## The DJO Best Practice Protocol for Joint Replacement Surgery. KNEE ARTHROPLASTY.

Best Practice Protocol is the maximum combination of surgical skills, education, products and services delivered to each patient to maximize their results with joint reconstruction. This protocol gives each patient the information necessary to succeed in their recovery, be part of their recovery process, be better informed about their condition, gives them the latest tools to aid in this process.

We believe that all patients deserve the maximum when it comes to joint replacement surgery. Joint reconstruction is a big operation to undergo and takes active participation in the recovery and the therapy that is required for success. Many things tend to restrict services and influence patterns of care. We who participate in the DJO Best Practice Protocol, want to deliver as much as possible to our patients to get them back in the game as soon as possible. We believe that every little bit helps. This is the competitive edge. The edge our patients deserve to optimize their recovery. We are your teammates; your surgeon, DJO, your therapists, and you.

The DJO Best Practice Protocol Illustrates all of the things that patients today can take advantage of to speed up the recovery process, to improve comfort during the recovery, to maximize their results.

We still have many hurdles to overcome to get all of these measures to you. The largest is usually the restrictions that many insurers place on the patients. All attempts are made to have as much of your care completely covered by your plan. The responsibility is yours however to be familiar with the benefits of the insurance plan you signed up for. Your surgeon and DJO are constantly battling to get carriers, providers, and facilities to do the best possible job for our patients.

Your, Best Practice Protocol Menu of Services, will be illustrated below. It will present your options in your treatment protocol. Please review and discuss your needs with our office staff in order to get you back in the game as soon as possible.

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#### **Consult/Office Visit**

We discuss your options for treatment both surgical and non-surgical, which may include but are not limited to: physical therapy, anti-inflammatory medication, bracing, injection therapy, and surgery.

#### **Conservative Treatment**

#### **Patient Education Material**

For additional reference please visit the following web sites: <a href="https://www.vbjs.net">www.vbjs.net</a>



#### Medication

The medications of choice for arthritic conditions, are anti-inflammatory medications. You may or may not be able to have these prescribed, depending on your individual condition. Pain medication can be used but only in moderate amounts. We do not treat chronic pain, arthritis or pre and post surgical patients with continuous higher dose narcotic pain medication. Your medication needs will be managed as best as possible with pain medication during your treatment course. If you require long standing narcotic prescriptions, they will need to be prescribed by your family physician or a pain management specialist. Patients are expected to be on pain medication after these procedures and while in physical therapy working on their recovery.

## **Topical Prescription Medication**

A topical prescription medication is a useful tool in treating joint pain overall. A topical agent that reduces pain and inflammation can be ordered for you. We will attempt to get you an agent that is best suited with a combination of medications for best effect. You will be contacted by a representative for these medications as they frequently come from pharmacies out of the area. Depending on your insurance coverage, there may be an associated cost to you. Please be familiar with your insurance benefits that you have elected to sign up for with your insurance carrier. You always have the ability to decline.



#### Injection Therapy

Injection Therapy may be used as a temporary measure of comfort and function. These include hyulranic acid type medications such as Synvisc, Suparz, Hylagan. It is our opinion that these medications work best in early arthritic patients. When arthritis is advanced, there is not enough cartilage left to absorb the medication to have its effect. At that point Cortisone like medications tend to be more effective for the temporary relief of symptoms. These injections can be given every 3 months as long as effective. The duration and the effectiveness is variable in patients.



### Cartilage Transplant and Stem Cells

At this time there are only very small indications for cartilage transplant. This is in cases of small isolated lesions in the very young patient. When arthritis or cartilage damage is moderate to severe, the only accepted treatment is joint replacement, partial or total.

### **Physical Therapy**

Physical therapy is recommended for almost all patients if they are able to tolerate it. The effects are beneficial for pre-operative strengthening, pre operative weight loss, pre operative range of motion, pain reduction. Please be aware that some insurance companies may have limits and or co-payment requirements for you. Please be familiar with the insurance benefits that you have elected to sign up for with your insurance carrier.

Physical Therapy Is Essential For Knee and Hip Replacement Patients After Surgery. It is the single most important factor in your recovery. Knee replacement surgery is the most painful surgery there is to recover from. We are well aware of what our patients go through. Aggressive therapy is the only road to a successful joint replacement result.

This is a surgery that requires your active participation. The knees scar tissue will mature in a matter of about 9 weeks on average. This means that you need to have the majority of your range of motion before this happens. All the more reason that a partnership between, you, your surgeon, the facility, the therapy personnel is important to your recovery. More about this below, in Post Operative Care of your Knee Replacement.

In home physical therapy can be ordered for patients going home from the hospital. We urge you to participate in out patient physical therapy as soon as you can however to speed up your recovery. A prescription for out patient physical therapy is provided by our office. Call for one or pick one up as soon as your ready for out patient therapy if one has not yet already been given to you.



## **Pre Operative Bracing**

Bracing is also an effective measure to help off load worn compartments of arthritic knees. They however must be worn to be effective. They often require fittings, adjustments, and often times, approval from various insurance companies. Please be familiar with your insurance benefits that you have elected to sign up for with your insurance carrier.



Pre Operative E-Stim Studies show that this modality is a highly effective treatment and speeds up recovery. This may be helpful in patients with long standing problems to strengthen muscles that have atrophied or become weak secondary to disuse from painful joints. This modality may be prescribed by, the Doctor, Physician Assistant or utilized in Out Patient Physical Therapy. Depending on your insurance coverage, there may be an associated cost to you. Please be familiar with your insurance benefits that you have elected to sign up for with your insurance carrier.



## **Ambulatory Device**

Canes, crutches, walkers will be helpful in off loading painful joints and will be used when appropriate. They will be used after Joint replacement surgery.

#### Scooters or motorized wheel chairs

These devices are not generally encouraged, as the goal of most orthopedic procedures is early ambulation. These devices are also very expensive and tend to be misrepresented in most advertising. They generally require authorization, which is frequently, time consuming and often denied by many insurance companies. When appropriate, these devices may be recommended. Our office can assist in this on occasion. Many times the patient seeking this type of equipment is served by their primary care doctor, as justification for them requires more than what our office may be able to provide. Depending on your insurance coverage, there may be a cost to you. Please be familiar with your insurance benefits that you have elected to sign up for with your insurance carrier.



#### **Before the Hospital:**

We ask our patients to use a prescription strength antibacterial soap to shower and full body scrub with for daily use, for 2 to 3 days prior to your surgery. Please pay attention to all areas, skin folds, creases, etc. We recommend Hibiclens Antibacterial soap. This can be obtained at most pharmacies. Your pharmacist can recommend an alternative if it is not available. Your personal hygiene, and or neglected areas may pose a significant risk factor for infection. This is a simple way to help decrease but unfortunately not eliminate this problem. On average 1% of joint replacements become infected in the United States. Treatment is sometimes difficult and complicated. Anything we can do to lessen the risk can help.



#### The 3D Knee Implant

Designed for long term success, early range of motion, and stability. Some knees in todays markets are based on designs and technology that is 20 years old. The 3D Knee was designed with new technology that allowed insight into how knees work with and with out certain ligaments. The 3D knee is a Modern Implant, From Modern Technology, For Todays Patients. Now with Vitamin E Blended Polyethylene for greater performance and longevity. This is not the only implant used by Dr. LaCognata, your implant choice will be dictated by your specific condition.



## **Your Surgeon**

Your surgeon has been trained in the use of the products, implants and instruments used for best practice protocol. Our surgeons are committed to successful outcomes and look forward to providing you with our services. Dr. LaCognata implements the latest technology, in the operating room and out of it, to give you the most advanced service available. This

includes Implant Design Technology, Computer Assisted Surgery, Minimally Invasive Techniques, Aggressive Therapy Modalities and Products, & Evidence Based Surgical Protocols. Dr. LaCognata is a consultant for several device manufacturers and thus has at his disposal



the latest technique and technology to deliver to his patients when it is appropriate. Not all devices or techniques apply to all patients. Dr.LaCognata also is involved in biomedical research and education here in the United States and in Europe. You may be asked to participate in clinical trials or post market studies. You are not automatically enrolled in any research without your knowledge or consent. No personal information either demographic or medical is ever released, sold, or given to anyone outside of this office. Any release of any personal and or medical information will require your release.

#### **Peri-operative Measures**



Cold Therapy: Iceman to the rescue,

Cold therapy units are used in the hospital after your knee replacement. We find them of significant benefit in reducing pain and swelling after surgery. These units are also available for home use. If you are interested in home use of the cold therapy devices after your surgery, please ask your nurses and social worker at the hospital to help arrange for this before you leave the hospital. It becomes less likely after you leave the hospital that your insurance carrier will allow anyone to provide it to you. Please be advised there may be an extra cost to you for

this for at home. Please be familiar with your insurance benefits that you have elected to sign up for with your insurance carrier.

#### **CPM Machines:**



This part of the Protocol for knee replacement surgery is at no direct cost to you while in the hospital. At home use may carry an additional cost to you. If interested please ask the social worker at the hospital to assist in exploring the option for you. Studies have shown no outcome benefits in final outcomes with cpm use. This is optional.

CPM or continuous passive motion machines are also available for use during your hospitalization, and for some with particular insurance benefits also for home use after surgery. Some clinicians believe that the use of CPM machines increases the early range of motion. Research studies have shown that in the end there is no difference in final recovery or functional result in patients who use these or do not. Physical Therapy is the principal way you will obtain your results. CPM machines are not a substitute for therapy. We leave this up to you. If you would like to try them in the hospital, please ask your nurse to obtain an order for one. If you would like to have one for home use, please ask your nurse and social worker at the hospital before you are discharged. Once discharged, it becomes less likely after you leave the hospital that your insurance carrier will allow anyone to provide it to you. Please be advised there may be an extra cost to you for this. Please be familiar with your insurance benefits that you have elected to sign up for with your insurance carrier. The social worker in the hospital can also check your coverage for post hospital use.

## In Hospital Physical Therapy Unit:

Physical Therapy will begin on the same day as your surgery or post op day 1. Knee replacements in general, unless otherwise instructed by your surgeon are capable of full weight bearing immediately. Range of motion is the most important parameter that we concentrate on. Strength can be worked on in time. Pain and swelling usually dictate the patients' progress, and all progress at their own pace.

In general however the goals are 0-90 degrees in the first 2-4 weeks, 0-120 degrees by the end of 8-12 weeks after surgery. As discussed in the office, this is a marathon recovery, not a sprint. Knee replacement surgery requires your active participation and a great deal of therapy.



## **Dynamic Splints:**

These special braces may be used in instances when the patient in unable to achieve their range of motion and have fallen behind in their physical therapy. Documented failure of your rehab is usually needed to obtain these devices. Your doctor will discuss their role if necessary. At home use may carry an additional cost to you. These devices may or may not be covered by your insurance

carrier. Please be familiar with your insurance coverage.

## **Manipulation Under Anesthesia:**

A manipulation under anesthesia is sometimes preformed when patients fail to achieve the range of motion and function desired and or expected. This is generally due to a poor response to physical therapy, and scar tissue formation. The procedure is short, and out patient in nature, is done at the hospital under anesthesia, requires further aggressive out patient physical therapy. Your doctor will discuss this with you should you fall behind in your progress

## **Before Your Surgery**

## **Surgical Clearance and Patient Optimization**

Almost all patients need surgical clearance prior to their operation. You will be referred to your doctor for this with instructions from our office regarding pre-operative testing that needs to be accomplished prior to your surgery. Based on acceptable results and risk assessment from your regular doctor and or specialists your surgery can then scheduled at the appropriate facility. Keep in mind that this can be an longer process than you anticipate. This is for your safety. In general surgery is scheduled between 4 to 6 weeks from when you begin this process. It may be longer depending on your medical conditions and inter-office communications, and insurance verification and authorization.

You should have all your pre-operative questions answered in the office. It is suggested you make another pre-operative appointment if needed. In most cases you will not see the surgeon the morning of your operation. Your surgical assistant will introduce themselves to you and get you back into the operating room where the surgeon will be. The surgeon will see or call your family, friend, or designated contact after the operation to advise them of your condition.

You will be asked to obtain an antibacterial soap and preform a thorough body scrub for several days before your surgery. It is in your best interest to comply in an attempt to decrease but not eliminate risk of infections. A clean home environment and clean clothing are also factors that influence infections and healing rates. Exposure to contaminants of any nature from outside elements increase risk of infections. Some previous infections also increase your risk for having a post-operative infection.

You will be instructed on local wound care while in the hospital. Once home you are permitted to shower, but not soak the incision. Use Hydrogen peroxide to clean the incision two to three times a day and after showering. Use a clean dry dressing to cover the incision if there is drainage. If there is no drainage it may be left open to air as long as you keep it clean. Do not let pets near your incision as there is always a risk of contamination and infection.

If you are overweight it is recommended that you lose as much weight as possible to get to your target weight before your operation. Obesity is a serious and preventable risk factor for joint replacement surgery, and directly affects your outcome. Obesity increases your risk with but is not limited to: the use of anesthetics, pulmonary complications, cardiovascular complications, DVT, or blood clots, fatal pulmonary embolism, infection, healing rates, chronic pain, re-operation, failure of replacements, and death.

If you have serious medical conditions, your physicians will try if it is possible to optimize your medical condition prior to your operation. We recommend that you get into the best overall shape as you can prior to your surgery for your benefit.

#### **Surgical Consent**

Joint replacement surgery is an elective procedure that requires your consent. You will be asked to consent to the possible and probable risks that accompany major surgery. These are generally listed, but not limited to; pulmonary complications, cardiovascular complications, DVT, or blood clots, fatal pulmonary embolism, infection, nerve damage, paralysis, muscle damage, fracture, bone loss, failure of procedure, failure of implants, delayed healing rates, reoperation, and death.

Accepting this packet constitutes your consent for your surgical procedure as explained to you by your physician and or representatives in the healthcare team. You will most likely be asked to consent to the procedure again on the day of surgery. Your surgical consent form is enclosed and part of this packet.

## What To Expect In The Hospital

#### The Day of Surgery:

You will be expected to report to the hospital much earlier than you think is necessary. Please understand that there are many reasons for this. This is an arrangement of a surgical schedule with multiple large operations, and a large number of personnel, and inventory of devices and implants, all which is arranged for you. There are many things that may alter that schedule and, may have a large impact on many levels. This is surgery, not fast food. Please be prompt for your appointment for surgery. Bring a picture I.D., Your Insurance cards, Loose fitting comfortable clothing, anything else you may need for your stay, we advise you do not bring valuables.

You will have an I.V. access placed by nursing. Nursing staff will do their own check in and assessment process. They will ask you questions regarding your medical and social history. You will meet the anesthesiologist and discuss your medical history, medications, what procedure you are having done and the anesthetic technique that they recommend. Please be aware, the Anesthesiologist will ask you questions regarding your medical and social history,

including, but not limited to: medical conditions, medications, smoking and drinking history, drug use and history. Based on your answers, history and test results, surgery may be delayed or canceled if it is in your best interest.

You may meet our surgical assistant that will assist the surgeon on your case. You will most likely not see the surgeon, as he will be busy making arrangements and preparations in the operating room before you have arrived. You may need lab work done the morning of surgery.

Your surgery may be cancelled for a variety of reasons the day of surgery. Everyone works hard to avoid this, but at times, it may be in your best interest to cancel and reschedule.

Your surgery will be performed as discussed in the office visit prior to surgery. All your questions should be asked prior to the day of surgery, as you may not see the surgeon just

prior to your operation or during your hospitalization. Your surgeon will inform your family or designated individuals of the results of your operation and your condition after your surgery. Internal Medicine specialists will be in charge of your hospitalization, medications, and discharge. A hospital social worker will be available to assist with post hospital and possible placement needs. You will see your surgeon in follow up appointments in the office.

## Post op day 1:

An Internal Medicine Physician will manage the patients' hospitalization. Your surgeon may or may not visit you in the hospital depending on scheduling. Our internal medicine specialist will care for you post operatively. Your surgeons office staff is a phone call away if needed.

Significant post-operative pain and swelling is expected. Knee replacement surgery has been described as the most painful surgery to recover from by patients. Your pain is managed as best and as safely as possible. No type or amount of medication will eliminate the pain. I will take the edge off. If you have been on narcotic pain medication for an extended period of time before your surgery, you can expect to have a more difficult time with pain control as your body will already be tolerant to the medications. Even with the discomfort of this procedure, it is critical that you perform the necessary physical therapy in order to achieve a successful outcome.

Post-operative antibiotics are given as a standard precaution in standardized fashion. Most patients are not discharged on post-operative antibiotics, as studies have not proven this of benefit. DVT or blood clot prevention is initiated for most patients approximately 24 hours after surgery. It is generally continued for approximately 10 days after your leave the hospital. Typically your sleep is interrupted the first few nights. Sleeping aids may be used in most cases, but not all. Please ask the nurse for a sleep aid in the hospital if necessary.

## Post op day 2:

Things slowly get better. Attempts are made at removing IV access if you are taking orals well, and controlled with medications, removing catheters if placed. Trying to get you ready for discharge tomorrow. More physical therapy both morning and afternoon sessions are desirable if tolerated. Remember this is a race between you and the forming scar tissue. Range of motion is the early goal.

Arrangements for discharge tomorrow are worked on and consideration is given to your insurance benefits and needs. The social worker at the hospital will be assisting in making plans for such things as assist devices (walkers, canes, grabbers, etc), in home physical therapy for a limited time, home nurse visits, home medical devices (cold therapy units, braces), consideration is given as to entering a rehabilitation facility after the hospital. This may

give those with limits in physical therapy access to more therapy than just out patient alone if your insurance limits you. It is also advisable if you have little or no help at home. Keep in mind you can not enter a rehab faculty once you leave the hospital for home. You must go directly from the hospital for it to be covered by your insurance.

#### Post op day 3:

Typically this is the usual discharge day for most patients. You will be made ready for:

- 1. Home with in-home physical therapy and home nurse visits if you have insurance benefits for these services.
- 2. Rehab hospital/facility placement if you are unable to care for yourself or manage your home environment just yet, or need addition medical care to recover.
- 3. Keep in mind that once discharged from the hospital, you will not qualify to go to a rehab or skilled nursing facility. For this to be covered by insurance you need to go directly from the hospital to the facility.

Your surgeon may not have the opportunity to see you in the hospital. Our Internal Medicine specialists will guide your hospitalization along with the hospital healthcare team. This is their specialty and role in your recovery.

Remember that if at any time you suspect something to be unusual or wrong, have questions or issues that are not being addressed, please call the office.

## **Hospital Stay Chart**

Day of Surgery	Post Op Day 1	Post Op Day 2	Post Op Day 3	2 Weeks post op	4-6 Weeks post op
Be there early As instructed	Its gonna hurt	Little better today	Usual discharge day	Staples out of the skin	Continue therapy
Bring ID	Its gonna hurt	Changing pain meds	Know where your going	Call the office for appointment	Follow up in the office
Lots of Questions from the staff	Its gonna get better	Walk further with therapy	Arrangements for after hosp made	Or have home nurse visit do it	
Maybe Lab work done that morning	Up with Therapy	Catheters out by now if possible	Make sure therapy is arranged	Or have Rehab/SNF do it	
I.V. Access is established	Internal medicine manages your hospitalization	Cont dvt prophylaxis		0-90 deg on knees	
Chance your surgery is canceled for medical safety reasons	Changing pain meds	Cont antibiotics		Home physical therapy	
Poor sleep is expected	Better sleep	Have decided where your going after hospital		Or Outpatient Therapy going on	
Pain management begins	Start dvt prohylaxis	Home vs Rehab/SNF		Dvt prophylaxis may be ending	
	Cont. antibx				

#### After Discharge from the hospital:

Staples generally come out of the skin incision 2 wks from surgery. This can be done in our office or at home if you are receiving home physical therapy and home nurse visits. Please be advised that as comfortable as it is to receive in home therapy, what is needed is out patient physical therapy. Very few patients are able to meet their goals with in home therapy. We encourage our patients to go to out patient physical therapy as soon as possible. If you would like home therapy and nursing please ask the social worker and your nursing staff at the hospital to arrange it. This is usually prearranged for you, but in your best interest to ask. Once discharged, it becomes less likely after you leave the hospital that your insurance carrier will allow anyone to provide it to you. Please be advised there may be an extra cost to you for this. Please be familiar with your insurance benefits that you have elected to sign up for with your insurance carrier.

If you would like someone at the office to remove the skin clips, then please call the office and make an appointment for that 2 weeks after your surgery. Otherwise please schedule an office visit for 4 weeks after surgery if staples have been removed by another healthcare provider. Please be aware that you should be undergoing physical therapy immediately following your discharge. If you do not hear from a home physical therapy provider within a day or two of your discharge please call the office to notify us. Call for, or obtain an outpatient physical therapy prescription as soon as you are ready to go, if one has not already been provided to you. Do not delay your therapy.

Remember this is a marathon recovery, not a sprint. We are expecting 8-12 weeks of physical therapy for most patients. Most patients use a walker or crutches the first 4 weeks. You may discard them sooner unless directed otherwise. Most patients drive 4 weeks after surgery. Most patients need 8 weeks before returning to work, depending on their job environment and requirements. Most patients say they needed 6 months before they had gotten back to "normal" routines and have put it all behind them.

I do not advocate having both knees done at the same time. Most all patients who have had this done have never reached the same goals as the ones who do them one at a time. It is simply too difficult for most people to rehab both knees at once. Patients may have the second knee done as soon as the first is fully recovered or the second knee stands in the way of any further progress.

If at any time after discharge you believe there is something wrong with your progress, recovery, signs, or symptoms. Call the office, answering service or go to the emergency room for evaluation.

#### **Post Operative Measures**

#### 2 Weeks Post Op

Staples will be removed in 2 weeks in our office or at home if you have home health coverage. Please call the office to schedule that visit with our PA, Nurse, or other healthcare team member.

Your goal is 0-90 degrees of motion at the 2 week mark. We understand the level of discomfort is significant with this operation, but it is imperative that the patient reaches the range of motion as soon as possible unless otherwise instructed. Scar tissue generally matures by 9 weeks, the more time passes, the more difficult it will be to reach your desired range of motion.

#### 4-6 Weeks Post Op

Office Visit, please call to schedule your appointment with one of our healthcare providers. Knee Replacements: expecting 0-90 deg range of motion at 2-4 wks post surgery Goal is 0-120 deg range of motion in the end for normal daily function. Out Patient Physical Therapy, if you are not already in outpatient therapy, then you will be given prescriptions for it.

Generally therapy runs for a course of 4-6 weeks, 3 x week Repeat prescriptions for therapy are given at your next visit or refilled for a second course of 4-6 weeks, 3 x week

If you are failing to reach your goals the options are:
MUA (manipulation under anesthesia) followed by
Aggressive Physical Therapy daily x 1-2 weeks
Then continue Aggressive Physical Therapy 3 x week x 4-6 weeks
Repeat as long as progress continues

Dynamic Splints can be used, they may not be covered by your Insurance These splints are essentially braces that are worn by the patient as long as can be tolerated that help to force the knee to bend and straighten in a passive manner. Please not there may or may not be a cost to you based on your healthcare coverage. It is your responsibility to understand your benefits.

Or

Open Surgical excision of scar with possible component exchanges / revision knee surgery. This of course requires another hospital procedure, and continued physical therapy after the

procedure. There is no way out of the therapy process. It is essential to the success of your knee replacement.

## 8-12 Weeks Post Op

Recheck office visit to evaluate your progress in therapy, your ambulatory status and strength, review your post op X-ray if not already done.

## **6 Month Post Op**

Recheck your X-ray

## **Annual X-ray check**

Recheck to follow signs of bone quality, and wear.

#### Frequently Asked Questions About Joint Replacement Surgery

#### When can I get my surgery?

In general about 4-6 weeks from the time you are seen and the process is begun to get you cleared for surgery. Pre-Admission testing and medical clearance is required. Once the material is in the possession of our office, we can then work with the hospital to get secure an operating time and a room for your stay. You may need clearance from more than one physician if you have multiple medical problems or specific issues that need addressed prior to surgery. The goal is here to make it as safe to proceed as possible.

#### Where do you operate?

I operate at:

Arizona Orthopedic Surgical Hospital. 2905 W. Warner Rd Chandler Arizona 85224-1610 USA

Scottsdale Healthcare Osborn Campus. 7400 E. Osborn Rd Scottsdale Arizona 85251

Arizona Spine and Joint Hospital. 4620 E. Baseline Road Mesa Arizona 85206

#### How long will I be in the hospital?

Generally, 2 to 3 days after the day of surgery.

If you have your surgery done on Monday you will go home on Thursday. Some patients if doing very well may go home the second day post surgery. We advise you to take advantage of the care you are able to receive. If you are not able to be independent at home by then, you should go to a rehab facility for as long as needed for you to be safe at home.

#### How long will I be down?

You should not be "down". Joint replacement surgery is all about getting you moving as soon as we can, as much as we can. This lessens scar tissue formation, decreases your chances for blood clots/dvt, helps to decrease swelling, leads to a faster and better result.

#### Will I need help?

Yes. This is significant surgery, expect to need assistance. A walker or crutches are used the typically for the first 4 weeks, and moved to a cane after that for a period of time. You may need help to accomplish activities of daily living. This all depends on your personal condition and social living arrangements. If you can not manage to go home on your own after the hospital, the social worker at the hospital can arrange for a skilled nursing facility or rehab hospital placement after your stay at the hospital. This is dependent on your insurance. It is in your best interest and responsibility to know your benefits for this before you have your surgery performed. Please be advised that once you are discharged to home this availability no longer exists. You must go to a facility directly from the hospital in order to have any coverage. Once home your doctors office can do little to assist.

#### How long will it take to drive?

Most patients need about 4 weeks prior to driving. You will not be restricted in most instances because of having the implant. Unless otherwise instructed you generally can bear full weight on knee replacements immediately. The determination for driving and other activities is based on ability to perform the function safely. Hip replacement patients may be restricted for a period of time from full weight bearing however and have other restrictions for the first several weeks.

#### How long will I need to be off work?

We recommend that you plan for 8 weeks. This is variable for all patients depending on their recovery, job environments, and job requirements. The knee components are stable and capable the day they are implanted. Your return to work is based on the condition of your leg, your ability to perform your duties, the amount of care your incision, swelling and pain will take.

#### Skin Numbness?

Numbness around the incision of a knee surgery is extremely common and unavoidable. It is usually appreciated on the outside part or Lateral to the skin incision. some of this resolves over time. It takes up to a year for full resolution of this. Many patients remain with a patch of numbness of variable size.

#### How long will it last?

Contemporary bearing surfaces in knee and hip replacements should last 20-25 years before they wear out. The new generation of materials and designs now most frequently needs reoperation because the anatomy around the knee gets worse with time and leads to revision. It is the patients ligaments and other factors that become the problem for most people in the future. Your weight, work, and activity level all contributes directly as to the long term outcome of your joint replacement.

Please fill out and bring a up to date copy to the hospital and provide to the office before surgery

Name:		Date:		
Patients Medication L	ist			
Medication	Dose	Number Times per Day Taken		

## **Questions / Notes:**



#### The 3DKnee Difference

Stability. Range of Motion. Longevity.
The 3DKnee is a premium high flexion total knee replacement designed after a decade of research. The 3DKnee instills confidence through every step of the total knee replacement process, from the surgeon's joint selection decision, to the surgical procedure and patient post-operative function.

The result of more than a decade of in-vivo research, the 3DKnee™ design is based on a comprehensive study of knee kinematics through fluoroscopic review, tibial plateau resection, and tibial insert retrieval analysis.

As a result of this analysis of pathological axial rotation and motion patterns in total knees, the implant provides an articular surface with the optimal balance between conformity and constraint while remaining complementary to the existing mechanics. The 3DKnee is designed for greater total knee strength, patient stability, range of motion, and performance.



## E-Plus™ Polyethylene Technology

e-plus™ - Blended to move you An appropriately cross-linked polyethylene material, e-plus, a knee specific formula, is blended with vitamin E and formulated to reduce long-term wear1.

Re-Melting not Required Because vitamin E stabilizes free radicals2, a melt-anneal step is rendered unnecessary.

A re-melt step, used for most highly crosslinked polyethylenes, reduces the mechanical properties and fatigue strength of irradiated UHMWPE2.



#### **Blended**

e-plus is the only FDA cleared blended vitamin E TKA component. UHMWPE resin is blended with pure liquid a-tocopheral (vitamin E), a naturally occurring anti-oxidant.

#### No Oxidation

During intense age testing1, e-plus exhibited no detectable oxidation.

#### **Maximum Mechanical Strength1**

The impact of oxygen exposure to e-plus samples was evaluated in accelerated aging tests. Un-aged and aged e-plus samples yielded the same results during yield strength testing, while a melt-annealed standard highly cross-linked material exhibited a 12% reduction in yield strength.

IZOD Impact testing, which can indicate the relative brittleness of a material, showed no change in performance between pre and post-aged e-plus.

#### **Reduced Wear1**

e-plus, when tested on an Instron/Stanmore knee simulator, had a 57% reduction in wear rate than already premium performing direct compression molded UHMWPE.

e-plus is currently available for the 3DKnee TKA e-plus FDA cleared claims



#### References

- 1. E-plus testing data on file. Bench test results not necessarily indicative of clinical performance.
- 2. S.M. Kurtz. "The UHMWPE Handbook: Ultrahigh Molecular Weight Polyethylene in Total Joint Replacement". Oral E, Muratoglu OK. Chapter 15, "Highly Crosslinked UHMWPE Doped with Vitamin E". Elsevier Academic Press, 2009.

**Neuro Muscular Electro Stimulator** ( NMES )/TENS, is a therapeutic treatment device that helps to strengthen muscle groups through electrical stimulation that leads to muscle contraction. Studies have shown that patients recover faster and reach activity quicker using NMES than not. This is a valuable tool that allows for true muscular exercise when a patient is weak or restricted by other issues that effect recovery. It is a treatment that can be used indefinitely.

We recommend use of NMES over Tens units as the wave form of the electric stimulation is better geared to work on muscle strength and not a simple twitch or contraction.

The NMES device has helped many patients retain muscle mass over the course of long term treatments and staged procedures where time between operations was needed.

We recommend use of the NMES device for your joint replacement surgery both before and after. You will be contacted by a representative for the device manufacturer in order to arrange getting it to you.

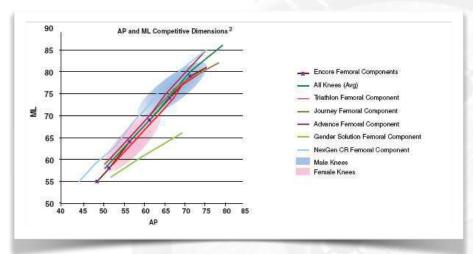


Please be advised there may be an extra cost to you for this for at home. Please be familiar with your insurance benefits that you have elected to sign up for with your insurance carrier. If there is and you are not able to work out arrangements you may decline.

### Sizes Designed for Men and Women

Research has shown that women have smaller medial-lateral femoral dimensions than men1. This difference is incorporated into the sizing of DJO Surgical's femoral implants.

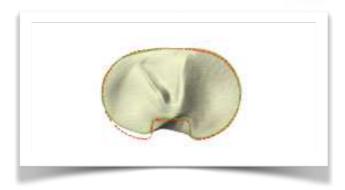
DJO Surgical's knee replacements accommodate both genders by providing narrower small sizes which are mostly implanted in women, and wider large sizes which are typically implanted in men. This will help to reduce overhang, which can lead to soft tissue impingement and pain.



Better Femoral and Tibial Anatomic Fit The 3DKneeTM and Foundation® femoral components are designed with a narrow anatomic anterior flange to achieve an optimal fit.

Additionally, the 3DKnee is the only total knee designed to replicate the natural narrow lateral femoral condyle and wide medial condyle. The 3DKnee and Foundation femoral components are designed with a narrow anatomic anterior flange to achieve an optimal fit. The 3D Knee also incorporates a single radius curvature design for, the "round knee", in order to maintain equal tension on ligament structures during activity.





Unlike most tibia implants, DJO Surgical's tibia implants are uniquely anatomic (right and left specific). Data shows that the medial tibial condyle is larger than the lateral tibial condyle3,4. Symmetric tibia implants (figure below, red line) placed on a patient's asymmetric tibia can cause overhang or underhang which creates the risk of soft tissue impingement or component subluxation.

The red outline represents a symmetric component which is overhanging the proxial tibial, while the green outline represents DJO Surgical's asymmetric baseplate. Bone Resurfacing Implants

DJO Surgical's sleek and simple surgical instrumentation, used to implant the 3DKnee, Foundation and EPIK® implants, allows the surgeon to replace the thin layer of bone that is removed during surgery.

#### Data From:

- 1. Hitt K, Shurman JR, Greene K, McCarthy J, Moskal J, Hoeman T, Mont M. Anthropometric Measurements of the Human Knee: Correlation to the Sizing of Current Knee Arthroplasty Systems. JBJS 85-A Suppl 4. 2003.
- 2. Competitive Sizing from Literature.
- 3. Mensch JS, Amstutz HC. Knee Morphology as a Guide to Knee Replacement. Clin Orthop Relat Res. 1975 Oct;(112):231-41.
- 4. Dupont JA, Weinstein AM, Townsend, PR. Tibial Plateau Coverage in Total Knee Replacement. Tenth coverage and Annual Meeting Soc. Biomaterials. Washington DC, April 27-May1, 1984.

Knee Surgical Consent Form Page 1

I agree to the performance of:

Knee Replacement and or Reconstruction, Revision, Arthroplasty, Knee Incision and Debridement

By Dr LaCognata and/or associate(s), assistant(s) of his choice. I understand the benefits expected from this procedure, the risks, possible and probable outcomes as well as limitations of this procedure. I understand that these benefits cannot be guaranteed.

I am satisfied with the explanation of the risks, benefits, possible and probable outcomes associated with this procedure and have no further questions about them. These risks include but are not limited to nerve damage or injury, bleeding, blood clots, pulmonary embolism, cardiac and pulmonary complications, death, stroke, infection, fractures, failure of fixation, failure of implants, sub optimal position of implants, chronic pain, and in extreme cases leg length change greater than 1/4 inch, permanent need for orthotic devices or shoes.

I understand the level of pain accompanying this procedure is significant and that this procedure requires significant physical therapy. I understand that it has been recommended that I undergo at least 8-12 week of physical therapy at minimum as an out patient. Pain not from the joint is not directly treated or resolved in knee replacement surgery.

Alternative treatment has been discussed with me. All Questions have been answered.

I have been informed whether my physician has any independent medical research or economic interests related to the performance of the proposed operation or procedure. I have been informed if the hospital or their staff have any business relationship between individuals treating me or with any educational institutions involved in my care. I have been informed if any professional relationship to another healthcare provider or institution may suggest a conflict of interest.

I understand that the Safe Medical Act of 1990 mandates the hospital to be able to locate patients who have specified implantable devices. I authorize the utilization of my social security number if needed to locate me.

I give the permission and consent to the observation and/ or the photographing and or video recording of this procedure as needed and decided by my physician(s) selected above. I give my permission to use these photographs, negatives, video, CDs as determined

Knee Surgical Consent Form Page 2

necessary by my physician(s) with the understanding that my identity will be protected whenever possible and by all means reasonable.

Il consent to the presence of any medical company representative(s) as determined necessary by my physician(s).

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I understand that the following professionals may be acting on my behalf as independent contractors responsible to me.

- Anesthesiologists providing anesthesia with or without the assistance of CRNAs, Anesthesia Techs.
- Radiologists providing interpretation of x-rays and performance of special or requested tests.
- Pathologists providing examination of tissue or specimens.
- Internal Medicine, Hospitalists, other Specialists providing specialized medical care.

I authorize and consent to hospital and/ or pathologist to use their discretion in disposing of any member, organ, or other tissue removed during the operation or procedures set forth above.

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Surgical Consent Signature Page 3
Initial:
Patient Name
Date and Time.
Patient signature
Date and Time.
If signed by other than patient, indicate relationship:
Witness:
Date and Time.