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Centre of Excellence  
For Bariatric & Metabolic Surgery

Member of:



**مستشفى الزهراء دبي**  
**AL ZAHRA HOSPITAL DUBAI**  
Care in Style رعاية راقية

## CENTER FOR MINIMALLY INVASIVE SURGERY



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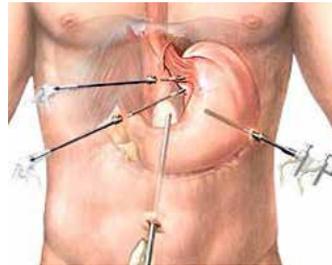


Al Zahra Hospital Center of Minimally Invasive Surgery provides comprehensive diagnosis and treatment for patients suffering from diseases of the gastrointestinal tract and thoracic cavity. An experienced team of physicians and medical staff works closely with every patient to provide state-of-the-art treatment and clinical care for both chronic and acute conditions. Esophageal, pancreatic, gallbladder, hernia, lung, thoracic and obesity problems are among the division's specialties.

## 1. Esophageal Disease

### Conditions include:

Hiatus Hernia  
Cancer of the esophagus  
Esophageal strictures and achalasia  
Acid reflux esophagitis (Heartburn)



One of the most common complaints of patients with esophageal reflux is heartburn, the sensation of pain or burning below the breastbone. This complaint frequently follows meals, though some patients experience these symptoms between meals, at bedtime or upon arising. Patients with more severe symptoms complain of food or fluid coming up into the mouth, being awakened at night coughing or wheezing due to aspirated fluid or difficulty swallowing as a result of stomach acid causing an ulcer or narrowing of the esophagus.

The cause of these symptoms is a decrease in the strength of the lower esophageal sphincter (similar to a valve) which is then unable to prevent food or fluid from coming back up the esophagus after it enters the stomach. Patients with complaints of reflux are often treated with medication which lowers the acidity of the stomach contents coming up into the esophagus. Occasionally another medication is added which causes the stomach to empty more rapidly, reducing the amount of material entering the esophagus. Despite treatment with medication, many patients continue to experience symptoms and are referred for evaluation for surgery.

The surgery most commonly done for patients with reflux disease is called a Nissen fundoplication. This surgery involves bringing a portion of the upper stomach up around the lower esophagus and suturing it in place, creating an "artificial valve." This procedure is usually done laparoscopically by inserting a small camera through the stomach wall through a one half inch incision; four other one-quarter inch incisions are made for the instruments. Most patients are able to return home one to two days after the surgery and resume most activities, including work, in two to three weeks.

Possible risks and complications include, but are not limited to, needing to convert the operation to an "open" procedure, meaning that a several inch incision is made over the stomach area to complete the procedure, perforating the esophagus, development of a stricture (narrowing) of the esophagus, wound infection and minimal symptom relief. These complications are rare with 80 to 90% of patients experiencing symptom relief and the ability to discontinue medications.

Evaluation prior to surgery usually includes an upper endoscopy (looking down your esophagus with a camera), esophageal manometry (measuring the pressure in your esophagus) and a gastric emptying scan (measuring how long it takes your stomach to empty). We may also need a 24-hour pH probe to measure how often acid comes up into your esophagus if your upper endoscopy does not show evidence of inflammation. Having these procedure results available at the time of consultation for surgery will expedite your care. Necessary studies can be performed at Al Zahra Hospital Dubai, if the facilities in your area are not equipped to complete them.

Diagnostic and therapeutic services cover the full spectrum of gastrointestinal diseases, including minimally invasive and robotic-assisted procedures. Being part of an academic health system enables the surgery team to take a multidisciplinary approach in each case, getting expert support from colleagues in other departments and providing patients with the skilled care they need. The division is dedicated to doing everything possible to help patients achieve and sustain the highest quality of life.

## 2. Bariatric Surgery

Bariatric surgery is the best current treatment for morbid obesity and encompasses surgical procedures that produce significant and sustained weight loss. Our surgeons offer a comprehensive solution for surgical weight loss that is focused on long-term success.

### Type of bariatric surgery

There are three types of surgical procedures for obesity performed at our Center. Roux-en-Y gastric bypass, vertical sleeve gastrectomy, and adjustable gastric banding. All three bariatric surgeries are laparoscopic, which means five one-half inch incisions are made on the abdomen. The surgeon then performs the operation using special laparoscopic tools and by observation through a small camera.

### 1- Roux-en-Y Gastric Bypass

Most commonly performed bariatric surgery in the United States

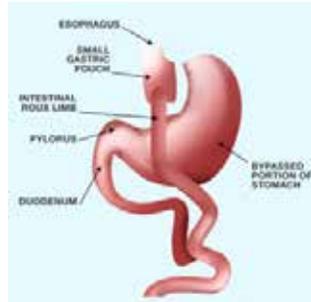
Restrictive procedure that produces early satiety, limits food intake, and thus promotes weight loss

Possible intolerance of high sugar, high fat foods – “dumping syndrome”

Lifelong vitamin and mineral supplements needed

Average weight loss is %80-60 of excess body weight

Long term (10-7 years) weight loss is %70-25 of excess body weight



### 2- Vertical Sleeve Gastrectomy

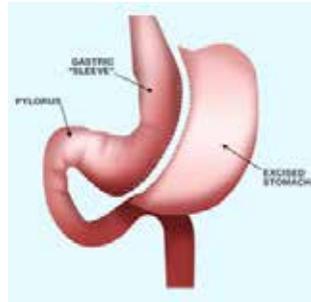
Restrictive procedure that produces early satiety, limits food intake, and thus promotes weight loss

Approximately %85 of the stomach is removed

Lifelong vitamin and mineral supplements needed

Average weight loss is %70-40 of excess body weight

Long term (5 year) weight loss is %60-42 of excess body weight



### 3- Laparoscopic Adjustable Band

Silicone band with an inflatable inner collar is placed around the upper stomach

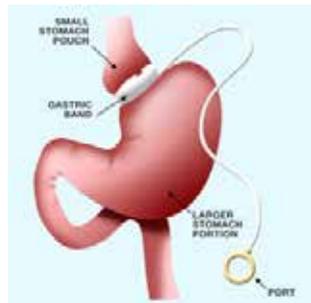
Small upper stomach pouch is created which helps limit food intake

Gastric lap band is adjustable (by your surgeon)

No absorption issues with micronutrients

Average weight loss is %60-30 of excess body weight

Long term (10-7 years) weight loss is %60-14 of excess body weight



### Possible Nutrition Challenges with Bariatric Surgery:

Dehydration, due to not drinking enough fluids

Nausea and vomiting, due to eating/drinking too fast, too much, or not chewing well

Constipation, due to limited fluid and fiber intake

Weight regain

### 3. Video-assisted thoracic (Lung) surgery

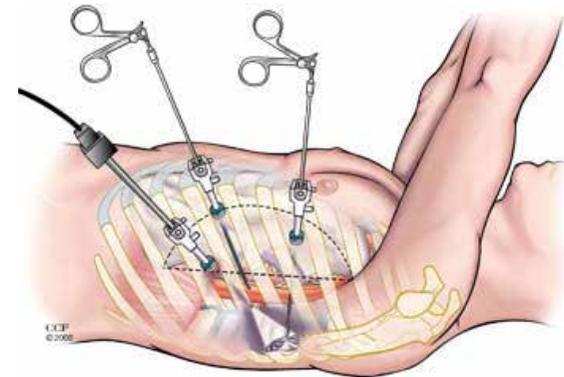
Video-assisted thoracic surgery (VATS) is a technology that has revolutionized general thoracic surgery, and has brought it to the minimally invasive realm. Our Center is a leader in VATS and was the first center to extensively use VATS to perform pulmonary resections for early stage lung cancer.

VATS utilizes 4-3 one to two inch incisions to gain access to the inside of the chest cavity. With VATS techniques, there is no rib spreading, "cracking" or dividing. The lung or the thoracic organ in question is visualized using a camera (thoroscope) and displayed on a high definition screen. Using special minimally invasive instruments and staplers, abnormal tissue can be removed.

VATS can be used to biopsy suspicious lymph nodes or nodules on the lung or pleura, and clean out the space between the lung and chest wall (the pleural space) of fluid or infectious tissue. VATS is used to perform pulmonary resections or lobectomy for lung cancer, remove mediastinal masses, perform sympathectomy for hyperhidrosis, resect abnormal lung tissue for lung volume reduction surgery and many other thoracic procedures.

The advantages of VATS include shorter hospital stays, decreased post-operative pain and reduced usage of narcotics by patients, smaller post-operative scars, and earlier return to work compared to traditional "open" procedures.

To provide patients with a full range of treatment options, our surgeons are highly trained and experienced in minimally invasive surgical techniques. These can be an excellent alternative to traditional "open" surgery techniques and their larger incisions.



#### 4. Minimally Invasive Surgery for GI and solid tumors

Our Team is highly specialized in performing minimally invasive surgery for adrenal tumors, pancreatic tumors and tumors of the Colon. We also regularly perform surgery for Gallbladder disease, hernias and appendix surgery utilizing standard minimally invasive surgery.

Technologically advanced minimally invasive surgery, which can include robotic-assisted techniques, requires incisions just millimeters in length. The small incisions create a passageway for special surgical instruments and a fiber-optic instrument called a laparoscope, which is inserted into the abdominal wall. The device transmits images from within the body to a video monitor, allowing the surgeon to see the operative area on the screen. Advantages to the minimally invasive approach can include quicker recovery times, shorter hospital stays and reduced blood loss during surgery.

Whether it is minimally invasive or traditional surgery, our team always works in close consultation with patients to determine the best possible treatment options in each case.

