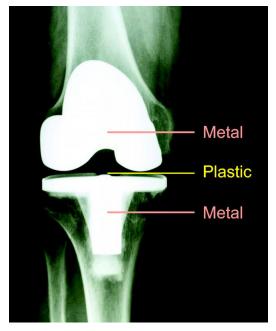
# **KNEE REPLACEMENT SUREGERY**

**Knee replacement surgery** is usually needed if you have osteo-arthritis, where the cartilage inside your knee wears out resulting in bone on bone rubbing, with not enough cushioning between your shin bone and your thigh bone.



During the surgical procedure, the muscles around the knee are traumatized by being forcefully moved aside to gain access to the knee.

A small portion of both the shin bone and the thigh bone are cut away to make room for a metal cap on your thigh bone and a cap of hard plastic on your shin bone, resting on a solid metal base. This plastic is as slippery as teflon and so hard that ice skating on this material wouldn't even leave a mark. This plastic will take on the role of the cartilage.

The plastic fills up the dark space in the X-ray image, including the thick ridge in the middle. Thus, its shape provides two concave hollows to accommodate the two protrusions on the now metal ending of the thigh bone. And the two concave shapes are further strengthened by the plastic ridge in the middle. This provides stability to the joint.

**The ACL – Anterior Cruciate Ligament** – is removed during this procedure, in part because it would be very difficult to preserve it and also because it is most likely that the ACL is also worn out.

The surgery will put you out of commission for at least a month, and quite likely for 2 or 3 months. Some pain or discomfort might linger even longer.

The following pages provide information on:

- 1. Things you need to know before surgery, and
- 2. A personal experience of recovery which might be different for different people.

# WHAT YOU WILL NEED FOR KNEE REPLACEMENT SUREGERY

**ASSISTANT (or "Coach"):** You will need someone (or a number of people) to help you with the following. Keep in mind that you will be quite groggy and sleepy for at least 2 or 3 weeks and will barely have energy for anything other than sleeping, going to the bathroom, and eating.

- 1. **Transportation to and from the surgery.** The surgery takes about 1.5 hours, plus some drive time to and from, which can easily add up to a total of 2 3 hours, depending on the driving distance. This assistant will need to help you **get dressed** before you leave the hospital, especially with socks and pants, or anything that you need to step into before pulling up.
- 2. **Transportation to physical therapy** twice a week for a couple of months. Each therapy session lasts 45 minutes. Add the driving time for a total. You will receive a schedule of all the therapy days ahead of time, so maybe you can ask different friends and neighbors to sign up for at least one or two of these session. They don't need to go inside. If they prefer, they can wait for you in the car in the parking lot.
- 3. **Food.** It is best to prepare some food ahead of time. Have something in the refrigerator that you can simply warm up to eat. Or simply open a can of soop and have it with some crackers or bread. But, you will need some food assistance for maybe a couple months, so it would be best to have someone who can get some fresh food for you (bread, milk, yogurt, fruit), or order some food to go, such as Chinese, or Mexican food. Remember that you will not have much energy left. You will just want to sit down and eat, but not spend time and energy cooking the food. Also, it will be difficult to carry your food from the kitchen to a dining or living room, especially while you have both hands busy with a walker.
- 4. **Clothing and Getting dressed.** Use as simple clothing as you can. You will most likely be living in your jammies for a while. But, you'll need to get dressed for your physical therapy. During the first couple of weeks, you will not be able to raise your operated leg more than an inch or two off the ground. You won't be able to put on or take off your socks. There might be some sort of mechanical aid for putting on your sock. Or you can just go barefoot.

# SHOES & SLIPPERS.

Chose something simple that you can just slide your foot into. For example, shoes without laces, or just sandals. No high heels. Just a flat shoe. You will be able to wiggle your toes to pull your foot deeper into your shoe or your slipper. You will not be able to tie your shoe-laces.

# WALKING AIDES: A WALKER and A WALKING CANE.

You will need both. A <u>walker</u> definitely, especially during the first 2 or 3 weeks. A walker will help you use your arms and upper body strength to get from a sitting position to an upright position.

After the first few weeks, your therapist will tell you to switch to using just a cane for walking, which facilitates more natural walking. The best **walking cane** is the kind that has 4 tiny little "feet" at the bottom, so it can stand upright on any flat surface.

Even if you are not very mobile, these days you can order any of these aids through the internet and have them delivered to your home.

I asked if I could use some crutches I already had, but they said that crutches are not recommended, and don't provide the needed stability for walking around or being able sit and stand up.

**SITTING AIDS.** A taller chair is easier to get in and out of. Not as tall as a barstool, but at least a few inches taller than a regular chair. In fact, maybe even just an additional small pillow or folded blanket might be enough to lift your chair just enough.

A chair with **arm-rests** is best. You can put your hands on those armrests to help lower yourself into the chair or to pull yourself up from it. One great option would be an **office chair** that has arm-rests, can be pushed around on wheels, and even has an adjustable height.

Maybe also raise **the height of your toilet seat.** You can do this by purchasing and installing a separate higher seat. Or, maybe just try to inflate a "floaty" and simply place it on the existing seat, assuming they are a similar diameter. It's not a must. Your walker will help you sit down and stand up. But the higher the seat, the easier it will be.

**SLOPING BED.** Lift the foot of the bed by several inches, so when you lay down on it, your knee will be slightly above your heart. This elevation helps against your knee swelling up. You can place some pillows or folded blankets between your mattress and the bed frame to lift it just one end of it.

A good option might be **a LazyBoy chair** where you can raise the legs up. You will most likely be sleeping on your back anyway.

**ICE:** Your doctor will give you some plastic bags filled with a gel that is easily frozen in your freezer. Insert the frozen bag into a sleeve and wrap around your knee. Do not place the bags directly onto your skin. Your pajamas are a suitable in-between layer to prevent any freezer burn.

Even better than these frozen bags, is to have an **ice machine**, especially one with a timer that can be programmed to send cold water to your knee for around 30 minutes, followed by a 30 minute pause, and then another 30 minutes of icing your knee. See some of the "cold therapy machines" at: <u>https://orthobracing.com/blogs/resources/cold-therapy-machines</u>.

## YOUR HOME LAYOUT

Organize your living situation in such a way that you don't need to use any stairs and so that everything will be close at hand. It will be at least a month before you can try using the stairs gingerly, one step at a time.

If there is any stair that you can't avoid, like in front of your house, always use the following rule: When stepping UP, go with your good leg first. When stepping DOWN, lead with you bad leg. The effect is to avoid bending and putting pressure on your sensitive knee.

Place a bed and TV close to each other and close to the kitchen. Your trips will mostly be between you bed, the bathroom, and the kitchen.

I thought I would be able to watch a lot of TV, and I did some of that. But most of the time I was too sleepy. I lay down, and within a minute or two I was asleep again.

**Near your bed**, within reach, place a **TV remote control**, as well as **a way to charge your cell phone.** Keep your cell phone close to you, so you don't have to get up to fetch it when it rings.

Consider sleeping in a shirt that has a chest pocket. That will make it easy for you to slide your cell phone into your pocket when you get out of bed, just in case it rings while you are away from your bed.

# TIPS TO STAND UP and LAY DOWN

**To stand up**, especially from a low toilet seat, pull your walker close to you and use your arms and your good leg to stand up. But before you make the effort, first prepare yourself mentally. Tell you operated leg to **not** help in this. Tell your bad leg to lift up first; just a fraction of an inch off the ground will do. Then use your good leg and your arms to lift yourself off the seat.

**To lay down**, first lower yourself to the bed with one hand on the walker and the other on the bed, and sit on it. Then, hook up your ankles, with your good leg being under your painful leg, and then raise both hooked legs together and swing them onto the bed.

Continued on next page. Scroll down.

# **RECOVERY FROM KNEE REPLACEMENT SUREGERY**

**PAIN:** The pain will not be terrible. In fact, they say that the pain after surgery will never be as great as the pain if your knee gets inflamed before the surgery.

#### PAIN MEDICATIONS:

You will get plenty of pain medications to handle the pain, such as: **For low pain:** Tylenol (Acetaminophen) and/or Advil (Ibuprophen). **For medium pain:** Tramadol (which will make you sleepy). **For greater pain:** Oxycodone.

You will most likely be prescribed all 3 or 4, and you can use them as needed. Just follow the instructions regarding how often you can take them. Some of them can be taken every 4 hours, others every 8 hours.

Always take a pain pill about 30 – 45 minutes before each physical therapy session, so you can do the exercises without too much pain.

Most of these medications will slow down your metabolism and cause constipation, so you will also be given some stool softener pills. And you can also take some over-the-counter laxative such as Mirolax or Durolax.

**NAUSEA:** Most likely, you will not experience much nausea at all. To help against nausea, **always take your pain medication with some food.** If you need to take some pills in between meals, have some crackers or cookies right next to your pills, so you can eat something first before swallowing the pills. If you do experience nausea, that is probably one of the signs that it is time for you to ease off you pain pills for a day or two.

#### **EXERCISES**

Try doing your prescribed exercises as much as possible. The therapist will give you some 5 - 10 different exercises as homework after each session.

It is important to move your knee. Gently at first, and then gradually with more muscle power. Keep moving your knee. Motion is lotion.

Three of the knee exercises that seemed to help a lot:

- 1. **Ankle pumps.** Every time you are lying down, move your ankles up and down some 25 30 times, which pumps blood in and out of your shins. This helps to prevents blood clots (which could potentially be dangerous). Do this every hour, or whenever you are awake.
- 2. **Bicycle rides.** You will most likely be offered the use of a machine that looks a bit like a stationary bicycle but with the ability to regulate the size of the circles it makes. My insurance paid for the use of this for the first 3 weeks. It gently massages your leg.
- 3. Pulling your foot toward you while lying down, using a belt around your foot and gently sliding your heel toward you. Once you reach the limit, you will experience a sharp pain. So, don't overdo it, but do work with it. It is during this exercise that the therapist will measure the maximum angle between your shin bone and your thigh bone. The goal is to reach about 90 degrees within the first 2 weeks, and then up to a maximum of 120 130° within 6 weeks.

# WHEN TO STOP TAKING PAIN PILLS

You will most likely receive enough pain medications to last you approximately 3 weeks. They will all say: "No refills", but if you get close to running out of them, just phone your doctor and you will get a new prescription for more. The doctor will probably not tell you anything about stopping the medication, leaving that decision up to you.'

It is advisable to try to stop taking pain medication as soon as you can. Don't wait until the pain is completely gone, because that will take a long time. Some of the pain pills can be addictive. So, break the addiction chain as soon as possible.

A good sign that you need to stop or lower your intake of pain pills is when you start **urinating excessively**. If you are being awakened every hour and a half because your bladder is full, and it might also feel like your urine is somewhat bubbly, and you even feel a slightly nauseating bubbly feeling in your stomach, it is time to at least pause the pain medicines for a day, or maybe even stop altogether and see how that feels. If the pain becomes too much, you can always resume.

In my case, I stopped taking pain medications for a day and a half after about 3 weeks. It felt good to give my body a rest. But I felt the pain eventually come back stronger than it was before, so I resumed taking the pills. During week 6, I stopped taking the pills again, and this time I did not resume them. Well, not the stronger medications. But I resumed taking some Tylenol, just to take the edge off.

When you stop taking pain medications, it will seem like the pain gets a litle bit stronger. But it could also be said that it's not necessarily stronger but just more focused. What used to be a dull pain in the background while on pills, now becomes a slightly sharper, more visible pain where you can pinpoint which muscle hurts.

Since pain medications tend to put your body to sleep, and slow down you metabolism, not only do they cause constipation, but I believe that they also slow down the healing. You need your body to wake up and send more blood into your knee and surrounding muscles. That's one of the benefits of getting off the pain medications at least periodically.

# WHEN TO START DRIVING A CAR AGAIN

It is recommended not to drive a car until

a) at least about a month after the surgery, or probably longer,

b) when you are completely off you pain medications, and

c) when the pain is low enough that you can trust your leg to be able to switch from the gas pedal to the brakes without any delay or hesitation, when needed.

# MY OWN EXPERIENCE OF KNEE REPLACEMENT SUREGERY

**ANESTHESIA:** I think I received 3 kinds of anesthesia on the day of surgery:

- a) A spinal block
- b) An intravenous infusion that put me to sleep
- c) Maybe also an injection into my upper thigh.

I slept through the whole surgery and awoke in a post surgery recovery room.

I had read in advance about some of the exercises I would have to do, and one of the most important one is the "ankle pumping," where you move your foot up and down around the ankles to pump some blood into your calves in order to prevent blood clots. I started doing those almost as soon as I was awake, even though no one told me to do it.

Interestingly, for at least the next 30 – 45 minutes, though I could easily move my feet, I could not lift my knee at all. In fact, I couldn't even feel my knee, since it was still under anesthesia.

Once I regained feeling in my legs, I walked, with the help of a walker, to the bathroom and back. I was then discharged from the hospital.

**DAY 1:** The same day as the surgery. I was told that the goal is to get me to bend my knee forming an angle between my calf and my thigh of up to 90 degrees by the end of two weeks after the surgery. On day 1, I thought that would be easy, because while laying down, I managed to slide my heel to a position of maybe 75 – 80 degrees. But I probably overdid that, because this same movement would become very painful the next day, as the anesthesia wore off.

When I was asked what my pain level was, on a scale from 1 to 10, I didn't know what to say. When at rest, my pain level was between 0 and 1. I didn't think that that's what the question was about. When I moved my knee or stressed it the wrong way, the pain would shoot up to at least 7-8. It lasted for only a second or two, but it was the only pain I could feel. So, that's the pain I reported – the moving pain.

**DAY 2:** Not a big difference from day 1. Both days, there was almost no pain at all if I was resting. I could lay down, or sit still, or stand with

equal ease, as long as I wasn't using my muscles to bend my knee or to put any pressure on it. But on day 2, the pain did increase inside the knee itself if I tried to bend it. Still the pain was very localized and centered around the center of my knee. Everyone told me that the pain would increase on days 3 and 4.

One nurse told me that I was lucky that I didn't experience any pain at rest. She said that maybe just 1 patient among 20 has no resting pain.

**DAYS 3 and 4:** Yes, the pain increased somewhat, but not nearly as much as I had been dreading.

It felt as if up till then, I had had all my pain compressed into the center of my knee, and then some "valves" got released and the pain spread out to a larger area around the knee. These "valves" were actually due to the wearing away of my anesthesia. But it also felt like that pain was now somewhat diluted, less sharp than before.

For pain, I did take some **Acetaminophen** (Tylenol) for mild pain, **Tramadol** for medium pain, and **Oxycodone** for severe pain, but only moderately, as needed. I tried not to get too dependent on the medicines.

In retrospect, these two days (3 and 4) were the most painful. I had to be very careful how I moved my leg. When at rest, either standing or sitting, or laying down, the pain was not really a pain, just a minor discomfort. But what really hurt were the transitions between these 3 body positions, especially going from a standing position to sitting.

During these transitions, I had to raise my bad leg up in the air, at least a little. If my heel was still in touch with the ground, I would almost subconsciously put a little pressure on that leg to help me sit down or stand up. And that's when the pain shot up to at least 7 or 8.

**DAY 5:** On this day, I expected the pain would diminish. But I had an unpleasant morning surprise. I sat down at a table for breakfast. I experienced the usual "Ouch" or "Arrrgh" as I transitioned from standing to sitting, but then I also felt pain of maybe 2 or 3 while I was sitting and resting. More resting pain than before. I finished my breakfast as quickly as possible, took a tramadol (for medium pain) and went back to bed.

Luckily. The rest of the day was much better. There was less pain. I just wasn't sure if that was because of a lessening of the pain, or because of

the medicine, or because I had learned how to move my body better.

**DAYS 6 AND 7:** I now know that the pain is not going away, at least not as fast as I was hoping. Of the 3 possible factors mentioned the previous day, it is the **pain medications** that are the strongest factor.

On day 7, I experienced the same kind of surprise as on day 5. I woke up in the morning, my medication had worn off, and I had more pain. I am talking about the resting pain. I used to be able to lie down, sit, or stand with ease. But now sitting is getting more painful. I took an oxycodone and some Tylenol (acetaminophen) and went back to bed. The pain gradually subsided.

Basically, the pain that was confined to just the center of my knee in the first couple of days is gradually spreading through my whole leg. I can feel the sore muscles in my thighs more and more. In some ways, maybe the sharp central pain seems to he diminishing very gradually. But, at the same time, my whole leg is getting more sensitive. So, my resting pain is gradually rising to a 3 or even 4 at times (on a scale from 1 to 10).

So, whereas in the first 2 or 3 days, there were two distinct levels of pain: **resting pain** at almost zero, and a **moving pain** at 7 or 8, the two are now getting closer together, and will perhaps merge into one, which might settle somewhere around 4 or 5.

At the end of day 7, only lying down is almost painless. Standing is a bit of discomfort, but sitting is getting difficult. While sitting, I have to keep readjusting my posture, from a straight leg to a leg bent at around 75 degrees, and then back again to a straight leg. But nothing helps much.

Well, at least I keep moving my leg. "Motion is lotion" they say.

To keep handling the pain, I keep switching between Tramadol (for mild pain) and Oxycodone (for severe pain). I don't want to get hooked on any one of them. But there are also times when I use both of them at the same time as well as extra-strenght Tylenol. All 3 have been prescribed for me by the surgeon.

At the end of week 1, I was instructed to remove the top layer of my waterproof bandage. This was quite easy and painless. There is yet another, thinner layer of somewhat waterproof bandage underneath. This lower layer will gradually dissolve, dry out, and eventually fall of all by itself.

## WEEK 2 (Days 7 - 14)

I was expecting the pain to decrease gradually but perceptibly. But the results were mixed. In retrospect, this second week was probably the most painful, but not by much.

Any changes in pain were very gradual and barely noticeable from day to day. It took several days to notice any difference. It was easier to compare one week to another.

Week 2 brought a very gradual decrease of the moving pain, the sharp shooting pain that I experienced for just a second or two at a time. On top of that, it was really hard to tell if the lessening of this sharp pain was due to:

- a) A real lessening of the pain itself, or
- b) Me learning how to avoid painful movements or positions, or
- c) The pain medicines doing their job, or
- d) A combination of all of the above.

Much more noticeable was the gradual **increase** of the "at rest" pain. During week 1, I could stand, sit, or lay down with no pain. But by the middle of the second week, I could only lay down with no pain, while sitting became increasingly more uncomfortable.

There was some bruising visible on both my calf and my thigh. On the thigh, the bruises were on the back, so that whenever I sat down, part of my chair would dig into the bruised area, and that hurt. The bruising itself is normal, but it does bring some additional pain into the mix.

Overall, I still experienced the occasional sharp pain when moving, just more rarely. But the gradual increase of my "at rest" pain became a real thing. It wasn't very high pain. Maybe around 3 - 4. But just the fact that it was constantly there, except when lying down, made it a real irritant. It was a somewhat dull but cumulative pain. For a while, I started reporting a pain of about 4.

At physical therapy, I noticed that I was gradually able to bend my knee more, and lift it up a bit more. Obvious improvements, but I couldn't fully enjoy them because of the almost constant ache.

By the end of week 2, I was able to slowly and cautiously bend my knee to over 90 degrees. Then it went from 90 to 97, to 100, and 104 degrees, though with the help of a belt tied to my foot to help me pull my knee up.

# WEEK 3 (Days 15 - 21)

Very similar to week 2. But with some noticeable improvements.

My dull resting pain level went down from a 4 to a 3.

At the same time, the sharp, shooting pain gradually abated to the point that I could now bend my knee more than before without triggering the sharp pain.

All these differences were subtle and barely noticeable. The most concrete signs of improvement were in the form of an increased level of **mobility** around the middle of week 3.

I could now lift my leg high enough to place my foot onto a step. I am still not walking down or up stairs, but at least it looks like I will be able to do that soon. Also, my therapist wants me to transition from using a walker to using just a walking stick by week 4.

I could also achieve greater angles between my calf and thigh bones. From an angle of approximately 90 degrees at the end of week 2, during week 3, this angle increased to 97, then 100, and then 104 degrees.

I made sure to always take my pain medications at least 30 minutes before my physical therapy appointment, in order to be able to do all the exercises without too much pain.

So, week 3 showed obvious mobility improvements, but the underlying pain is still there, and if I push my leg a bit too much, I stilll experience the occasional shooting pain that goes to a level of 7 or even higher.

At the urging of my physical therapists, I am now bending my knee and ankle in a more natural walking mode. Instead of dragging my leg one step at a time, I am now starting to walk more naturally, more fluidly.

However, I still need to be very careful in all the transitions from standing to sitting, or from standing to lying, or from sitting to standing. And the consistent dull pain is still there.

## WEEKS 4, 5, and 6

More of the same. Any improvements are very gradual. At some point, I came up with the idea that I am improving only about 1% per day. Almost imperceptible from one day to the next, but with some visible improvements from week to week.

If this is true, then it might take me about 100 days (3 months) to get more or less back to normal.

**The pain level** has not changed all that much. It came down to maybe a 2 but then stayed there for a long time.

But the **mobility** keeps improving. I could bend the knee first to 111 degrees and then to 120 degrees, which is getting closer to the goal of between 120-130 degrees. Also, I can now easily raise my foot off the ground by several inches, maybe even close to a foot off the ground by the end of week 6.

I was getting some nausea and really excessive peeing around the end of week 4 after surgery. So, I quit taking all medications for about a day and a half. It was a welcome change. My body liked the rest. The excessive urination stopped. I ate more yogurt and drank more kefir, to restore balance in my digestive tract.

But the pain became more pronounced without the medication, more in focus, so after a day and a half or rest, I went back to taking my pain pills, just in time for my next therapy session.

Near the end of week 6, my therapist suggested that I cut down on the strong pain medications. So, I stopped using them once again. But this time I stayed on just Tylenol, just enough to soften the edge of the pain.

The pain is not very strong at all. It's just irritating that it is constantly present, which feels debilitating. And this time, with any medication, I noticed that the pain can be more pronounced at times even while laying down and resting. It now feels a bit irritating and ticklish, with some occasional throbbing.

Without pain medications, it is more difficult to sleep on my back. I have now started sleeping more on the side, but it takes a lot of shifting my body around until I can find a position that is comfortable for my leg.

This time, I stayed off my medications for several days, and I plan not to

use them regularly any more. Except, I think I will still take just one Oxycodone pill just before each of the remaining therapy sessions.

My two therapists are not nice guys any more. They are now pushing me to do ever harder things, such as standing up from a chair without the use of a walker or a cane, or walking up and down a set of stairs continuously, not one step at a time, and walking over a set of small hurdles that force me to lift my foot higher up in the air.

## WEEK 7

**Day 44 after surgery.** Almost exactly a month and a half. **I saw my surgeon for the last time today.** Basically, he discharged me saying everything looks good, but he would like to see me one more time in about a year. He thinks I am now OK to drive a car. I still have about 2 weeks of physical therapy.

All this sounds good, and I do feel better in many little ways. But then came the big reveal. When I complained that I still have pains in and around my knee, he immediately named a whole bunch of muscle groups, such as quads, glutes, left side, right side, etc. -- and **all of these muscles will continue to ache and hurt for maybe up to 6 months or a year, and possibly even longer for some people.** 

Last night I had a bad night because of the pain in the knee. The pain is slightly less than earlier, but it is persistent, and it occasionally flares up like last night. My muscles twitch a bit. It's like someone hit a nerve. It feels similar to a restless leg syndrome and it looks like **Magnesium** pills help calm it down.

So, overall a mixed bag. I reached a milestone, but the saga goes on!

# WEEK 8

There is slightly less pain in my knee. For the past week or more, I quit using stonger pain medicines, butr still took Tylenol regularly. During the 8<sup>th</sup> week, I finally quit using Tylenol as well. Except on physical therapy days, because the exercises are getting more demanding and the muscles still hurt.

In fact, it seems that the pain is now mainly centered around two groups of muscles. The muscles right above the knee hurt because they've been traumatized during surgery. And the muscles around my hips are hurting probably because I am now using the hip muscles more than the knee muscles, in order to protect my knee.

There is greater mobility again. In week 8, I can now bend my knee more, not just in a back and forth motion, but I can also twist the knee a bit, which makes it easier to soap up my right foot in the shower.

But overall, I don't see any end to the general achines in the muscles, especially if I end up sitting too much, which compresses a nerve in the back of my thigh, and that seems to aggravate everything.

Some nights, it's hard to sleep because I just can't find a position in bed to avoid the pain. Some other nights are OK. The pain comes and goes.

#### WEEK 9

**Day 58.** A setback. This was my last real therapy session. It didn't go well. My leg hurt more than usual and I was unable to stand up from sitting in a chair without the use of hands. I was able to do that a week or two ago, but not now.

## Day 60, or 2 full motnhs, near the end of week 9.

The leg muscles, above the knee, and the hip muscles, are still hurting. Some days, especially after a physical therapy session, I am dragging my right leg a bit, because it just hurts too much to walk. It feels like the exercises over-work the muscles.

But walking is what I probably need the most at this stage. It may hurt a little, but it hurts less than climbing stairs. Walking provides a relatively easy way to exercise the leg muscles and gradually build them up so they can be fully functional again. Walking is a relatively gentle exercise and it provides the needed "motion is lotion" factor.

When walking up or down the stairs, which I can now do, I still chose to do it just once step at a time, leading with my good leg when going up, and leading with my hurting leg when going down, and then bringing the other leg next to the first one.

Occasionally, I try to climb by putting equal pressure on each leg, climbing the next stair with each step. This is more painful, and I help myself by putting as much weight as possible on my arms, with one arm on the handrail and the other arm on my walking stick. I do this for just one, two, or three steps at a time, because it feels like I am damaging my hurting muscles this way. I don't want to overdo it.

## WEEK 10

**Significant improvements.** I was gentle with my body for several days, hoping the hurting muscles will heal. And they did. And I was able to do more things:

- I walked without a cane, as suggested by my therapist.
- I was able to climb some stairs more easily.
- I was able to take my dog for a walk once a day.
- On day 64, my wife asked me to help her remove a cluster of small trees that looked like a large bush in our yard, using my chainsaw. I was able to do it and even bend low enough to the ground to leave only a very small stump.

**Day 65. Even more improvements!** This was my very last physical therapy session. This time, the focus was mainly on taking some measurements to establish how much I have improved. And I passed with flying colors! To my surprise:

- I was able to walk up and down stairs without flinching.
- I was able to walk fast for 6 minutes without a cane.
- I was able to bend my knee to an angle of 126 degrees.
- I was able to stand up from sitting without pain and without using my hands, not just once, but 10 times in a row.

Most of this came as a pleasant surprise, because for the past several days, I have had a feeling of tightness and stiffening in my knee. But, it's encouraging to see some real improvement.

The dull pain in and around the knee is still there. It's at a lower level of maybe around 1. It feels more like a discomfort than real pain. But just the fact that it is there almost all the time is aggravating. It looks like this background pain or discomfort might be with me for at least another month or more.

But it does feel like I have graduated from physical therapy, gained a greater freedom of movement, and my life is finally back to almost normal. I even purchased a ski season pass for this coming winter, which is still about 3 - 4 months away.

For me, it took a little over 2 months. This may be different for different people. I have heard some people take only about a month to recover from knee surgery. Others take 3 months, or 6 months, or even a whole year.