

### Physical Therapy

We recommend that patients **bring their helper in for one session** so that our therapist can instruct in the technique. The Helpers are often afraid of the technique without instruction. Our therapist can also show **other techniques** to help extension.

### The Extensionator

This is a device that can be used to help at home. However, it mostly **maintains extension**, but lacks sufficient force to correct contractures.

### Other Joints

Increasing flexibility of the **hip and shoulder** is also beneficial in many cases – but the results for the knee are the most uniformly helpful.

### Other Knee Problems

Loss of knee extension, as little as 5 degrees, has been shown to be the main cause of **knee pain after ACL reconstruction**. This process can also be applied after ACL reconstruction and is **usually helpful**.

### Why haven't I heard about this elsewhere?

We have been using this technique successfully for decades. The advent of stem cell and PRP injection has only increased its usefulness. However, it is **initially painful** for the patient and it takes weeks and **months to achieve best results**: Fast answers are often sought even if none exists. Also, doctors fear patient resistance and it is time consuming to explain. It also does not generate revenue for the health care system. Finally, it is **not generally taught** to residents, as the emphasis in health care is – unfortunately - increasingly on **drugs and surgery** and much less on **self-help**. We believe that most patients prefer to help themselves, if they can, and **avoid drugs and surgery**: and years of use, have borne this out.

Illinois  
Sportsmedicine  
and  
Orthopaedic  
Center

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## Gaining Knee Extension to Decrease Arthritis Pain

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## The Problem

Arthritic knees often do not fully straighten. We call this a **flexion contracture**. When you walk on this “flexed” knee, the quadriceps muscle is forced to work during the stance phase of gait driving the kneecap (patella) into the thigh bone (femur) and **worsening the arthritis**. This vicious cycle usually ends in rapidly **worsening pain** and knee replacement – unless remedial steps are taken. The increased muscular contraction time also renders walking more fatiguing.

## The Solution

Fortunately, all such knees can have this **flexion contracture reversed**, often completely, by an aggressive program of “**extensional exercise**” that can be carried out **at home** by a friend or family member, at your health club or elsewhere. It is painful at first but as the knee loosens it becomes much less so. **The process takes many weeks** and once corrected must be maintained indefinitely. Fortunately, it only takes **5 minutes per day** as will be outlined below. Knee straightening is called “**knee extension.**” The patient must be motivated to preserve the joint and avoid the **uncertainty, risks** and temporary nature of **total knee replacement**.

## The Payoff

Remarkably as your knee motion is restored your **knee pain will decrease – often dramatically**. Also, your stem cell or PRP **injection will work better** if your knee motion is improved before injection.

Usually we allow **3-4 weeks** to kick start the process before stem cell or PRP injection. The exercises are kept up after treatment, with a one-week hiatus immediately after injection. If you do not have a stem cell or PRP injection, you will still obtain **sustained benefit** from the correction of the flexion contracture.

## The Video

On our **website we have a video** showing the proper technique. Log in to **ismoc.net**, click the video link near the bottom of the page, then the physical therapy link will appear. Within that area, you will see a short video entitled “**obtaining knee extension**” which shows the proper technique.

## The Technique

Please view the video before or after reading the technique, which is as follows:

- Lay down on your back on a **carpeted floor**. A bed will not work, the surface must be rigid.
- Your helper will **kneel near your knee**.
- Turn your **leg inward** a little so that the kneecap points straight up
- Your helper will then place their **hand just below the kneecap**, (left hand first on the left leg, right hand first on the right leg) with the elbow straight on the bony prominence which is there. They will then place their other hand on their first hand – **as if performing CPR**
- They will then push down **very firmly** for 10 seconds until the **back of the knee touches the floor** or gets as close as it will go.

By leaning over the knee, they simply use **their own body weight**, and **very little arm strength is needed**. You do not need to be young or strong to do this successfully. PLEASE NOTE: When you first start this will be painful, but performed as directed it **is safe**

- After **pushing for 10 seconds**, relax for 10 seconds and then push again for 10 more seconds. This cycle is repeated **20 times** – a total of only **five minutes** elapsed time.
- The treatment is completed, and you may get up and walk. One **five-minute session per day** is a minimum. It may be repeated several times daily, and will achieve results faster if this is done.

Most patients notice an **immediate decrease in walking pain**. There are other adjunct techniques that can also be performed if you live alone.

**But best results are obtained by having someone else push on your knee.**

## Other Benefits

Even if joint preservation treatment fails and you have knee replacement surgery, the reduced flexion contracture makes the **surgery technically easier** for the surgeon and enhances the prospects for a **good result** after surgery.