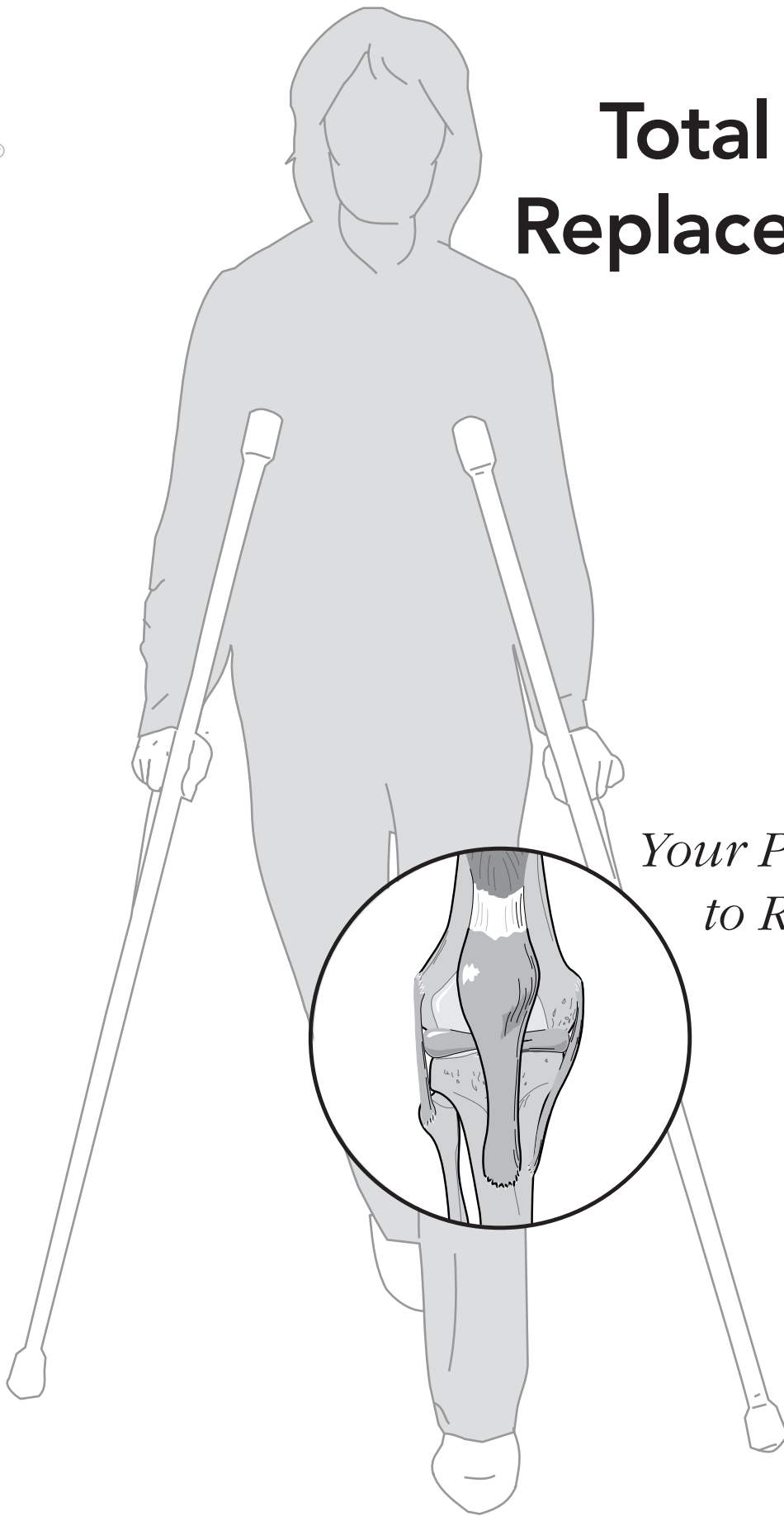



KAISER PERMANENTE®

Total Knee Replacement



*Your Pathway
to Recovery*

TOTAL KNEE REPLACEMENT

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TOTAL KNEE REPLACEMENT SURGERY

Total Knee Replacement surgery is a common procedure done to help patients who have severe knee pain, stiffness, and loss of motion due to a damaged knee joint. The joint damage may be caused by an injury, inflammation from arthritis or other illness, or the joint may just be worn out from use over time.

The first total knee replacement surgery was done in 1968. Since that time surgical techniques and materials have continued to improve, greatly increasing its effectiveness.

You and your doctor have decided that this procedure is the next step in your treatment. This handbook will help you to understand more about this surgery and what to expect during your hospitalization. You will also learn ways to prepare for the surgery and ways to care for yourself when you go home. Knowing what to expect can help reduce any fears that you may have.

THE KNEE JOINT

The knee joint is composed of bones, cartilage, ligaments and tendons, and muscles. The knee joint connects three bones: the thigh bone (femur), the shin bone (tibia), and the knee cap (patella). The ends of the three bones in the knee joint are covered with cartilage, which keeps the bones from grinding against each other, acts as a shock absorber, and allows the joint to move smoothly. The bones are joined together by strong, elastic bands of tissue called ligaments. Tendons are tough cords of tissue that connect muscle to bone. Leg muscles help to support the knee joint.

WHAT IS TOTAL KNEE REPLACEMENT SURGERY?

In total knee replacement surgery, the surgeon removes damaged bone and cartilage and inserts metal and plastic joint surfaces. Patients are given general anesthesia, in which they are asleep throughout the surgery or spinal (epidural) anesthesia, in which patients are awake but their legs are anesthetized. The surgery takes about two hours.



A TEAM APPROACH

A team of healthcare providers is ready to help you during your hospitalization and recovery. The team will consist of orthopedic surgeons and other physicians, nurses, physical therapists, health educators, and discharge planners. You are an important member of this team. Taking an active role in your own care is very important for a fast and smooth recovery. By actively participating in the preparation before surgery and in the activities during your recovery, you will be able to return to a more comfortable and active lifestyle.

IMPORTANT DATES



APPOINTMENTS BEFORE SURGERY:

- Medical clearance appointment with Dr. _____
is on _____ at _____ a.m./p.m.
- Preoperative appointment in Orthopedic Department with Dr. _____
is on _____ at _____ a.m./p.m.
- Preoperative Class _____
is on _____ at _____ a.m./p.m.
in meeting room _____ at Kaiser _____
- Anesthesiology appointment with _____
is on _____ at _____ a.m./p.m.
at Kaiser _____ Location _____
- Lab work may be done on the same day as your anesthesiology appointment

SURGERY DATE _____ a.m./p.m. at Kaiser _____

- Arrive at the Kaiser Permanente _____ on the day of surgery at _____ a.m./p.m. You are asked to arrive early to allow time for the preoperative nurses to prepare you and your medical record for surgery.
- Call _____ after 11 a.m. the day before surgery to verify the time you will be admitted. If your surgery is on a Monday (or on a Tuesday after a holiday), call the Friday before.

PREOPERATIVE LAB WORK

You will need some blood work and possibly some other tests before your surgery. Your surgeon will give you the lab slips for these tests. These can usually be done on the same day that you come in for your anesthesiology appointment.

BLOOD TESTS

- CBC evaluates how well your body carries oxygen, the number of red blood cells and white blood cells in your body.
- Electrolytes - evaluates percentages of potassium, sodium, chloride, and other chemical substances in your body.
- PT and PTT - evaluates the time it takes for your blood to clot.

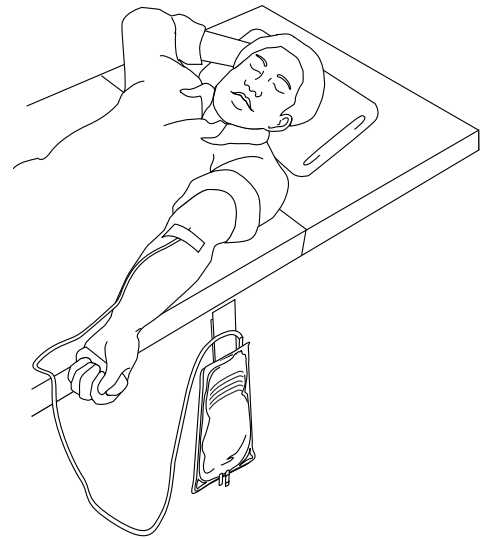
OTHER TESTS

- EKG - required if you are 50 years of age or have a history of heart problems.
- Urinalysis - is requested to ensure your urine is free of bacteria.
- Pulmonary Function Test - may be required if you have a history of breathing problems.

BLOOD DONATION

Blood loss is anticipated during total knee replacement surgery. You might need a blood transfusion to replace blood lost during the procedure. Blood donated by volunteer donors is carefully screened by blood banks and we consider it safe. You have the right to donate your own blood. This is called autologous donation. We recommend that you discuss the possibility of blood transfusion and your options with your surgeon.

If you plan to donate your own blood, you will need to schedule your donation appointments as soon as possible. Blood may be stored for up to 42 days, but you need time between donations and your surgery date to rebuild your blood iron level. The blood bank needs at least 5 days to process your donation. All blood donations should be completed at least 3 weeks before surgery.



The autologous donation site for Kaiser Permanente is _____,
located at _____.

To schedule an appointment, call _____.

You will need to take a completed "Request for Autologous Donation" to your appointment. Your physician will provide you with this form during one of your visits.

Staff in the Orthopedic Clinic or Blood Bank can answer further questions you may have about Autologous or Designated Donor Blood donation.

GETTING READY TO DONATE BLOOD

It is recommended that your diet include foods high in iron to ensure an adequate blood level. These foods include:

- cream of wheat, or other iron fortified cereals such as “Total” (read nutritional labels)
- meats such as liver, lean red meats, oysters, tuna in oil
- dried fruit and prune juice
- dark green leafy vegetables such as broccoli or spinach
- beans such as navy or kidney beans



If your doctor recommends an iron pill:

- do NOT take your iron pill on an empty stomach
- drink plenty of orange or other citrus juices when taking the pill
- eat foods high in Vitamin C to help iron be better absorbed
- wait one hour after taking the pill before drinking caffeine drinks such as coffee or tea to ensure good absorption

DONATION DAY

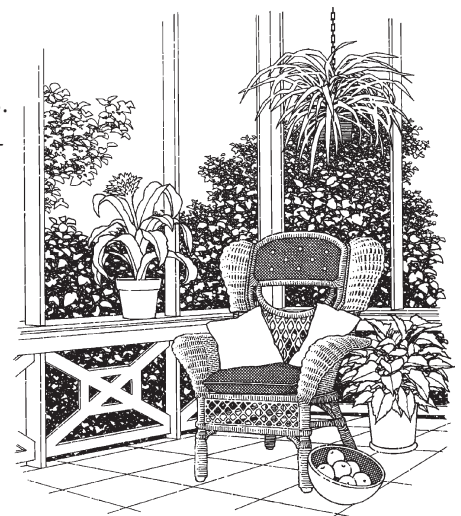
Eat a well-balanced meal and drink extra water or juices before donating your own blood. The procedure takes about one hour. The staff will monitor your blood pressure, pulse, and temperature, and make sure your blood level is high enough to donate. Snacks such as orange juice and cookies are available after you have completed the donation. The blood bank staff will not let you leave until they feel it is safe for you to do so. Do not plan to participate in any strenuous activity for the remainder of the day. Fluids and good nutrition are important after the donation as well.

HOME READINESS

Since you will still be recovering from your surgery when you return home, it is important that you make it a safe and convenient environment *before* you have your surgery. The following tips will make your home healthier for you and your new knee.

Kitchen

- Precook meals (have some already prepared meals available).
- Stock up refrigerator and pantry with frozen convenience foods.
- Place frequently used pans/utensils within reach without bending or climbing.
- Omit throw rugs from your home.
- Use only non-skid floor wax on linoleum floors.
- Prepare serving carts to push food from stove to table.
- Teach others in the home how to use stove, microwave, dishwasher, clothes washer/dryer as needed.
- Explore using Meals on Wheels.



Bedroom

- If two story home, ensure some bed/sleeping areas are on ground floor.
- Ensure sufficient nightlights illuminating bed to bathroom route.
- Keep flashlight at bedside.
- Practice getting up from lying position slowly.
- Place phone within reach on nightstand without having to turn or twist in bed; consider purchasing a cordless phone.

Bathroom

- Consider installing grab bars on walls of shower or tub.
- Obtain high rise toilet seat (better brands secure to the commode for greater stability and have arms which help you to push up from the seat - prices vary).
- Move toilet paper so you do not have to reach forward or twist around when using the bathroom.
- Explore purchase of hand-held shower head and shower chairs which allow sitting while bathing. Once showers are allowed, a long-handled sponge is useful.
- High rise toilet seats and shower chairs are not covered by Kaiser or Medicare and must be purchased by the patient.

Living Space

- Remove scatter rugs or other objects on floor which could cause you to trip and fall (electrical or telephone cords).
- A firm chair with arm rests, high seat, and straight back is needed.
- Enlist help to rearrange furniture allowing clearance for walker or crutches (walker dimensions: height varies with patient, minimum width is 2 feet).
- Foot rests to elevate your surgical leg are important.
- Place list of emergency numbers by each telephone.

Wardrobe/Closet

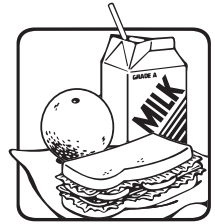
- Obtain low, broad-heeled, or flat shoes that are properly fitted.
- Allow ease in dressing by wearing loose-fitting slacks/shorts or skirts.
- Borrow an apron with pockets to hold a cordless or cellular telephone, tissues, TV remote control, medications, juice box, etc.
- Place frequently worn items in dresser drawers that do not require bending or stooping.
- Rent or purchase a grabber to pick up dropped items; practice using it before surgery.
- Obtain shoe horn with extension to reach your feet.

Other Equipment

- Crutches are provided by the physical therapist at the hospital. All Kaiser Permanente members have coverage for crutches.
- Walker - the nurse from Continuing Care will assist you in making arrangements for a walker. Coverage for the walker depends on the type of Kaiser Permanente insurance you have.

PHYSICAL AND MENTAL READINESS

It is very important to the success of your surgery that you are ready physically and mentally for the challenge ahead. Your decision to proceed with the knee replacement indicates your willingness to make necessary changes and preparations before surgery. Making any lifestyle changes discussed in the following paragraphs will enhance your recovery.



Weight Loss

If your physician has recommended weight loss prior to surgery, it is important that you attempt this goal. Extra weight causes undue stress on the new knee and surrounding bone as well as the non-operative knee. Every time you step you are actually placing about two times your weight on the leg touching the floor (a weight of 200 lbs = 400 lbs of pressure). We have classes and other resources to help you. For more information, contact the Health Education Department at _____.

Balanced Nutrition

It is important to prepare your body for surgery. This can, in part, be accomplished by eating a well-balanced diet. We ask that you read and follow the recommendations in, "Good Nutrition for the Surgical Patient" in the weeks before surgery.

Smoking Cessation

Smoking is known to increase the risk of lung complications after surgery and it can slow down the healing process in bones and tissue. If you smoke, we strongly urge you to try to quit smoking before surgery. Quitting smoking is the most important thing you can do to improve your overall health. We have free programs that can help you. To learn more about these, talk to your surgeon or other healthcare provider or call or visit the Health Education Department.

Alcohol

If you drink alcohol, we recommend that you limit your alcohol intake or eliminate it completely. Alcohol interferes with the body's ability to absorb medication properly. This includes anesthetic agents and pain medications which are very important during surgery and your hospital stay. It is important that you are alert and able to think clearly during your recovery at home. Initially your balance may be unsteady. Alcohol is known to increase the risk of falling and should be avoided in the recovery period after discharge to reduce the chance of injuring yourself. If you need help quitting, talk to your doctor about programs that we have to help you.

Cardiac Strengthening

The pain in your knee may have restricted your ability to participate in a regular exercise program. After your new knee is in place, you will be required to exercise daily with a Physical Therapist in the hospital. With your medical doctor's permission, it is recommended that you exercise before surgery to help improve your strength and stamina. Water exercise is an excellent way to do this. Water exercise programs protect painful joints yet allow you to strengthen your heart. Contact the Department of Parks and Recreation to find out about programs that are available in your area.

Dental Care

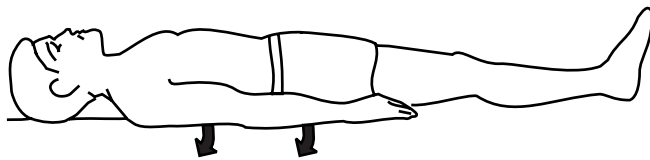
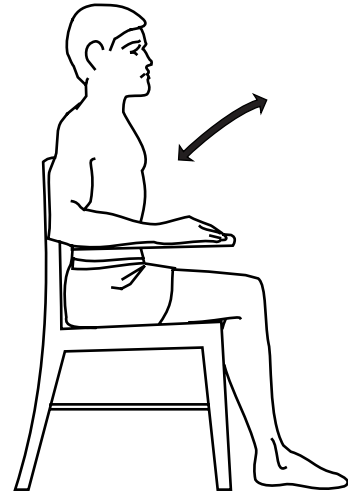
If you anticipate needing work on your teeth or gums, this should be completed before your orthopedic surgery is scheduled.

Muscle Strengthening (Pre-Surgery and Post-Surgery)

The muscles in your arms and non-surgical leg will be required to support you after your surgery. The following exercises need to be performed daily to strengthen these muscles before surgery. Build slowly to a goal of repeating each exercise several times a day. Add additional weight as tolerated. These exercises will be reviewed during the Total Knee Class. Exercises can be done twice daily with 5-10 repetitions.

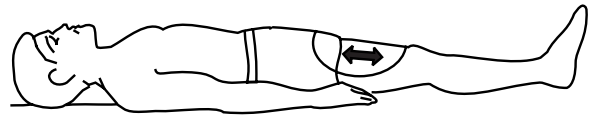
Arms:

1. Sitting in a chair with side arms, practice lifting your weight off the chair by pushing with your arms on the side arms of the chair.
2. Lying on your back, your arms by your side, thumbs pointing towards the roof; press arms into the mattress, tensing entire arm, hold for a count of 5, relax.



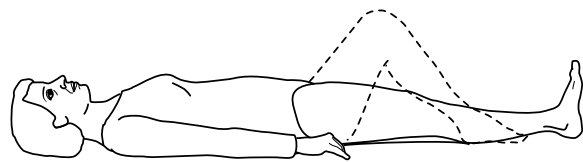
Isometric Exercises:

1. Tighten your buttocks, hold for a count of 5, relax.
2. Quadriceps set: Keeping your legs straight, tighten the thigh muscles on top of your leg and hold for 5 seconds. This will cause the knee to flatten and the kneecap to move upward slightly. Try to tighten even more during each second as you count to 5.



Active Range of Motion and Strengthening Exercises: (do while lying on your back)

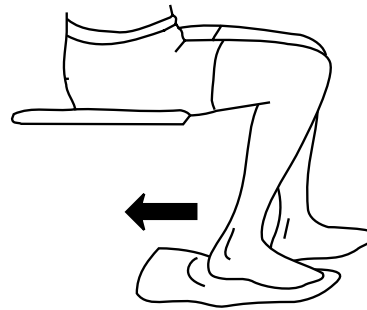
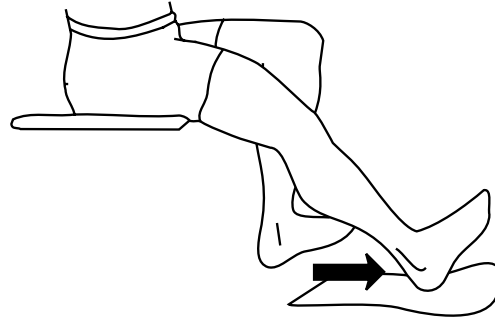
1. Begin this exercise lying on your back. Move your leg straight out to the side. Keep your knee straight and pointing up to prevent your knee from turning inward. Bring your leg back to the center.
2. Active hip and knee flexion:
Lay flat on your back.
Bend your hip and knee.
Then straighten your leg.



3. Draw circles with your ankles while your legs are straight. Pump your ankles up and down.
4. Static hold exercise: Place rolled towels under your knee. Attempt to straighten the knee. Hold for 5 seconds then slowly return to the starting position.

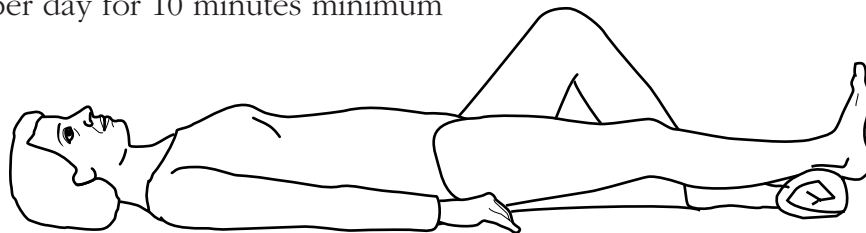
Sitting Exercise:

1. Do heel sliding exercise in a sitting position using a towel. Slide leg forward and straighten as much as possible (Bring toes toward head). Hold 5 seconds, then slide leg backward and bend knee as much as possible. (Hold 5 seconds).



Passive Extension:

1. Lie down on your back, or sit with your legs straight out in front of you. Put a towel roll or foam roll under your foot and ankle, but not under your knee, and allow your knee to straighten. This exercise needs to be done 2 to 3 times per day for 10 minutes minimum each time.



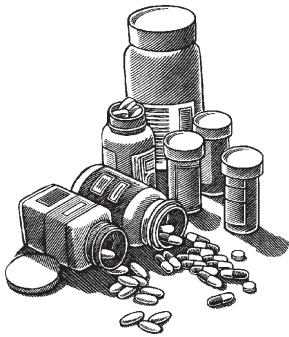
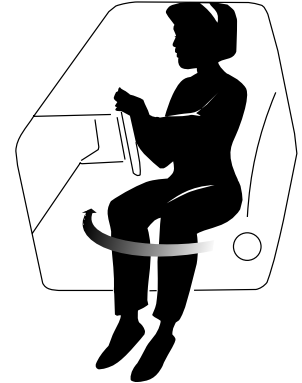
Mental Preparedness

The choice to undergo a total knee replacement can be a difficult decision. It is important that you fully understand the benefits and risks of the surgery. If you have any questions concerning your surgery, please ask your surgeon. If you are told something that you do not understand, you must seek clarification. You should be able to approach your surgery with all the knowledge that you desire and with the fullest confidence in your decision

COUNTING DOWN TO SURGERY

Some final considerations must be reviewed before your surgery day.

Automobile Issues: You must be able to get in and out of your vehicle safely after your operation. Since you will be restricted from driving for at least 6-8 weeks after surgery, you need to consider the driving ability of the significant other who will be helping you during your recovery. Your driving partner must be available to take you to and from your outpatient physical therapy.



Medication Restrictions:

Your surgeon and anesthesiologist need to know all the medications you are currently taking. In addition to your prescription drugs, this includes any over-the-counter medications such as aspirin, vitamins, allergy pills, anti-inflammatory medication, and anything else you take. Because some of these medications affect your body's ability to control bleeding, they must be restricted. Your physician will tell you which medicines to stop before surgery. Space is provided below to write down the medications you are currently taking.

Medications I am currently taking:

Name of Medications	Dose	How Often	Why Taken	Times Taken
Lisinopril (example)	20 mg	once a day	high blood pressure	at bedtime

Illness Before Surgery: If you develop a cold, flu, or any other type of infection in the two weeks before surgery, you need to report this to the Orthopedic Department by calling _____ . Surgery may need to be postponed for you until you are well. It can be dangerous for you to have surgery when you are sick. Bacteria in the body can travel to your new joint and cause an infection in this area. In some cases, patients must return to the operating room for removal of the knee prosthesis as part of the treatment for a knee infection. Illness or infections include:

- urinary tract infections, prostate infections
- skin infections due to broken skin, pimples, rash, cuts from razors, thorn pricks, eczema, hang-nails
- respiratory infections with cough, fever, or colored sputum
- dental abscesses

In addition, if a regular medical problem such as asthma, high blood pressure, diabetes, or other chronic condition requires additional attention other than routine management, your surgery may have to be postponed.

Again, it is important that you have your surgery during a time of optimum health.

Bowel Care: If you tend to become constipated easily, are dependent upon laxatives or bulk substances, it is requested that you ensure that you have a bowel movement the day before surgery. This can be accomplished through increasing the fiber in your diet, gentle laxatives, or enemas. The Health Education Department has pamphlets available on high fiber diets. Do NOT use one of these products the night before surgery.

FINAL PREPARATIONS

These are the things that need to be done in the 24 hours before surgery.

Blood Work: A “type and screen” of your blood is often performed on this day. Since this test is only useful for 72 hours, it is drawn as close to your surgery date as possible, yet still allows enough time for the blood bank workers to process the test. You must not remove the identification band placed on your wrist. This ensures that blood you might receive matches only you.

Packing for Your Hospital Stay: Since your hospital stay is only 3-4 days, only the following items are suggested:

- Plan to wear home what you wear to the hospital - this should be loose-fitting so you can easily get into and out of the clothing with minimal or no assistance. A dress or shorts/pants with loose legs are suggested. Well-fitting, low-heeled, or flat shoes - your feet swell after surgery.
- Tooth brush, toothpaste, comb/brush, deodorant
- Knee length, open front robe, loose-fitting shorts
- Hearing aid batteries, glasses, dentures
- Bring walker or crutches to hospital for proper sizing (labeled with your name)
- One book/magazine (you will be busy)
- Pen/pencil to write out your meal menu, questions, phone numbers, etc.
- THIS BOOKLET
- Phone card for out-of-area calls

REMEMBER: **Leave jewelry, contact lenses, and all valuables at home.** Leave routine medications at home unless otherwise directed by the Surgeon or Anesthesiologist. The nurses will supply your medications.

Pre-operative Bathing

Evening Before Surgery

- Shower and shampoo since you will not be allowed to shower for about 12-14 days
- Shower the night before surgery AND the morning of surgery, using ½ bottle of Hibiclens soap for each shower.
- DO NOT EAT or DRINK ANYTHING after midnight unless directed otherwise by the Anesthesiologist! This includes gum, breath mints, hard candy, cough drops. These items all stimulate your stomach secretions and must be avoided.

Day of Surgery

Once you have reached this day, you have already traveled far to ensure your readiness for surgery. The day of surgery begins early, so some helpful reminders for the morning need to be reviewed:

- Do not drink any water while brushing your teeth (a note on the bathroom mirror may be helpful).
- Do not drink any liquids or eat anything (remember this includes NO coffee, tea, juice, candy, gum, hard candy).
- Take only those medicines that the Anesthesiologist ordered with a sip of water (sip = 1 ounce).
- Arrive at the admitting office for final paper processing at given time:
_____ a.m./p.m. The admitting clerk will take you to the pre-operative area.

Pre-operative Area: Staff here will ensure you and your chart are ready for surgery. Your spouse or significant other will be allowed to be with you as you are prepared for surgery. You will:

- be given a hospital gown, have a special stocking put on your leg, and will have an IV (intravenous fluid line) inserted, usually in the back of your hand
- have your vital signs checked: temperature, pulse, blood pressure, and respiration
- have your knee shaved, scrubbed, and wrapped
- be given medication to relax you
- have your belongings stored until after surgery when they will be delivered to your room
- be escorted to the bathroom or will have a tube inserted through your urethra to drain your bladder

and the staff will help you relax through meditation and relaxation techniques.

Transport Team: These individuals will push you on a rolling stretcher to the operating room after they have made sure you have removed your dentures, contact lenses, and glasses. Your significant other, who has been waiting with you in the pre-operative setting, will be directed to a place to wait for the surgeon to report on the surgery.

Operating and Anesthesia Team: Professional staff in this setting will greet you and again review your surgical plan. These repeated checks are safeguards to ensure absolute accuracy in our operating room environment. Make sure to inform the staff if you are cold in this setting. Warming blankets can be provided.

In the operating room, because of the trust in the professionals you have chosen to perform your needed surgery, you will be able to relax as they talk you through each step of the anesthesia process. You will be given either a spinal or a general anesthetic as agreed upon during your pre-operative anesthesia interview. You may be in this setting 3-4 hours.

PACU (Post-Anesthesia Recovery Care): Nursing staff in this setting monitor your vital signs closely and manage any pain, shivering, or nausea you might have as you recover. You may have a drain emerging from your surgical knee. This drainage system gently suctions blood from your incision so that it cannot pool and slow the healing process. Another drain, a Foley, is used to remove urine from your bladder. The IV supplies fluids. You may also be receiving some of your blood that was collected during surgery. The doctor talks to you in this area and then speaks to your waiting significant other. You stay at least one hour in the PACU or until you are considered stable to be moved to your room. A gentle squeezing action may be felt on your leg(s) when you awaken from surgery from a pumping device that is applied to your legs. This helps the blood in your lower body to return to the heart. You may also be aware that your knee feels cool. The nursing staff place ice bags or some other type of cooling device on your knee to reduce the amount of swelling because of the surgery.

Post-Surgical Care

Key responsibilities for your healthcare team in this setting include:

Managing your pain: As you learn more about the actual surgical procedure, you can understand why you will have pain. What is important to remember is pain can be controlled.

You will be given the opportunity to determine your “Comfort Zone,” the level of pain that you will tolerate. If your pain exceeds this level, your nurses will work to better manage your pain through repositioning you in bed, ice compresses, or providing you with pain medicine. If these measures are still ineffective, your surgeon or one of his or her associates will be contacted. Your nurses will frequently ask you to rate your pain from 0-10 using the scale below to determine if the interventions they provide are effective. All nurses throughout the hospital are trained to use this scale and will know what you mean when you say, “My pain is a five.” Initially, after surgery the pain medication will be given in the form of a shot or through the intravenous line. Do not be hesitant to ask for pain medication.

Determine your desired comfort zone from the choices below. The nurses in the pre-surgical setting will ask you what you chose for your comfort zone.

0	Pain Free
1-2	Mild
3-4	Bearable
5-6	Distressing
7-8	Severe
9-10	Intolerable

My desired comfort zone is _____

You can also reduce your own pain by using any of these relaxation exercises:

- Clench your fists; breathe in deeply and hold your air; breathe out slowly and go limp; start yawning.
- Slow and rhythmic breathing.
- Recall a peaceful past event.
- Listen to soothing music via a headset.

Again, be assured the staff will work with you to manage your pain.

Monitoring Vital Signs, Intake and Output: During the first 24 hours after the surgery, the nursing staff will be checking your temperature, pulse, blood pressure, and respirations frequently. Taking deep breaths every hour when you are awake will keep your lungs clear. A device will be placed at your bedside to encourage deep breathing.

How much you are allowed to drink or eat after surgery will depend on what you can tolerate. Sometimes, patients are nauseated after surgery. Again, your nurses will provide you with medication if necessary to reduce your nausea. You will continue to have an IV giving you fluid until you can drink fluids easily.

The drain from your knee and the tube draining your bladder will be checked often. If the drainage is more or less than it should be, your physician will be notified.

As you can see, there is frequent communication between the doctors and nurses about your well-being.

Activity: Initially, you will be required to stay in bed to protect your new knee. A special immobilizing brace may be strapped on your surgical leg to prevent movement of the knee immediately after surgery. The nursing staff will help to turn you off your back, propping you up with pillows. Flexing your ankles up and down is encouraged.

NEW DAY, NEW KNEE

This day is exciting! Your first full day with a new knee joint. All of your health care team is focused on getting you moving again. This is accomplished through different avenues. Today includes monitoring of:

- **Pain Control** - you must be comfortable in order to participate in activity. You should ask for pain medication before your pain becomes too high on the Pain Scale.
- **Blood Count** - a laboratory technician will draw a sample of blood. You must have an adequate blood level to tolerate the activity of getting out of bed.
- **Your Nutrition** - the body needs food and fluids in order to help wounds heal.
- **Your General Well-Being** - assessments are made of your body's functioning status.
- **Participation in Physical Therapy** - getting out of your bed to a chair and practicing leg exercises and gentle range of motion are the first steps to walking again.

RECOVERY DAYS

The following days continue to focus on helping you gain independence. Basic areas of focus remain the same but with the following changes:

- Pain will be managed with pills.
- A low blood count may be improved through a blood transfusion.
- General Assessments of your well-being will continue.
- Drainage tubes and fluid lines will be discontinued.
- Meals will be eaten out of bed for better digestion.
- Bowel and Bladder routines will return. Pain medication and lower activity levels can cause constipation, so it is important to eat high fiber foods, exercise frequently, and drink plenty of fluids.

Physical Therapy will continue to promote strengthening exercises, knee range of motion, and walking. All healthcare members on your team will reinforce these exercises since you must learn them so you can use them after discharge. The physical therapist will provide you with a guide meeting your particular needs. Your knowledge about reportable conditions after discharge will be evaluated. You must know....

1. Watch for signs of infection such as fevers of 101° F or greater that persist; increasing and quite noticeable areas of redness around your incision; a pain level that becomes increasingly severe over a couple of days that does not improve with rest and is not related to activity level increase or recent physical therapy session; drainage that does not decrease over several days after hospital discharge.
2. Watch for signs of deep thrombophlebitis (blood clots in the deep veins of the leg), such as tender cords, red streaks, or firm swelling in the back of the calf, knee, and/or thigh.
3. Report immediately to your Internal Medicine physician or go to the Emergency Department if you develop sudden moderate to severe chest pain, difficulty breathing, fainting or near fainting episode(s), or a noticeable worsening of pre-existing medical conditions such as elevated blood sugar or blood pressure.
4. Pain medications can become addictive and have side effects such as nausea, vomiting, light-headedness, constipation, fatigue, and/or depression. However, they are often necessary during the period immediately following hospital discharge. Use them judiciously, however, and gradually wean from them over the first 2-6 weeks after surgery. Use over-the-counter medications such as Tylenol, Enteric-Coated Aspirin, Alleve, or Ibuprofen for less severe pain.

During the recovery days, as you experience the initial limitations of a new joint, you may find yourself thinking of questions you might not have previously raised with your physician or healthcare team. Listed below are some questions you may have. Your physician will tell you if there are any differences unique to you.

FREQUENTLY ASKED QUESTIONS

1. **What is a CPM machine?**

The letters stand for Continuous Passive Motion. It is a machine that slowly and smoothly bends and straightens your knee. The nursing staff will place the CPM under your operated leg with the foot of the bed flat. The machine will be on for 2-6 hours a day/evening, and will be adjusted to increase the bend in your knee as your therapy progresses.

2. **When can I drive?**

Approximately 6-8 weeks after surgery. Manual transmission may require a longer waiting time.

3. **When can I travel?**

Long distance travel should be minimal for 6-8 weeks. You should make frequent stops where you can get out and walk. You are at high risk for developing blood clots in your legs because of the surgery. Support stockings are recommended for travel to help with your circulation.

4. **When can I shower?**

When your doctor says you can or once your staples have been removed. You should use a shower chair to assure your safety since your leg is still weak.

5. **How do I get in and out of my car?**

Have the front seat moved all the way back.

Back up to the car seat with your walker or crutches

Sit down as you would in a chair.

Bring your operated leg into the car.

Reverse these steps to get out of the car.

6. **When are my staples removed?**

Usually 10-21 days after surgery during your first outpatient visit or during a visit from a home health nurse.

7. **How do I use a walker or crutches in the correct sequence?**

Flat surfaces

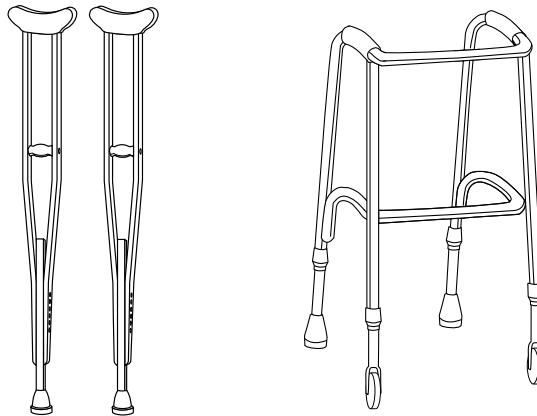
- walker/crutches first
- operative leg second
- non-operative leg third

Up stairs (with crutches)

- non-operative leg first
- operative leg next
- crutches last

Down stairs

- walker/crutch first
- operative leg next
- non-operative leg last



8. **How long will I need a walker or crutches?**

An ambulatory assistive device such as a walker may be required for 6 weeks. This time depends on the progress you make.

9. **When can I put full weight on my new knee?**

This is dependent on the type of device placed.

If cementless: 6-8 weeks

If cemented: immediately

10. **Do I need antibiotics if I am having dental work?**

Your physician may decide to have you take antibiotics for 2 years after the joint replacement surgery prior to dental appointments. The incidence of joint infection after a dental procedure is extremely rare, however. In addition to dental work, always identify to healthcare providers that you have a joint replacement anytime you require the following procedures:

 - cystoscopy, colonoscopy, proctoscopy
 - surgery of any kind
 - urinary catheterization
11. **Why do I need to wear support stockings?**

In the month following your surgery, until you are active again, you are at a greater risk for forming blood clots in your legs. Supportive stockings help your circulation and help control the swelling in your leg which almost invariably occurs.
12. **Can I lift my grandchild?**

You should not engage in any heavy lifting for 6-12 weeks after your surgery.
13. **Will I set off the alarm at the airport security booth?**

On occasion it has happened. Your surgeon can give you a special card stating that you have an artificial joint.
14. **When can I return to gardening which requires stooping and bending?**

Consider gardening in elevated planter boxes. You are restricted from stooping and bending for at least 3 months.
15. **When can I have intercourse with my partner?**

Waiting 4-6 weeks after surgery will allow your new knee time to begin healing. During your six-week follow-up appointment, your physician can assess the stability of your new joint and make recommendations. The partner with the new knee should assume a passive position on the bottom until flexion has returned to full strength. Sexual desire may be diminished after surgery due to the amount of energy being directed toward relearning walking skills. A woman may benefit from placing a pillow under her thighs.
16. **How long will I need physical therapy?**

Your progress will determine this answer. Your daily attention to your exercises and walking is the key.
17. **If I feel okay do I really need to return to the doctor's office for a follow-up visit?**

Yes. An appointment will be made for you at the time of your discharge from the hospital. You will receive a notice in the mail detailing your appointment time, date, and location. Your physician needs to evaluate your progress and how well your wound is healing.
18. **How long will the prosthesis last?**

Average implant longevity is around 10-15 years but may vary depending on your age, weight, activity level, and bone quality.
19. **When should I resume my regular medications?**

When you are discharged your surgeon and medical doctor will tell you which medications you should resume taking.
20. **How can I obtain a handicapped parking permit?**

An application can be obtained from the Department of Motor Vehicles. Your physician can assist you by completing the portion requiring his signature

Write down your own questions which come to you during your recovery. Your physician or others on your team will be willing to answer them for you.

DISCHARGE CRITERIA

In order to return home after surgery, you must satisfy the following criteria:

- demonstrate knowledge and understanding about your surgery
- identify activities you can or cannot perform due to range of motion limitations
- identify resources in the home, family, or community you can use to maintain your safety
- explain the purpose of all medications you will be taking
- obtain assistive devices to aid with walking and activities of daily living
- demonstrate safe mobility, transfers, and ambulation on a flat surface
- recognize signs or symptoms of wound infection or phlebitis
- identify contact numbers for emergencies
- identify when your follow-up appointment is scheduled



If you feel you would be unable to manage on your own once discharged, the Continuing Care Coordinator can provide you with names and telephone numbers of agencies that you can hire to assist in the home. (You may wish to interview these individuals before being admitted to the hospital.) These services can help with simple housekeeping, cooking, or bathing activities.

Outpatient Physical Therapy will be ordered for you to begin after discharge from the hospital at the Kaiser Permanente clinic settings. If you live out of these regions, alternative settings will be arranged. They will work on improving your ability to:

- walk
- transfer (bed, chair)
- shower safely
- perform movement of the knee joint

DISCHARGE DAY (Usually 3-4 days after surgery)

On the day of discharge, final arrangements will be made for you. If your destination is home, the following steps take place:

- Your nurse will review final discharge instructions from the physician. You will sign the form provided indicating your understanding and willingness to follow the outlined restrictions.
- Any prescriptions your physician has ordered will be sent to the Kaiser Permanente Pharmacy for filling. If you normally get your prescription at another pharmacy, notify your nurse. Your significant other will be asked to pick up the prescription from the pharmacy.
- Physical therapy will work with you one more time. The Physical Therapist or nurse discharging you will tell your ride where to park their vehicle. You will be transported to your vehicle in a wheelchair.
- Outpatient physical therapy is required; this will be arranged for you.

Once home, you will be contacted by these health providers to set up scheduled visits. You will return home with all the knowledge and skills to become progressively stronger and independent.

CONCLUSION

The Total Knee Pathway to Recovery is not an easy one. Through your determined effort, however, and the support of your healthcare team, you will once again have the ability to return to those simple things in life which mean so much, relieved of the pain that greeted you with every step. Now you will have a supportive knee to stand on and the opportunity to try new challenges ahead.

If you have any questions after discharge, please call the Orthopedic Department at _____ . Your Orthopedic Surgeon or one of his staff will assist you.

NUTRITION

FOR THE SURGICAL PATIENT

Nutrition is an important part of staying healthy and is especially important for healing from surgery. In preparing for your surgery, the following guidelines will help improve your nutrition. This is important in order:

- to speed healing
- to decrease complications
- to return quickly to an active lifestyle

Eat a Variety of Foods: The Daily Food Guide illustrates the major food groups and the recommended number of servings to be eaten daily. Use this chart when planning your meals.

Increase Protein Intake

PROTEIN is necessary for the maintenance and repair of body tissues. Good sources of protein include milk and milk products, eggs, meat, poultry, and fish. Vegetable protein sources include soybeans, lentils, garbanzos, beans, peanut butter, nuts, and seeds.

To Increase Protein:

- Add extra chopped or pureed meats to soups, stews, casseroles.
- Add chopped nuts to salads, sandwiches, or desserts.
- Use nut butter on celery, apples, bananas, crackers, or toast. Try adding nut butters to cookie recipes or frostings.
- Add powdered milk to a variety of foods such as hot cereals, soups, casseroles, puddings, sauces, gravies, and scrambled eggs.
- Try fruit with yogurt or cottage cheese for an easy nutritious food.

Iron Needs

Females:

11 - 50 years: 18 mg/d

Males:

11 - 18 years: 18 mg/d

Select iron-rich foods from the following food group

Protein Foods	Iron mg
Beef, cooked - 2 oz.	2.0
Pork, cooked - 2 oz.	2.0
Eggs - 2 large	1.5
Tofu - 1/4 cup	2.0
Peanut butter - 4 TB	2.0
Beans - 1 cup cooked	
• Red, Kidney, Pinto	5.0
• Black-eyed Peas	4.0
• Lentils	3.0
• Chili con carne with beans	3.0
• Soup, split pea or bean with pork	2.0

Breads & Cereals

	Iron mg
Product 19, Total - 3/4 cup	18.0
Kellogs Raisin Bran, Kix - 3/4 cup	4.0
Cream of Wheat, Malt-o-Meal - 1/2 cup	4.0
Iron-Fortified Infant Cereals - 4 TB dry	6.5
All Bran - 1/2 cup; Wheat Chex - 2/3 cup	4.5
Cheerios - 1 1/4 cup; Special K - 1 1/3 cup; Wheaties, Rice Chex, Rice Krispies, Cornflakes - 1 cup	2.0

Fruits & Vegetables

Prune juice - 1/2 cup; raisins - 1/3 cup	1.5
Prunes - 5 medium dried	1.0
Spinach - 1/2 cup cooked	1.4
Greens - 1/2 cup cooked	2.0
Mushrooms - 1/2 cup cooked	1.0

Vitamin C helps your body use iron. Plan to have a good source of Vitamin C when eating iron rich foods such as orange juice and other juices with Vitamin C added.

Multiple Vitamin Supplements: A one-a-day multiple vitamin/mineral (with iron, zinc, and magnesium) may be helpful to increase body stores prior to surgery. This is important if you are unable to eat the recommended number of servings in each food group. If the iron supplement you are using causes intestinal problems, i.e., constipation, diarrhea, etc., a time-release type iron supplement may be better tolerated.

Fluids

Make sure you get adequate fluids; six 8-ounce glasses per day are recommended. Check this with your doctor.

A DAILY FOOD GUIDE

Food Group (key nutrients supplied)	Minimum Daily Servings	Example of one Serving	Tips for Good Food Selections
Fruits & Vegetables (fiber, Vitamins A and C)	5	<ul style="list-style-type: none"> • 1 cup swiss chard or spinach • 3/4 cup cooked broccoli or asparagus • 2 medium tomatoes • 4 Brussels sprouts • 1/2 cup carrots, squash, or green beans • 1 small potato • 1/2 cantaloupe • 1/2 cup orange or tomato juice • 1 small apple, banana 	<p>Limit fruits canned in sugar syrups and vegetables in rich sauces.</p> <p>Daily: choose a food high in Vitamin C such as orange or tomato juice, cantaloupe</p> <p>Choose a dark green or yellow vegetable as a Vitamin A source such as carrots, spinach, or broccoli.</p>
Bread, Cereals & Starches (B vitamins, iron, fiber)	6	<ul style="list-style-type: none"> • 1 slice bread • 1 tortilla • 1/2 cup hot cereal • 3/4 cup dry cereal • 1/2 cup cooked rice, noodles, pasta, or potatoes 	<p>Emphasize whole grain products and watch your serving sizes. Limit bread and cereals high in sugar and fat.</p>
Milk and Milk Products (calcium, Vitamin A, Vitamin D)	2-3	<ul style="list-style-type: none"> • 1 cup milk • 1 1/2 oz. cheese • 1 cup plain yogurt • 1 1/3 cup cottage cheese 	<p>Nonfat milk or lowfat dairy products are recommended.</p>
Protein Foods (protein, iron, B vitamins)	2 or more	<ul style="list-style-type: none"> • 2 eggs • 2-3 oz. lean meat, fish, or poultry • 1/2 cup tuna • 1 cup cooked beans • 1/4 cup nut butter • 1/2 cup nuts or seeds 	<p>Select lean beef, poultry, fish, or veal. Remove skin from poultry and trim all visible fat from meat. Limit bacon, frankfurters, and luncheon meats which tend to be high in calories, fat, and salt.</p>
<p>OTHER FOODS: <i>Some foods do not belong in any of the food groups such as cake, cookies, butter, oil, jelly, and alcohol. These foods tend to be high in calories and contain no nutrients or are low in most nutrients.</i></p>			

RESTRICTED PRE-SURGERY MEDICATION

Warning

ALL DRUGS (prescription, over-the-counter, and illegal) CAN BE DANGEROUS DURING YOUR SURGERY!

Important

PLEASE tell your doctors and nurses about any drugs you have taken in the last 30 days, including Herbal products such as Ginko or garlic supplements as they may impact clotting.

BLOOD PRESSURE AND HEART MEDICINES are important for your doctors to know about. Most need to be continued until your surgery. Your doctors will tell you which ones to take.

Surgical Bleeding

- Some medicines can cause serious bleeding during an operation.

Blood Thinners

- Coumadin (warfarin) - ask your doctors when, and if, you should stop. Usually 4 days before surgery.
- Ticlid (ticlopidine) - stop 14 days before surgery.
- Lovenox (enoxaparin) a type of heparin - stop 24 hours before surgery.

MEDICATION TO AVOID BEFORE SURGERY

NSAIDs (Nonsteroidal Anti-Inflammatory Drugs)

These include many headache, cold, and arthritis pain remedies. Please check the ingredients of medicines you are taking. If you are not sure what is in them, ask the Pharmacy.

Stop 7 Days Before Surgery

- Aspirin (salicylates) - many products contain salicylates. Examples are: Anacin, Excedrin, Darvon, Talwin, Bufferin, Midol, Sine-Off, etc.

Stop 2 Days Before Surgery

- | | |
|--|-----------------------------|
| • All other NSAIDs | • Sulindac (Clinoril) |
| • Diclofenac (Voltaren) | • Difunisal (Dolobid) |
| • Fenoprofen (Nalfon) | • Tolmetin (Tolectin) |
| • Meclofenamate (Meclomen) | • Sulfinpyrasone (Aturane) |
| • Ibuprofen (Motrin, Advil, DayQuil, etc.) | • Dipyridamole (Persantine) |
| • Indomethacin (Indocin) | • Piroxicam (Feldene) |
| • Naproxen (Aleve, Naprosyn, Anaprox) | |

Note: Acetomenophen (Tylenol) and Codeine DO NOT cause bleeding and may be continued.

Some drugs can react with anesthetic medicines and may cause heart damage.

All Illegal Drugs - stop at least 14 days before surgery.

Some Diet Pills

- Stop 14 days before surgery
Fenfluramines - Phen-Fen (phenteramine-fenfluramine), Redux, Pondimin

MAO (monoamine oxidase) Inhibitors - for depression

- Please check with the prescribing doctor and Anesthesia
- Usually stop 14 days before surgery



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