



UNIVERSITY  
*of* MARYLAND  
MEDICAL  
SYSTEM



# Preparation & Recovery from Colorectal Surgery

## PATIENT GUIDE

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UNIVERSITY OF MARYLAND MEDICAL SYSTEM  
COLORECTAL SURGERY PROGRAM

# Welcome

## **Welcome to the University of Maryland Medical System Colorectal Surgery Program.**

Preparing to have surgery can be overwhelming. You will receive a lot of information. Your UMMS colorectal surgery team is here to help you through this entire process.

This packet includes information about:

- Getting ready for your surgery
- What to expect on the day of surgery and while you are recovering in the hospital
- Planning for recovery and getting ready to go home after surgery
- What to expect at home after surgery

Please remember that every patient is different. Your care team will create a recovery program based on your needs.

Please try to read this booklet as soon as you are able to and bring it with you to all of your appointments and hospitalizations. Write down your questions and be sure to ask your surgical team when you see them, or call your surgeon's office. It is important for you, your family and your friends to understand what to anticipate so that everyone can fully participate in your recovery.

We look forward to partnering with you to ensure a quick recovery!

The University of Maryland Medical System  
Colorectal Surgery Team



## Your Checklist

CHECK WHEN DONE	ACTION
	<b>PRIOR TO SURGERY</b>
	View assigned video education programs.
	Prepare your medical records to bring with you to your pre-operative appointment.
	Meet with your surgeon to discuss surgery during your pre-operative appointment. You will review your medical history and will be told if you need to stop or change any medication before surgery.
	Complete blood work at clinical laboratory
	<b>A FEW DAYS BEFORE SURGERY</b>
	Receive phone call from hospital staff reminding you what time to arrive for your surgery, review medications to take the day of surgery and answer any last-minute questions.
	Ensure you have all supplies needed for your bowel preparation as prescribed.
	Ensure you have your medicated liquid soap for your skin preparation.
	Stop medications as advised before surgery.
	<b>ONE DAY BEFORE SURGERY</b>
	If your surgeon prescribed a bowel preparation and antibiotics <b>one day before surgery</b> , in the morning. Follow the instructions starting on page 8 of this booklet. You can refer to this packet if you need help understanding each step.
	The <b>night before your surgery</b> , shower and use medicated liquid soap (CHG) or wipes, following the instructions on page 8 for proper use.
	<b>MORNING OF SURGERY</b>
	Take medications as instructed.
	Shower, use the medicated liquid soap or wipes following the instructions on page 8 for proper use.
	<b>IMMEDIATELY AFTER SURGERY</b>
Oxygen	You may be asked to wear the oxygen mask placed over your nose and mouth for a few hours in the recovery room.
Mobility	Get out of bed and to a chair as ordered by your surgeon.
Diet	You can drink clear liquids as tolerated.
Pain Management	Take all medications that have been prescribed to you to control your pain. If you are still experiencing pain, let the nurses know, and they can help you manage your pain and remain comfortable.

PATIENT NAME

DATE OF SURGERY

CHECK WHEN DONE	ACTION	
	<b>FIRST DAY AFTER SURGERY</b>	
	Mobility	Spend at least several hours out of bed. Walk at least three to five times in hallway.
	Diet	Drink clear liquids as tolerated. Your diet may be advanced as you improve.
	Oxygen	Participate in your recovery through use of an incentive spirometer.
	Pain Management	Take all medications that have been prescribed to you to control your pain. If you are still experiencing pain, let the nurses know, and they can help you manage your pain and remain comfortable.
	Urinary Catheter	Your urinary catheter may be removed. If it is not addressed, please ask your care team.
	If Ostomy	Participate in your ostomy care. Describe your plan for care after discharge.
	<b>SECOND DAY AFTER SURGERY</b>	
	Mobility	Spend at least several hours out of bed. Walk at least three to five times in hallway.
	Diet	Your diet may be advanced as you improve.
	Pain Management	Take all medications that have been prescribed to you to control your pain. If you are still experiencing pain, let the nurses know, and they can help you manage your pain and remain comfortable.
	Urinary Catheter	Your urinary catheter may be removed. If it is not addressed, please ask your care team.
	If Ostomy	Ask your nurse to demonstrate how to empty ostomy. Ask your nurse how to record ostomy liquid. Learn what actions you can take to prevent dehydration from your ostomy.

PATIENT NAME

DATE OF SURGERY

CHECK WHEN DONE	ACTION	
	<b>THIRD DAY AFTER SURGERY</b>	
	Mobility	Spend much of the day out of bed and walking.
	Diet	May start to eat solid food.
	Pain Management	Your pain should be well-controlled on pain medication. Discuss your discharge pain management plan for discharge with your care team.
	Discharge Planning	You may be ready to be discharged if you are drinking and eating well (no nausea), passing gas, and your pain is well-controlled.
	Discharge Instructions	Demonstrate understanding of signs and symptoms of infection, and what to do if you think you have an infection. Learn what actions you can take to prevent dehydration. Discuss this with your nurse.
	If Ostomy	Demonstrate to your nurse how to keep track of your ostomy output. Verbalize to your nurse what medications you can use to make your ostomy output thicker and prevent dehydration. Demonstrate how to apply a new ostomy bag. Make arrangements to have ostomy supplies for use at home.
	<b>BEFORE YOU LEAVE THE HOSPITAL, YOU SHOULD HAVE</b>	
	Hospital discharge instructions.	
	An outpatient appointment with your surgeon within one to two weeks of discharge.	
	Prescription for pain medication and any other medications you need.	
	A hospital bag containing all ostomy supplies, if needed.	



## Getting Ready for Surgery



## Scheduling Your Surgery

### How and When Will Your Surgery Be Scheduled?

You will meet with a surgery scheduler during your appointment with your surgeon to go over the date and time of your procedure and pre-operative visit.

**Make sure that we have up-to-date contact information for you, including a phone number where you can be reached the day before surgery.**

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## Prior to Surgery

Prior to your surgery, you will have an appointment with your surgeon. During this appointment your surgeon will review pre-operative testing that may be required prior to your surgery. Pre-operative testing may include the following:

Review of your medical history

- Electrocardiogram, if you need one
- Chest X-ray, if you need one
- Review of your anesthesia plan and pain relief for your surgery
- Review of your surgery preparation, including which medications to take the morning of surgery
- Blood work if needed
- Referrals with a specialist for pre-operative clearance if needed

*Note: Plan for management of blood thinners — Warfarin, clopidogrel, aspirin, etc. — will be done by your surgical team and prescribing doctor, if appropriate.*

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## Your Pre-Operative Evaluation Visit

### What Do You Need To Bring To Your Appointment?

Bring this booklet, your insurance card, complete list of medications, contact information for your primary care doctor and all pertinent medical information.

### Preregistration for Your Surgical Stay

You may have the opportunity to pre-register for your surgery. If this opportunity is available, it is best to do this ahead of time to prevent delays when you come for your surgery.

### Insurance Authorization

Our pre-certification team will be contacting your insurance company to secure authorization for your surgery and admission. Please notify your surgery scheduler immediately if there have been any changes regarding your insurance since your last visit. The pre certification team will make you aware of any coinsurance or copayment.

If your policy is an HMO, you may need referral from your primary care physician for services. Please contact the customer service number on the back of your insurance card for clarification.

### Advance Directives

An advance directive can be used to name a health care agent. A health care agent is someone you trust to make health care decisions for you. An advanced directive can also be used to say what your preferences are about treatments that may be used to sustain your life. Advanced directives are optional. If you have an advance directive, bring a copy to the hospital if you want it to apply to the upcoming visit/admission. An advance directive can be removed or updated at any time. Additional information about advance directives can be found by calling the Maryland Attorney General's office at 410-576-7000 or visiting [www.marylandattorneygeneral.gov/pages/healthpolicy/advancedirectives.aspx](http://www.marylandattorneygeneral.gov/pages/healthpolicy/advancedirectives.aspx).

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## Between Your Appointment and Day of Surgery

You should plan to be in the hospital for three to five days after surgery, unless your surgeon told you to expect otherwise. You will probably need assistance from friends or family immediately after leaving the hospital. If no one is available to assist at home, some patients require a short stay in an intermediate care or rehabilitation facility. These facilities give you assistance while you regain your strength for a short period of time. This decision will be made together by you and your medical, nursing and therapy teams. It will be helpful to select one friend or family member who can be part of the team to help make decisions and coordinate your care before, during and after surgery.

If no one will be able to assist you at home after your surgery, there are a few things you can do prior to coming into the hospital that may make things easier for you when you get home:

1. In the kitchen and bathroom, put the things you use often between waist and shoulder height to avoid having to bend down or stretch to reach them.

- Bring the things you are going to use during the day downstairs to avoid multiple trips. However, realize that you WILL be able to climb stairs after surgery.
- Stock up on food and other things you will need frequently because shopping may be difficult right after surgery.

**Eating a healthy diet during the weeks prior to your surgery may help you recover quicker.** Get plenty of exercise so that you are in good shape for surgery.

If you smoke, you will need to stop smoking because of the risks of smoking related to anesthesia and the healing process. Ask your primary care physician for assistance prior to surgery, if necessary.

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## One Day Before Your Surgery

### Bowel Preparation Before Surgery (Eating and Drinking)

Usually, your doctor will prescribe a bowel preparation with antibiotics to prevent infections after your surgery.

Purchase ordered bowel prep and antibiotics that were prescribed by your surgeon if you did not receive them from your surgeon's office.

**CLEAR LIQUID DIET PRIOR TO SURGERY DATE AS INSTRUCTED BY YOUR SURGEON.** Clear liquid is any liquid you can see through.

#### These clear liquid items are allowed:

- Water
- Clear broth: beef or chicken
- Gatorade (not red)
- Lemonade or Kool-Aid (no red or purple), Sodas, tea, coffee (no cream)
- Gelatin (not red and without fruit)
- Popsicles (no orange/red and without fruit or cream)
- Italian ices (no orange/red)
- Juices without pulp: apple, white grape juice
- You may use salt, pepper and sugar.

#### Not allowed:

- Milk or cream
- Milkshakes
- Tomato juice
- Orange juice
- Grapefruit juice
- Cream soups or any soup other than broth
- Oatmeal Grits
- Cream of wheat

**Note: It is important to stay well-hydrated during your bowel prep, so please drink plenty of the allowed clear liquids.**

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## Skin Preparation Before Surgery

Usually, your doctor will prescribe a skin preparation with medicated liquid soap to prevent infections after your surgery.

### General Information

- Do not** shave for two days prior to surgery.
- Do not** allow the medicated liquid soap to come in contact with your eyes, ears, mouth or nose. Do not use internally or in genitals.
- Shower normally and shampoo hair prior to using the liquid soap.
- Make sure your entire body is wet and turn off shower. Use the soap on a clean washcloth to wipe each area of your body, paying particular attention to your surgical area.
- Wipe each area in a back-and-forth motion. If you feel itchy or if your skin turns red, rinse your skin with water and stop using the product.
- You may need to ask for help to reach all areas.
- If given wipes, go to next step. If given liquid soap, after your entire body is wiped, turn the water back on and rinse off.
- Pat yourself dry.
- Do not** apply lotions, makeup, powders, deodorants or creams because they may reduce the effects of the soap.
- Dress in clean pajamas or clothes. Use clean sheets on your bed.
- Follow same process morning of surgery.



## The Day of Surgery

# Checklist and Directions to Follow

## Midnight and Morning of Surgery

- Follow the directions given by your provider regarding drinking clear liquids or taking anything by mouth.
- DO NOT** eat any solid food or drink, any thick liquids like milk or pulped juices, or add cream to any clear liquid drink.
- The morning of surgery, take your medications with a sip of water as directed by your provider.
- Use the second medicated liquid soap following the directions on page 8 for proper use.
- DO NOT** eat mints, candy or chew gum after midnight the night before your surgery.

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## The Day of Your Surgery

### Taking Your Medications Before Surgery

Make sure you know what medications you should take the morning of surgery.

You may receive a call the day before your surgery to review your regular list of medications and to confirm the time you need to come to the hospital. If anything is confusing, please ask questions!

### What to Bring

Leave all valuables at home or give to the person(s) accompanying you. We encourage you to only bring essential items the morning of surgery, including:

- Insurance cards
- Personal identification card, e.g., driver's license
- Copy of your advance directive (optional)
- A list of all your medications, including dosages and how often you take them
- Your Guide to Preparing for and Recovering from Colorectal Surgery (This book!)
- Payment for any deductible or copayment

Please be aware that there may be unexpected wait time prior to your surgery. We will do our best to predict how long the operations of the day may take, but unexpected delays are sometimes unavoidable. Therefore, bring a book or activity to do while you wait.

### Belongings for Your Recovery

Computers, tablets and cellphones are allowed in the hospital. Internet access is available. Towels and gowns will be provided, but you may also bring your own bathrobe and toiletries if preferred. We will give you all of your medicines needed for your recovery. Leave your medications at home.

### What to Wear to Surgery

Wear loose, comfortable clothing. Do not wear any jewelry; this includes wedding rings, earrings and any other body piercings. All jewelry must be removed prior to surgery.

### Parking and Check-In

To ensure a smooth registration process, please arrive two hours before your scheduled surgery. Please follow instructions provided by your surgeon's office regarding where to go for check-in and registration. It is important to allow ample time for parking and walking to the check-in area.

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## Your Hospitalization

Once your team is ready, you and one member of your family, if desired, will be brought to the pre-surgery area. This is where the nurses and anesthesia providers will check you in and make sure everything is set for your surgery. An IV catheter will be placed in your vein, and your weight will be measured. You may also be given medication to help manage your pain and nausea during and after surgery.

If it is appropriate for your procedure, the anesthesia provider will perform an epidural anesthetic by using a small needle to inject medications directly into the pain fibers in your back. This is important because we would like to minimize the amounts of narcotics — such as oxycodone or dilaudid — which cause constipation and nausea after colorectal surgery. The use of these narcotics can significantly delay your recovery after surgery. You will then be taken to surgery, and your family will be taken back out to the patient/family lounge.

### Operating Room

Many patients do not recall being in the operating room because the medications you are given during surgery affect your memory. In the OR you will be connected to monitors. After this, you will be given a blood thinner shot to prevent you from getting blood clots and antibiotics to prevent a wound infection. The anesthesiologist will put you to sleep with a general anesthetic.

Once you are asleep, your surgeon will begin your surgery. During surgery, the OR nurse will update your family periodically. In general, most operations last between two to four hours, but do not be alarmed if the procedure takes longer than this.

### **Recovery Room**

After surgery, you will be taken to the recovery room, where you will wake up from anesthesia. Once awake and stable, you will be given clear liquid to drink. The surgeon will talk with your family shortly after the surgery and let them know about the operation. Most patients remain in the recovery room for about two hours.

### **Surgical Unit**

From the recovery room, you will be sent to one of the surgical units. Your family will be able to visit and/or stay with you in your room as allowed by hospital visitation policy. This is a good time for your family to bring your belongings you packed at home.

In most cases, you will have a small tube in your bladder. This is so we can measure how much urine you are making and how well your kidneys are working. You may also be given oxygen. You will have an IV in your arm giving you fluid into your vein. In most instances you will be allowed to drink immediately. You will be placed on your regular medications, with the exception of some diabetes, blood pressure and blood thinner medications. You will also be given chewing gum three times a day to get your bowels moving after surgery. You will receive a low dose of a blood thinner medication (injection) several times a day to help prevent blood clots.

The nursing staff will help you out of bed. The staff will check your temperature, pulse and blood pressure regularly when you first come up to the unit. We recommend only having a few people visit on this day since you will still be very drowsy.



## Planning for Recovery & Going Home

# My Recovery Planner

Add today's date in the appropriate day of the week on the first row of your calendar and then mark the discharge date you have been given. You will probably have follow-up appointments after discharge. Mark your follow-up appointments on this calendar.

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

# In-Hospital Recovery Plan

## Team Caring for You After Surgery

In addition to the nursing staff on the unit, the colorectal surgery team will care for you. This team is led by your surgeon.

## Pain Relief After Surgery

Your pain will be assessed regularly on a scale from 0 to 10. Pain assessment is important to guide your pain relief. It is essential that you are able to take deep breaths, cough and move. Prevention or early treatment of pain is far more effective than trying to treat severe pain. Therefore, we will plan a specialized regimen to stay ahead of your pain and limit narcotics, which can slow down your recovery process. If you have an epidural catheter, you will receive a constant infusion of pain medication through your epidural. If you need additional pain relief, you will be able to push a button to increase the medication in your epidural. You can always ask for additional pain pills if you are not comfortable.

## One Day After Surgery

**Focus on drinking and walking.** You will start drinking clear liquids after surgery. The intravenous fluids will be stopped, and the catheter may be removed from your bladder. We expect you to get out of bed, with the nurses' or assistants' help, sit in a chair for several hours and start to move about in the hallways. You may also meet with a case manager to assess your discharge needs, including a nursing home or rehab facility for extended recovery. Your physician may order home care to assist with your transition home. Home nursing visits help you get readjusted to home by teaching treatments, monitoring medications, and performing clinical assessment and reporting back to your physician. The needed frequency of these visits will be suggested by your care team. Other services may include therapy and medical equipment, including an incentive spirometer. If you are going "home" to a different address upon discharge, please let us know. A home care coordinator may visit with you while in the hospital to discuss your options. If you have questions, please speak with your case manager. If you need rehabilitation at a facility, a social worker can assist you.

## Two Days After Surgery

You will start eating a soft diet and change to a more solid diet as you feel up to it. The catheter from your bladder will be removed, if not already done so. If there is a dressing on your wound, it will be removed. The tubing will be disconnected from your IV. If you have a new ostomy, one of the ostomy nurses will work with you to learn to care for your ostomy. We expect you to be out of bed for the majority of the day and walking several times in the hallway, with assistance as needed.

## Three Days After Surgery

You will continue to eat your low-residue diet. You may be ready for discharge if you are drinking enough to keep yourself hydrated; your pain is well controlled; you are not frequently belching or nauseated; you are passing gas and you are able to get around on your own. We will not discharge you from the hospital until we are sure you are ready.

## Complications That May Prolong Your Hospital Stay

**Nausea and vomiting:** It is very common to feel sick to your stomach after your surgery. We give you medication to reduce this. However, if you do feel sick, you should reduce the amount you are taking by mouth. Small, frequent meals or drinks are best if you are feeling sick. As long as you can drink and keep yourself hydrated, the nausea will likely pass.

**Ileus:** Following surgery, the bowel can shut down, making it difficult for food and gas to pass through the intestines. This is called an ileus. We have designed our care program to do everything possible to reduce the likelihood of an ileus. If you do develop an ileus, it usually only lasts two to three days. However, it may require a small tube to be put down your nose to relieve the pressure from the stomach. **The best way to avoid an ileus is to reduce the amount of narcotic pain medications, get up as much as possible after your surgery, and stimulate the bowel early after surgery with small amounts of food and liquids.**

**Anastomotic leak:** This is a rare but serious complication. Anastomotic leak usually develops five to seven days after the surgery, and it happens when two ends of the bowel that we join together fail to heal, leaving a hole. Patients usually have severe abdominal pain, fever and vomiting. This often requires another operation. Please let your care team know right away if you are having severe pain.

## Discharge

You will need to make arrangements for someone to accompany you home. You will not be released without someone present.

Please keep in mind that we strive to get patients discharged as quickly as possible, but there may be delays for a variety of reasons.

**Wound infection:** If a wound infection develops, this usually happens three to ten days after surgery.

**Urinary retention:** If you are unable to urinate after the catheter from your bladder is removed, you may have urinary retention. The catheter may need to be reinserted until you are able to urinate on your own. This can be caused by anesthesia, pain medication and decreased activity.

**When you are preparing to go home, you will receive:**

- Detailed discharge instructions, with information about your operation and medications
- All prescriptions for medications you need at home; it may be possible to fill your prescriptions while you are in the hospital. Please ask your nurse or case manager if this is an option.
- Ostomy supplies, if necessary
- A follow-up appointment to see your surgeon or provider one to two weeks after you leave the hospital.



## Concerns After Discharge

## Once you are discharged

**Call your surgeon's office at any time if you are worried about your recovery.**

Call us immediately if:

- You have a fever higher than 101.5 degrees.
- Your wound is red, more painful or has drainage.
- You are nauseated, vomiting or can't keep liquids down.
- Your pain is worse and not able to be controlled with the regimen you were sent home with.
- You have ostomy output more than 1.5 L.
- You experience diarrhea.

It is generally easier to reach someone between 9 am and 4 pm, so **call early if you think something is not right**. After hours and on the weekends, it may take longer for your phone call to be returned.

If you have a true emergency, such as severe abdominal pain, chest pain, shortness of breath or any other acute issues, call 911 and go to the local emergency room. Have the hospital contact your surgeon once you are stable.

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## Concerns After Discharge

### **Bowel Function Following Your Surgery**

Your bowels will take several weeks to recover from surgery and may be unpredictable at first. Your bowel movements may become loose, or you may be constipated. For most patients, this will get back to normal with time. Make sure you follow a healthy diet, drink plenty of fluids and walk frequently during the first two weeks after your operation.

### **Abdominal Pain**

It is not unusual to suffer gripping pains (colic) during the first week following removal of a portion of your bowel. This pain usually lasts for a few minutes but goes away between spasms. If you have severe pain lasting more than one to two hours or have a fever and feel generally unwell, you should contact us at the telephone contact numbers listed at the end of this packet.

### **Urinary Function**

After bowel surgery, you may get a feeling that your bladder is not emptying fully. This usually resolves with time. However, if this feeling continues or you have any other symptoms or concerns, call your surgeon.

### **Wound Care**

For the first few weeks following surgery, your wound may be slightly red and uncomfortable. You may shower and let the soapy water wash over your incision. **Avoid soaking in the tub for one month following surgery or until the wound is well-healed.** It will take the wound several months to "soften." It is common to have bumpy areas in the wound near the belly button and at the ends of the incision.

If you have staples, these should be removed when you are seen by your surgeon at the follow-up appointment. You may have a glue-like material on your incision. Do not try to remove this material. It will come off over time. It is the surgical glue used in surgery to close your incision. You also have sutures inside of you that will dissolve over time.

### **Post Surgery Diet**

Attention to good nutrition after surgery is important to your recovery. If you had no dietary restrictions prior to the surgery, you most likely will have no special dietary restrictions after the surgery. Consuming enough calories from a healthy diet consisting of enough proteins, vitamins and minerals is necessary to support healing. Some patients find their appetite is decreased after surgery. If this occurs, eating frequent small meals throughout the day may help.

It is not unusual to lose weight after surgery. Weight loss should stabilize by the fourth to fifth week after surgery.

It is normal for certain foods to taste different and certain smells may make you nauseous.

Over time, the amount of food you can comfortably consume at one time will gradually increase. You should try to eat a balanced diet. Some suggested foods to try initially include:

- Foods that are soft, moist, and easy to chew and swallow
- Canned or soft-cooked fruits and vegetables
- Plenty of soft breads, rice, pasta, potatoes and other starchy foods
- High-protein foods and beverages, such as meats, eggs, milk, cottage cheese, or a supplemental nutrition drink like Boost or Ensure
- Drink plenty of fluids—at least eight to 10 cups per day. This includes water, fruit juice, Gatorade, teas/coffee and milk.
- Avoid drinking a lot of caffeine, since this may dehydrate you.
- Avoid fried, greasy and highly seasoned or spicy foods.

- Avoid carbonated beverages in the first couple of weeks.
- Avoid raw fruits and vegetables.

### **Hobbies/Activities**

Walking is encouraged after your surgery.

You should plan to exercise several times a day.

Gradually increase exercise time during the four weeks following your operation until you are back to your normal level of activity.

You may climb stairs.

Don't do any lifting greater than 10 pounds for four weeks.

No contact sports for the first month after your surgery.

Generally, you can return to hobbies and activities soon after your surgery. This will help you recover.

It can take up to two to three months to fully recover. It is not unusual to get tired easily. You may require an afternoon nap for up to six to eight weeks following surgery. Your body is using this energy to heal your wounds. Set small goals for yourself, and try to do a little more each day.

### **Work**

It is normal to return to work four to six weeks following your operation. If your job involves heavy manual work, then you should wait six weeks. However, you should check with your employer regarding rules, which may be relevant to your return to work. If you need a return-to-work form for your employer or disability papers, bring them to your follow-up appointment with your surgeon.

### **Driving**

You may drive when you are no longer taking narcotics and are pain-free enough to react quickly. For most patients, this occurs three to four weeks following surgery.



## Notes







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