

# CHRONIC KNEE PAIN & GENICULAR NEURITIS

## WHAT ARE THE GENICULAR NERVES?

The genicular nerves are a set of nerves that provide sensory innervation of the knee joint capsule, when these nerves become aggravated or something within the knee joint is irritating the knee joint, pain is transmitted along these nerves.

## HOW IS KNEE PAIN FROM GENICULAR NEURITIS DIAGNOSED?

Many other conditions can present similar such as a pinched nerve from the low back, internal knee dysfunction, fibromyalgia, neuroma, aseptic loosening of the hardware, knee instability, saphenous neuritis, etc. History, exam, prior knee replacements and imaging are helpful but not conclusive. This is why a [diagnostic genicular nerve blocks](#) are required to **temporarily** stop the pain signals from the knee to assess if the pain improves.

## INDICATIONS FOR A GENICULAR NERVE BLOCK

- Continued pain after a total knee replacement:
  - Despite a very successful procedure, the literature demonstrates a 20% risk of developing chronic pain after a total knee replacement<sup>1</sup>
- Those who are unfit or want to avoid surgery
- Chronic knee pain not responsive to other therapies

## WHAT IS A GENICULAR NERVE BLOCK?

- A diagnostic block with numbing medication to temporarily stop incoming pain signals from the knee joint via the genicular nerve. This is the first step of a two step process to see if an ablation is appropriate.
- Think of this nerve block similar to a lab test, Xray, or biopsy. It is a diagnostic tool & **not a treatment** procedure and pain should return within 24-48 hours.

## HOW DO I INTERPRET THE OUTCOME OF THE PROCEDURE?

### 1) PAIN DOES NOT IMPROVE MORE THAN 50% FOR A FEW HOURS:

- a. This means that the pain is probably may not coming from the knee joint or the genicular nerve. This will help your provider workup other sources if possible, sometimes chronic knee pain after a total knee replacement has no identifiable cause

### 2) PAIN & FUNCTION IMPROVES MORE THAN 50% FOR A FEW HOURS & THEN RETURNS:

- a. This would mean that the pain is probably coming from the knee joint and an ablation would be appropriate

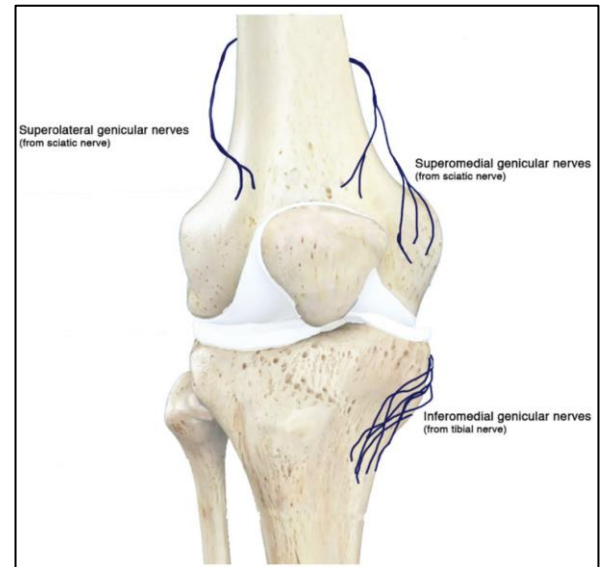
## WHAT SHOULD I DO AFTER MY PROCEDURE

- You will not be able to drive if the right leg is being performed
- We want you to do things that typically aggravate your knee pain to see how much improvement is obtained, this will help determine if a longer lasting procedure called a radiofrequency ablation (RFA) would be appropriate
- You will call our clinic at (775) 870-1490 to give us the results of the procedure

## WHAT IS A RADIOFREQUENCY ABLATION (RFA)

A RFA procedure is one that uses radio waves to stop a nerve from transmitting pain signals from the injured nerve or joint to the brain. The procedure calls for a needle to be inserted through the skin and guided with X-ray to the correct site overlying the genicular nerve. The sound waves heat the nerve causing damage but not permanently destroying the nerve. Pain relief ranges between 50% and 90% of baseline pain levels and these effects last anywhere between 6 and 15 months.

## Genicular Nerve Anatomy

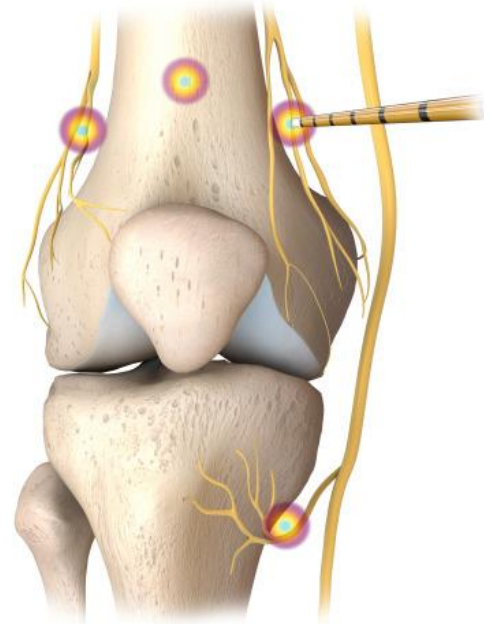


## WHAT ARE THE RISKS OF RFA

- As with any procedure, complications can occur, although they are rare. Of these complications, the most common would be a temporary increase of pain near the injection site. If this occurs, apply ice to the area on the day of the procedure.
- No relief from any procedure or surgery is always a risk. Studies demonstrate even those who respond very well to the diagnostic genicular nerve blocks do not respond to the subsequent ablation
- Post procedure pain that may last for a week or two after the procedure
- Very rare risk include procedure site bleeding, infection, or nerve damage

## BEFORE THE PROCEDURE

- Our office staff will call you a few days before the procedure for a pre-procedure screening.
- Let us know if you have bleeding disorders, or if you are using blood thinners like aspirin, Coumadin® (warfarin), Plavix® (clopidogrel), Ticlid® (ticlopidine), heparin, Lovenox® (enoxaparin), Fragmin® (dalteparin), Aggrenox® (dipyridamole), or NSAIDS (such as ibuprofen, naproxen, nabumetone, diclofenac, etodolac, indomethacin, ketorolac, meloxicam, piroxicam, ketoprofen, oxaprozin), or especially any herbal blood-thinning medications.
- If you are placed on antibiotics for any reason, please alert our office. The procedure will need to be rescheduled to reduce the risk of an infection
- Your doctor may call in a medication to help you relax during the procedure, if this is something you would be interested please alert our office staff 2 days before the procedure so we may send the medication into your pharmacy



## THE DAY OF THE PROCEDURE

- You will be required to have a driver
- The procedure should take about 30 minutes to perform
- You will receive post procedure instructions the day of the procedure and a follow up with your provider 2 weeks after the procedure will be scheduled

## WHAT TO EXPECT AFTER THE PROCEDURE

- Is immediate pain relief expected?
  - **No**, the physiology of heating the nerve does not cause immediate effects
- Knee pain may be improved for 4-6 hours while the local anesthesia (numbing medication) is working (similar to the diagnostic blocks). There typically is an increase in pain after this wears off. Ice packs used for 20-30 minutes every 1-2 hours is very helpful for this post procedure soreness.
- Since it takes up to 14 days for the nerve to be affected by the ablation, pain relief can take up to 14 days

## REFERECES

1. Wylde V, Beswick A, Bruce J, Blom A, Howells N, Gooberman-Hill R. Chronic pain after total knee arthroplasty. EFORT Open Rev. 2018 Aug 16;3(8):461-470. doi: 10.1302/2058-5241.3.180004. PMID: 30237904; PMCID: PMC6134884.