

Enhanced Recovery after Liver Surgery

Your surgical team has developed a plan to improve your recovery from surgery. Faster healing and return of wellbeing will help you prepare for your next cancer treatment. Following this plan will help prevent complications after surgery. It will also help to reduce your symptoms and improve your quality of life.

Preparing for Your Surgery

Improve your health and well-being in the weeks prior to your surgery. You may need to quit smoking or drinking alcohol, get more exercise and better sleep or reduce your stress and anxiety. Discuss these concerns honestly with your health care team. Making changes can improve your readiness for any of your cancer treatments.

Bowel Preparation

You may not need to do bowel preparation (the emptying of your bowels before surgery). If a bowel emptying process is best for you, your surgical team will discuss this with you.

Restful Sleep

It is important to be well rested before surgery. Get a good night's sleep several days before surgery. It may be difficult to sleep well in the hospital following surgery because you are closely monitored.

Packing

The following items will improve your comfort and symptom control while in the hospital. Bring these items with you:

- Toothbrush and toothpaste
- Rubber soled slippers
- Robe
- Undergarments or shorts
- Chapstick® or lip moisturizer
- Gum
- Eye mask or cover
- Ear plugs
- Routine medicine in original bottles

Do not bring credit cards, money or jewelry to the hospital. Leave your valuables at home or with a loved one. If you forget and bring valuables, you may contact hospital security to lock up your belongings. MD Anderson is not responsible for lost valuables.

Night and Morning Before Surgery

Eating the Night Before Surgery

Eat a healthy well-balanced lunch the day before surgery. Drink only clear liquids for the rest of the day. Stop eating and drinking at midnight the night before surgery. Clear liquids include:

- Apple Juice
- Water
- Tea or coffee (no cream)
- Vegetable or beef broth
- Gelatin, such as Jell-O®



Carbohydrate Loading (Carbo-Loading)

Your surgeon may recommend a special drink the night before. If you a drink carbo-loaded drink before bed and 2 hours before arriving for surgery, the sugar level in your blood will be more consistent the day of your surgery. If your surgeon recommends this, follow the guidelines in the tables below.

Choose 1 of these and drink the night before surgery

100 Gram Carbo-loaded Drink	Amount	Drink at This Time
Apple or cranberry juice; lemonade	32 ounces	Night before surgery
Grape juice	24 ounces	Night before surgery

Choose 1 of these and drink 2 hours before you arrive for surgery

50 Gram Carbo-loaded Drink	Amount	Drink at This Time
Apple or cranberry juice; lemonade	16 ounces	2 hours before surgery
Grape juice	12 ounces	2 hours before surgery

Preparing Your Skin

Showering well before surgery will help prevent infections after surgery. Please shower the night before and the morning of surgery with Hibiclens® or an anti-bacterial soap, such as Dial®.

Day of Surgery

Routine Medicines

The anesthesia team will tell you which of your routine medicines you may take the morning before surgery. Take medicines with a **small** sip of water. You may brush your teeth and use mouthwash in the morning. Please do not chew gum or mints the morning before surgery.

At your scheduled time, report to the surgery check-in desk. To get there, take Elevator E in the Main Building to Floor 5. You will see the check-in desk when you exit the elevator. A staff member will check you in and give you more information.

Once in your patient room, your nurse will give you a hospital gown to wear. It is the only thing you can wear into the operating room.

Remove for your safety:

- Dentures
- Partial plates
- Jewelry
- Eyeglasses
- Contact lenses
- Prosthesis (eye or leg)
- Bobby pins
- Hair clips
- Wigs

Your nurse will direct you to use the bathroom to empty your bladder. After discussing your allergies and any new symptoms or concerns, your care team will give you medicine to help you relax and to help control pain after surgery.

After Surgery

You will wake up in the recovery room. You may find the following surgical items connected to you. Your care team will remove these as soon as it is safe to do so.

Urinary catheter – This is a tube inserted into your bladder to keep it empty.

Nasal gastric tube – This is in your nose to empty your stomach. It prevents nausea or vomiting.

Surgical drain – These tubes remove fluid from the surgical site. It also monitors your surgical site.

Epidural – This is a small tube inserted into your spine. Pain medicine flows through the tube into your body. The medicine will prevent you from feeling pain during and after the surgery.

Drinking and Eating

Depending on the kind of liver surgery you've had, you may be allowed to have ice chips or even sips of clear liquids the night after your surgery.

Sitting and Getting Out of Bed

After you are more awake, you will be transferred to your hospital room. The night after your surgery, a team member will help you sit in a chair. If your care team determines it is safe for you to walk, you will be encouraged to do so.

How You Can Enhance Your Recovery

Report your symptoms – Better symptom control improves your recovery and improves your enjoyment of life. Report symptoms to your care team so they can be addressed quickly.

Exercise your lungs – Your nurse will teach you how to use your incentive spirometer. This exercise prevents pneumonia and other lung problems after surgery. It is one of the best things you can do help your lungs recover.

Walk - Walk around the nurse's station 4-8 times a day. It will help you recover and reduce stiffness that is sometimes common after surgery. Walking is one of the best things you can do to help you recover. Increase your activity every day.

Eat and Drink as Directed – You will gradually advance your diet. Your care team will recommend what foods to avoid and good food options to choose. You will be thirsty because of the medicine you received during surgery. Keep your lips moist with moisturizer; this will reduce dry mouth. Avoid over drinking or eating because it will not quench your thirst, but rather leave you bloated or nauseated.

Sleep – Sleeping is often difficult in the hospital. Your care team will work with you to prevent unnecessary sleep disturbances. Some patients find it helpful to use ear plugs or wear an eye mask. If you normally require medicines to help you sleep, tell your care team.

Protect Your Circulation – Your nurse will fit you with compression socks or special boots that massage your calves. These promote healthy blood circulation. They should be on you while you are in bed. Tell your nurse if they are not on or not working properly.

You will also be given a small injection into your belly to prevent harmful blood clots. You may need to continue these injections at home after being released from the hospital. Your nurses will teach you this if needed.

Enhanced Recovery Medicines

You will take a few medicines to treat the different types of pain that are common after surgery. Inflammation can cause more tissue damage and increases your pain. Preventing inflammation will decrease pain. During surgery your nerves are irritated and become very sensitive. Nerve pain can be described as shooting, traveling or burning pain. Narcotic pain medicine will also be used to decrease your pain.

Your medical history and allergies will be reviewed by your medical team to make sure these medicines are safe for you. If you have an allergy to nonsteroidal anti-inflammatory drugs (NSAIDs), tell your doctor.

Pain Medicines

Name of Medicine	How it Works	How to Take it
Celecoxib (Celebrex [®])	This reduces inflammation after surgery. Celebrex is similar to ibuprofen, but it is gentler on your stomach and kidneys. This drug is safe for your heart when taken for the short time period required after surgery.	Take 1 capsule twice a day while in the hospital . You may also take this at home for a short time.
Pregabalin (Lyrica [®])	Is commonly used to treat nerve pain. Common side-effects include	Take twice a day in the hospital for the first few days

Name of Medicine	How it Works	How to Take it
	sleepiness, dizziness or memory problems. Report these symptoms to your care team.	after surgery. You will not need to take this at home.
Tramadol (Ultram [®])	This is a gentle narcotic medicine. A common side-effect is constipation. Your care team will give you medicine to prevent constipation.	Take this by mouth on a regular schedule after your surgery. If you need better pain control, tell your nurse. An additional dose may be available for you. The maximum daily dose is 400 mg.
Epidural Pain Control	This is a method of delivering pain medicine close to your spine. It will help block feelings of pain. It will be in place for 3-5 days. Side effects can include itching and dizziness when sitting or standing. Tell your care team if these side effects prevent you from walking.	Your doctor will determine this based on what is best for you.
Acetaminophen (Tylenol [®])	This works to decrease pain by decreasing the inflammation-causing chemicals your body makes. Ultimately, this works to prevent pain. If needed, you will be given this in the hospital and can continue using it at home.	Small doses of Tylenol [®] after liver surgery are safe. Do not take more than 2000 milligram (mg) (2 grams) of Tylenol [®] in any 24 hour period for a few weeks after surgery.
Hydromorphone (Dilaudid [®])	This is a stronger narcotic pain medicine. You can receive it through a vein in your arm for fast acting pain control. Common side effects include nausea, sedation, itching and constipation. For example, this medicine can cause constipation and slow down how often you have a bowel movement.	Because it is strong, it is used when your pain level is high. Due to its side-effects, it is often best to take it only for severe pain. You will not take this medicine at home.

Resources

National Cancer Institute
<http://www.cancer.gov>
800-422-6237

American Cancer Society
<http://www.cancer.org>
800-ACS-2345