

Knee Pain Solutions



**Assess
Your
Pain**

**Make a
Plan**

**Take
Action**

**By Jared Evans
Certified Strength and Conditioning Specialist
Giammalva Fitness Director**

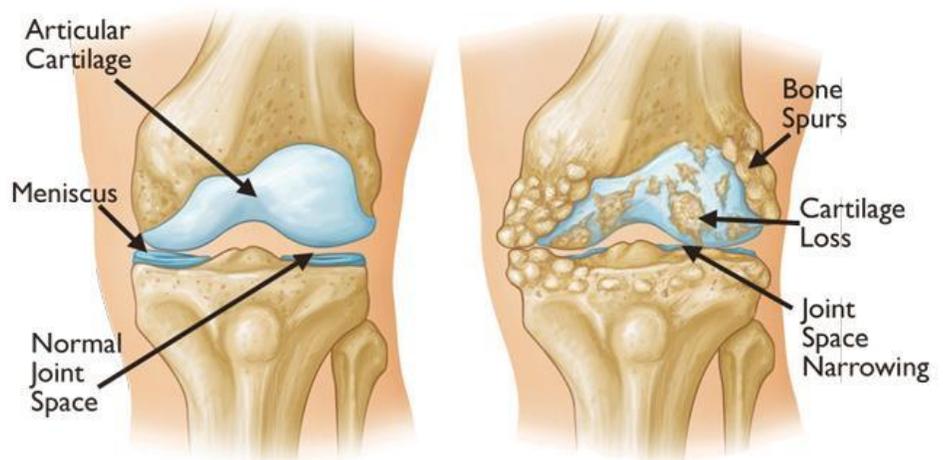


There are many different causes of knee pain and understanding the source of your pain is the first step to solving the problem. If you have chronic knee pain that alters your movement or limits you in your chosen activity, you should get it checked by a professional. A good orthopedic doctor, chiropractor or physical therapist is a good place to start to get checked up. Once you have a better idea of where your knee pain is coming from, it is easier to make a plan for addressing it.

Some possible causes of knee pain include:

1. Arthritis
2. Tendinitis
3. Ligament injuries
4. Meniscus injuries
5. Chondromalacia
6. Overuse

Knee pain can be debilitating and frustrating, but in many cases it can be lessened through proper exercise and stretching. Many times the pain causes us to limit



our movement to avoid pain. Unfortunately, this may cause even more problems down the line, even though it does temporarily keep us out of pain. Getting all the muscles around your knees strong is also very important. A good strength training program will take care of this.

What to do about stiff and painful joints

There are many reasons a joint may become stiff and painful, such as arthritis. Arthritis is a condition where the joint loses cartilage as it gradually wears away. This is an inflammatory condition that causes the joint to become painful and stiff. One of the best things for arthritic joints is movement, *even though you probably won't want to do it.*

Joint movement is incredibly important for the health of the tissue, as it circulates synovial fluid in the joint and keeps the muscles supple and strong. Finding ways to move that are tolerable can allow you to slowly increase your range of motion in the joint and improve its function.

Non-weight bearing exercise may be best

At least in the beginning, when you are trying to get your knees moving again, keeping pressure off your joints can make them easier to move. A great example of this is swimming or water aerobics.



Swimming is an excellent choice of exercise to strengthen your entire body. The buoyancy of the water means you are effectively reducing compression on your joints which will reduce pain and allow greater levels of activity. This will enhance circulation of blood and synovial fluids which promote healing of soft tissues such as cartilage. Keep in mind, these tissues do take substantial time to heal, since they lack the same blood flow as other areas (such as muscles) so be patient with your progress.

Another option that is accessible wherever you happen to be without needing a pool, is joint mobility and stretching exercises.

Stretching exercises for healing

Joint mobility exercise and stretching are extremely gentle and accessible forms of movement that help improve joint function. The following is a basic routine to address the most common issues people face. This routine can be followed every single day without issue.

Seated Twist/Piriformis Stretch

Sit on the floor with one leg bent and crossed over the other. Wrap your arm around your bent leg as you twist towards it. Hold for 30 seconds, repeat 3 sets on both sides.



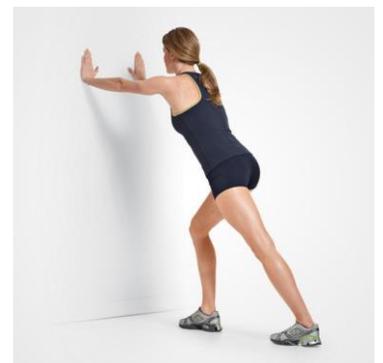
Supine hamstring stretch

Lay on your back with one leg up into the air, knee straight. Use a strap or towel underneath the foot to improve leverage. Pull your leg back towards you until you feel a mild stretch in the back of your leg. Hold for 30 seconds, repeat 3 sets on both sides.



Ankle/calf stretch

Stand facing a wall and place your hands on it. Start with one leg towards the wall. Bend your front knee towards the wall without letting your back leg heel off the ground. Keep the back leg straight. Hold for 30 seconds, repeat 3 sets on both sides.



Couch stretch

Use a wall, bench or couch to help you here. Make sure your hip is pushed forward and your back heel is close to your hips for the best stretch. Use a pad for your knee. Hold for 30 seconds, repeat 3 sets on both sides.



Sometimes, we need a break

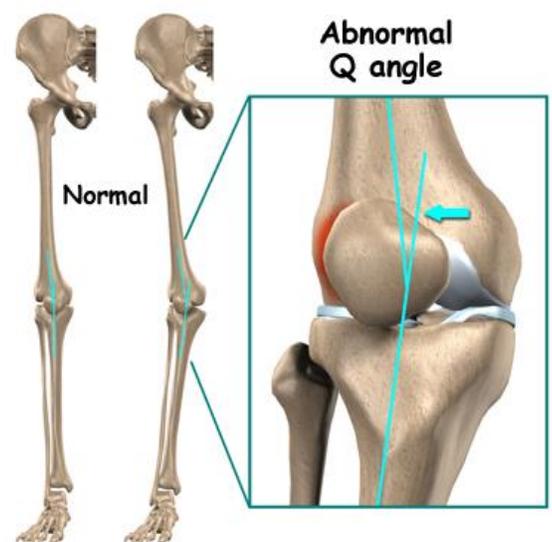
If you are suffering from over use type injuries such as tendinitis, jumper's knee, strains or pulls, then take a break to assess what the root cause is. Injuries like these can plague us for months or even years if we don't figure out what is causing them. You may want to keep playing your sport or working out as normal but if you do, it will likely get worse before it gets better.

Consider taking some time off, at least from things that seem to irritate the problem. If you play tennis and have constant pain in your knees, taking time off from your sport is almost certainly in your future. *The question is whether it will be your choice or not.* Choose to take time for yourself to fix the problem now, and you will be better off later.

Alignment is everything

Our bodies move best within certain parameters, and if we go outside of those parameters things tend to break down. The knee is a very unstable joint because of its shape and it relies on ligaments and muscles to hold it together. This instability makes it easy to get out of alignment and suffer wear and tear.

Pictured right we have a knee that is collapsing inward, this is called a valgus stress. This places stress on the medial tissues of the knee such as the meniscus and MCL. But it can also end up irritating the knee cap and the quadriceps tendon since they will be out of alignment when walking, jumping, and especially during something dynamic such as playing tennis.

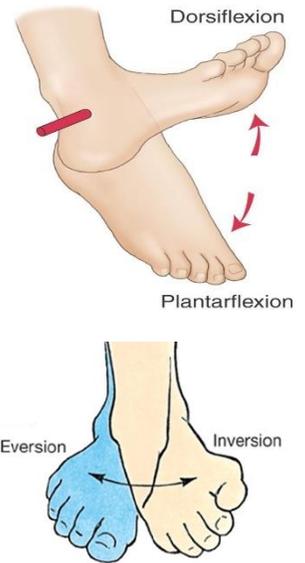



**KEEP
CALM
AND
TAKE A
BREAK**

Poor knee alignment is actually very common. It can happen because of leg length discrepancy, an injury, or muscular imbalance. In terms of muscle quality, often it is an issue of weakness on the outside of the hips and possibly tightness in the adductors (inner thigh).

Ankle mobility is another important consideration for knee alignment and health. If you lack dorsiflexion (when the top of the foot comes back towards the shin), your knee will compensate in ways it is not meant to. The ankle/calf stretch described earlier, will help with this.

Side to side movement of the ankle and the resting position of the foot is also crucial for knee health. If the arches of the foot are collapsed or the outside muscles of the lower leg are weak, this will also lead to poor knee biomechanics.



Corrective exercises

The following two exercises help address issues of the knee collapsing inward (knee valgus). This in turn will improve knee motion.

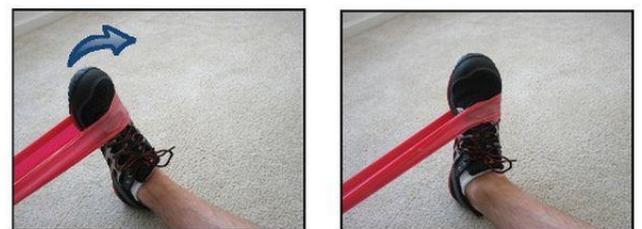
Lateral band walk

For this exercise use a resistance band placed around the ankles. Stand feet shoulder width apart, knees slightly bent. Take a step to the side and then follow with the other leg. Do 3 sets of 15 steps each way.



Ankle eversion

Use a band placed around the ball of the foot. Allow the foot to turn inward toward the big toe and then turn the foot back out. Do 3 sets of 20 reps each.



For more information on knee pain, or to setup a free fitness assessment, email jared@giammalva.com

Giammalva Racquet Club, 16400 Sir William Drive, Spring TX 77379