for several days after the procedure as PRP causes an inflammatory response. PRP is safe and effective for the majority of those who try it, but is **NOT** covered by insurance companies. The procedure is \$500-\$750 per procedure. Providers typically do two to three injections, approximately 2 weeks apart.

- 4.) Alpha- 2-macroglobulin (A2M) injection: A2M is a plasma protein found in the blood, produced primarily in the liver. It binds to the enzymes that are responsible for causing the breakdown of cartilage and the inflammation that occurs. By binding to those enzymes it functions as a strong anti-inflammatory agent, also often reducing swelling.

We draw your blood and spin it in a centrifuge. We extract the A2M and inject it into your knee joint. PRP, most patients do not experience a lot of discomfort after the procedure. It is safe but not covered by insurance companies. This procedure currently costs \$1000.