



JAMES BUCHANAN BRADY UROLOGICAL INSTITUTE

LAPAROSCOPIC ADRENALECTOMY

OVERVIEW

Laparoscopic Adrenalectomy provides patients with a safe and effective way to remove a diseased or cancerous adrenal gland. There are benign as well as malignant forms of adrenal tumors. Many of the benign adrenal tumors secrete hormones such as cortisol, aldosterone, epinephrine, norepinephrine and can result in high blood pressure, facial flushing, weight gain, headaches, palpitations as well as other symptoms. Adrenal cancer, although rare, can grow to a large size. Most benign and malignant adrenal tumors can be removed laparoscopically. Laparoscopic adrenalectomy is a minimally invasive technique, which provides patients with less discomfort and equivalent results when compared to the larger incision required with traditional open surgery. When compared to conventional open surgery, laparoscopic adrenalectomy has resulted in significantly less post-operative pain, a shorter hospital stay, earlier return to work and daily activities, a more favorable cosmetic result and outcomes identical to that of open surgery.

OUR SURGEONS

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APPOINTMENTS

For appointments please call 410-955-6100

In the event of an emergency and you need to contact someone in the evening hours or on the weekend, please call the paging operator at **410-955-6070** and ask to speak to the urologist on call

For **directions to Johns Hopkins Hospital** please **visit** <http://urology.jhu.edu/patients>

PRIOR TO THE SURGERY

What to expect during you preoperative consultation

During your initial consultation with your surgeon, he will review your medical history as well as any outside reports, records, and outside Xray films (e.g. CT scan, MRI, sonogram). A brief physical examination will also be performed at the time of your visit. If your surgeon determines that you are a candidate for surgery, you will then meet with a Patient Service Surgery Coordinator to arrange for the date of your operation.

NOTE: It is very important that you gather and bring all of your Xray films and reports to your initial consultation with your surgeon.

What to expect prior to the surgery

Since insurance companies will not permit patients to be admitted to the hospital the day before surgery to have tests completed, you must make an appointment to have pre-operative testing done at your family doctor or primary care physician's office within 1 month prior to the date of surgery.

For Johns Hopkins Hospital Patients : These results need to be faxed by your doctor's office to the Pre-operative Evaluation Center at **443-287-9358** two weeks prior to your surgery. Please call The Documentation Center at **410-955-9453** two weeks before your surgery date to confirm that this information was received.

Once your surgical date is secured, you will receive a form along with a letter of explanation to take to your primary care physician or family doctor in order to have the following pre-operative testing done prior to your surgery.

- Physical exam
- EKG (electrocardiogram)
- CBC (complete blood count)
- PT / PTT (blood coagulation profile)
- Comprehensive Metabolic Panel (blood chemistry profile)
- Urinalysis

Preparation for surgery

Medications to Avoid Prior to Surgery

Aspirin, Motrin, Ibuprofen, Advil, Alka Seltzer, Vitamin E, Ticlid, Coumadin, Lovenox, Celebrex, Voltaren, Vioxx, Plavix and some other arthritis medications can cause bleeding and should be avoided 1 week prior to the date of surgery (Please contact your surgeon's office if you are unsure about which medications to stop prior to surgery. Do not stop any medication without contacting the prescribing doctor to get their approval).

Bowel Preparation and Clear Liquid Diet

Do not eat or drink anything after midnight the night before the surgery and drink one bottle of Magnesium Citrate (can be purchased at your local pharmacy) the evening before your surgery.

Drink only clear fluids for a 24-hour period prior to the date of your surgery. Clear liquids are liquids that you are able to see through. Please follow the diet below.

Clear Liquid Diet

Remember not to eat or drink anything after midnight the evening before your surgery. Clear liquids are liquids that you are able to see through. Please follow the diet below.

- Water

- Clear Broths (no cream soups, meat, noodles etc.)
 - Chicken broth
 - Beef broth

- Juices (no orange juice or tomato juice)
 - Apple juice or apple cider
 - Grape juice
 - Cranberry juice
 - Tang
 - Hawaiian punch
 - Lemonade
 - Kool Aid
 - Gatorade

- Tea (you may add sweetener, but no cream or milk)

- Coffee (you may add sweetener, but no cream or milk)

- Clear Jello (without fruit)

- Popsicles (without fruit or cream)

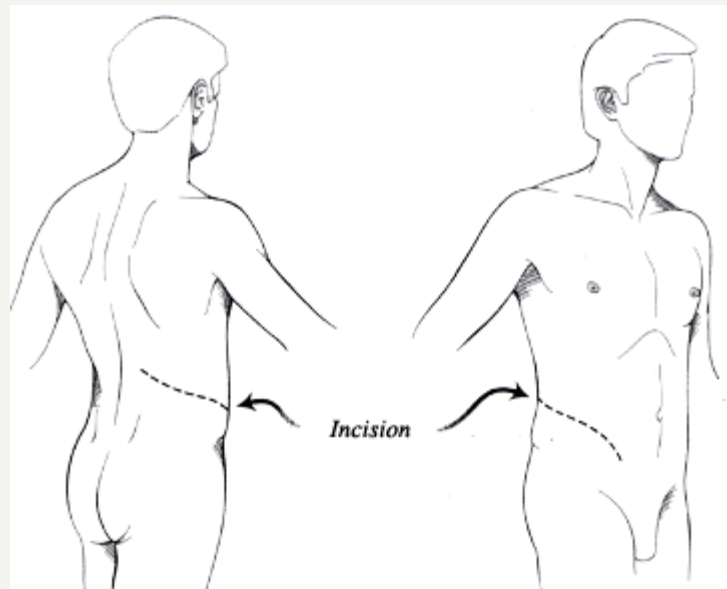
- Italian ices or snowball (no marshmallow)

THE SURGERY

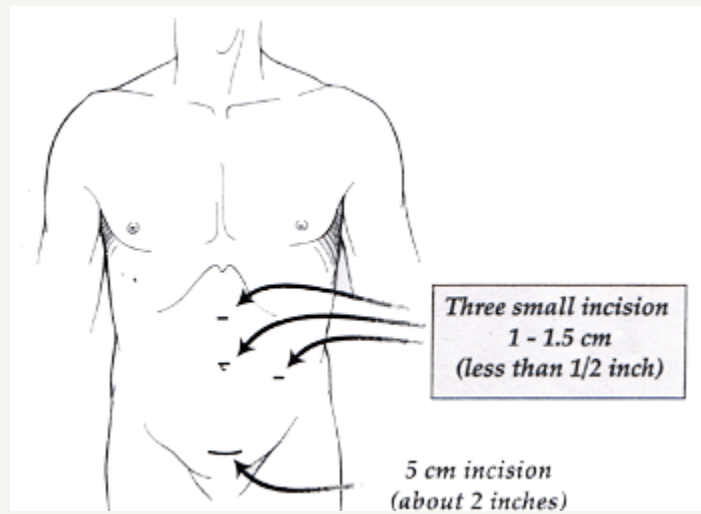
The Operation

Laparoscopic adrenalectomy is performed under a general anesthetic. The typical length of the operation is 3-4 hours. The surgery is performed through 3 small (1cm) incisions made in the abdomen. A telescope and small instruments are inserted into the abdomen through these keyhole incisions, which allow the surgeon to completely free and dissect the diseased adrenal gland without having to place his hands into the abdomen. The adrenal gland is then placed within a plastic sack and removed intact through an extension of one of the existing incision sites.

Open Procedure



Laparoscopic Procedure



Video Clips

Warning: these video clips include footage from an actual surgery which some viewers may find difficult to watch.

Potential Risks and Complications

Although this procedure has proven to be very safe, as in any surgical procedure there are risks and potential complications. The safety and complication rates are similar when compared to the open surgery. Potential risks include:

- **Bleeding:** Blood loss during this procedure is typically minor (less than 100 cc) and a blood transfusion is needed in less than 5% of patients. If you are interested in autologous blood transfusion (donating your own blood) prior to your surgery, you must make your surgeon aware. When the packet of information is mailed or given to you regarding your surgery, you will receive an authorization form for you to take to the Red Cross in your area.
- **Infection:** All patients are treated with intravenous antibiotics, prior to starting surgery to decrease the chance of infection from occurring after surgery. If you develop any signs or symptoms of infection after the surgery (fever, drainage from your incisions, urinary frequency/discomfort, pain or anything that you may be concerned about) please contact us at once.
- **Tissue / Organ Injury:** Although uncommon, possible injury to surrounding tissue and organs including bowel, vascular structures, spleen, liver, pancreas, kidney and gallbladder could require further surgery. Injury could occur to nerves or muscles related to positioning.
- **Hernia:** Hernias at incision sites rarely occur since all keyhole incisions are closed carefully at the completion of your surgery.
- **Conversion to Open Surgery:** The surgical procedure may require conversion to the standard open operation if difficulty is encountered during the laparoscopic procedure. This could result in a larger standard open incision and possibly a longer recuperation period.

WHAT TO EXPECT AFTER SURGERY

During your hospitalization

Immediately after the surgery you will be taken to the recovery room, then transferred to your hospital room once you are fully awake and your vital signs are stable.

- **Postoperative Pain:** Pain medication can be controlled and delivered by the patient via an intravenous catheter or by injection (pain shot) administered by the nursing staff. You may experience some minor transient shoulder pain (1-2 days)

related to the carbon dioxide gas used to inflate your abdomen during the laparoscopic surgery.

- **Nausea:** You may experience some nausea related to the anesthesia. Medication is available to treat persistent nausea.
- **Urinary Catheter:** You can expect to have a urinary catheter draining your bladder (which is placed in the operating room while the patient is asleep) for approximately one day after the surgery. It is not uncommon to have blood-tinged urine for a few days after your surgery.
- **Diet:** You can expect to have an intravenous catheter (IV) in for 1-2 days. (An IV is a small tube placed into your vein so that you can receive necessary fluids and stay well hydrated; in addition it provides a way to receive medication.) Most patients are able to tolerate ice chips and small sips of liquids the day of the surgery and regular food the next day. Once on a regular diet, pain medication will be taken by mouth instead of by IV or shot.
- **Fatigue:** Fatigue is common and should start to subside in a few weeks following surgery.
- **Incentive Spirometry:** You will be expected to do some very simple breathing exercises to help prevent respiratory infections through using an incentive spirometry device (these exercises will be explained to you by the nursing staff during your hospital stay). Coughing and deep breathing is an important part of your recuperation and helps prevent pneumonia and other pulmonary complications.
- **Ambulation:** On the day of surgery it is very important to get out of bed and begin walking with the supervision of your nurse or family member to help prevent blood clots from forming in your legs. You can also expect to have SCD's (sequential compression devices) along with tight white stockings to prevent blood clots from forming in your legs.
- **Hospital Stay:** The length of hospital stay for most patients is approximately 1-2 days.
- **Constipation/Gas Cramps:** You may experience sluggish bowels for several days following surgery as a result of the anesthesia. Suppositories and stool softeners are usually given to help with this problem. Taking a teaspoon of mineral oil daily at home will also help to prevent constipation. Narcotic pain medication can also cause constipation and therefore patients are encouraged to discontinue any narcotic pain medication as soon after surgery as tolerated.