Dr Surendra Pal Singh – Surgeries and Procedures Names

Ano-rectal Disease's

Anorectal diseases, also known as anorectal disorders, affect the parts of your body that involve the anus and rectum. Anal disorders impact the anus, the opening through which stool passes. Rectal disorders affect the rectum, which holds the stool before it passes through the anus.

Some anorectal disorders include hemorrhoids, anorectal abscesses, and fecal incontinence. Symptoms may include bleeding, pain, itching, swelling, or drainage.

There are various anorectal diseases, from minor conditions to more serious disorders.

- **Hemorrhoids** are normal blood vessels located in the anorectal region. They develop internally (inside the anal canal) or externally (around the anus). When they become swollen, they can result in bothersome symptoms, including pain, bleeding, protrusion, or itching.

- **Anal tears and fissures** are cracks in the superficial lining of the anus. Symptoms can include knife-like pain and bleeding, especially with bowel movements.

- **Anorectal abscesses** can occur if an anal gland becomes blocked and infected. An abscess is a collection of trapped pus. Some symptoms include pain, swelling, redness, warmth, fevers, chills, or generalized fatigue.

- **Anal fistulas** are tracts that connect a wound in the anal canal to an opening in the skin around the anal area. Anal fistulas are suspected when there is incomplete healing after abscess drainage or recurrent anal abscesses.

- **Rectal prolapse** occurs when the rectum protrudes out of the anus. Symptoms include fecal incontinence, constipation, or bleeding.

- **Fecal incontinence** is a condition in which you cannot control bowel movements, which can lead to stool leakage.

- **Anal cancer** develops from a growth of mutated of cells in and/or around the anus. Anal cancer may be asymptomatic or can involve symptoms of anal pain, bleeding, itching, or lumps near the anus.

Piles

Piles surgery (also referred to as Haemorrhoidectomy) serves as a reliable and safe piles treatment option. The hesitation towards seeking medical treatment for haemorrhoids develops from lack of knowledge and unawareness. Individuals suffering from painful, bleeding haemorrhoids and no hopeful solution can consider surgical treatment.

Continue reading to understand haemorrhoidectomy meaning, evaluating the types of piles surgery, who actually need haemorrhoidectomy, risks, and symptoms.

What is Haemorrhoidectomy?

Haemorrhoids, also known as piles, are a common health concern in India. They result from the inflammation of haemorrhoidal tissues in the anal-rectum region. There are different types of piles: external, internal, prolapsed, and thrombosed.

Piles can recur or worsen in severity, which is classified into four grades. Timely treatment is crucial to prevent the problem from progressing.

Piles treatment through Haemorrhoidectomy, is a surgical procedure for treating recurring internal or external haemorrhoids. Surgical procedure is appropriate for patients with severe conditions (Grade III or IV haemorrhoids).

The surgical treatment includes the administration of local or general anaesthesia. Surgery for piles treatment uses various approaches and equipment. Determining the appropriate surgery method depends on the severity of haemorrhoids.

Common techniques include-

1. **Conventional Haemorrhoidectomy**
2. **Stapled Haemorrhoidectomy**
3. **Haemorrhoidal Artery Ligation and Rectal Anal Repair (HAL-RAR)**
4. **Laser Piles treatment.**

Anatomy and Physiology of Anal Region

The anorectal region plays a crucial role in various bodily functions, including waste elimination and maintaining continence. The region comprises the anus, anal canal, and rectum, each with distinct structures and roles. Let's take a closer look at the anatomy of this region.

1. **Rectum:** The final portion of the large intestine temporarily stores faeces (stool) before elimination. It connects to the sigmoid colon and extends to the anal canal.
2. **Anal Canal:** Located at the end of the rectum, the anal canal is a short passage ending at the anus. It is around 3-4 cm long, surrounded by muscles that control defecation and maintain continence.
3. **Haemorrhoidal Tissue:** Clusters of blood vessels, also known as haemorrhoidal cushions, are present in the anal canal. They contribute to maintaining faecal continence and aiding in controlling gas release.
4. **Anus:** The anus is the external opening through which waste material exits the body. It consists of two muscular rings - the internal anal sphincter (involuntary) and the external anal sphincter (voluntary). These muscles maintain anal tone and regulate bowel movements.
5. **Perianal Skin:** It is the skin surrounding the anal area. It is susceptible and tends to experience itching, rashes, and infections.

Who needs Haemorrhoidectomy?

Haemorrhoidectomy is recommended for piles patients in specific cases when non-surgical treatments prove ineffective. A doctor may also recommend this procedure if the patient shows the following piles symptoms:

1. **Large Piles:** Patient has grade 3 or 4 internal, prolapsed or external haemorrhoids.
2. **Severe Pain:** The patient experiences severe pain and discomfort due to haemorrhoids.
3. **Chronic Bleeding:** If haemorrhoids lead to chronic bleeding that affects quality of life and doesn't resolve with non-surgical measures, haemorrhoidectomy could be considered.
4. **Recurrent Haemorrhoids:** Individuals experiencing recurrent episodes of haemorrhoids despite previous treatments might benefit from surgical removal to address the underlying issue.
5. **Thrombosed Haemorrhoids:** Haemorrhoids that develop blood clots (thrombosed haemorrhoids) can cause intense pain. If these clots don't resolve on their own, surgical intervention may be required.

Consultation with a general surgeon is essential to determine the most suitable type of piles treatment for a patient's health needs.

How is Haemorrhoidectomy Performed?

One of the most frequent questions a patient and their family members pose is how piles operation is done. It is typically done on an outpatient basis and follows a standard procedure. The surgery can be done using various methods like-

Conventional Haemorrhoidectomy

Conventional (open) haemorrhoidectomy is the most common surgical treatment for piles. The procedure of conventional piles surgery is highly suitable as external and internal piles treatment. The basic procedure of an open haemorrhoids surgery involves:

1. The patient is administered with an appropriate dosage of anaesthesia.
2. The surgeon excises the haemorrhoidal tissues through perianal
3. The removal of haemorrhoids is done with a trocar.

Stapled Haemorrhoidectomy

A stapled haemorrhoidectomy is a recommended treatment for recurring, painful haemorrhoids. The procedure involves inserting a thin tube and using a unique stapler to remove haemorrhoids. It is necessary for those with consistent risk factors.

1. The surgeon will reposition the haemorrhoids and cut off their blood supply using a stapler-like instrument. Without a blood supply, the haemorrhoid will disintegrate and perish.
2. It can treat haemorrhoids that have prolapsed or slipped out of the anus.
3. Because the haemorrhoid is moved to a location with fewer nerve endings, it hurts less than a standard surgical treatment.
4. Patients will heal faster with reduced bleeding and itching, with an overall improvement in quality of life.

Haemorrhoidal Artery Ligation and Recto-Anal Repair (HAL-RAR)

HAL-RAR surgical procedure uses an ultrasound-guided instrument to locate and ligate the arteries supplying the haemorrhoids. This causes the haemorrhoids to shrink and fall off.

If conventional Haemorrhoidectomy treatments haven't worked well enough for piles symptoms, HAL-RAR may be an ideal option.

1. A small ultrasound sensor is introduced into the anus to locate the arteries providing blood to haemorrhoids.
2. Healthcare professionals can identify and block the blood flow to the haemorrhoids by tying off the arteries to inhibit blood supply.
3. Most of the haemorrhoids are reduced immediately and are no longer evident after a few weeks.

Laser Haemorrhoidectomy

Laser haemorrhoidectomy is a minimally invasive piles treatment surgery. It offers minimal postoperative pain and almost no risk of prolapse and incontinence. Patients can return to work within two or three days unless they have an underlying health condition that may affect their recovery.

1. It is a procedure in which the surgeon burns the enlarged haemorrhoids to shrink them.
2. Alternatively, the surgeon could utilise a small laser beam to focus exclusively on the haemorrhoid and spare the surrounding tissues.
3. It is painless, causes minor bleeding, prevents recurrence and a speedy recovery.

Consult our general surgeon, Dr S.P. Singh Singh in Krishna Medical Centre to determine the best piles treatment depending on patient-centric needs.

Before and On The Day of Haemorrhoidectomy

Before The Haemorrhoidectomy Surgery

The information regarding the procedure followed in a healthcare facility before haemorrhoidectomy surgery is essential. Being aware about the criteria helps the patients to prepare accordingly specifically mentally.

Standard steps involved before conducting haemorrhoidectomy are-

1. **Medical Assessment:** The doctor conducts a physical examination of the doctor to understand the severity of the case. Medical assessment before surgery also helps in determining appropriate surgical procedure for the patient.
2. **Pre-operative Guidelines:** The patient is informed regarding the surgical treatment, risks, complications, benefits, and preparation methods.
3. **Evaluating Risks:** Based on the patient's unique health condition the doctor evaluates and informs regarding the potential risks of the procedure. It also involves assessing the patient's allergies and existing health concerns.
4. **Anaesthesia Selection:** Another important step before commencing haemorrhoidectomy is the selection of appropriate anaesthesia depending on the patient's needs.
5. **Fasting:** The patients are advised to maintain fasting 6-8 hours before the surgery. Fasting prevents the occurrence of anaesthesia-associated complications.

On The Day of Haemorrhoidectomy Surgery

Patient's awareness concerning the steps involved on the day of the surgery is also important. It helps in overcoming the chances of misguiding procedures, confusion, and anxiety among the patients. Common procedure followed on the day of surgery include:

1. **Hygiene:** Proper hygiene is mandated before the surgery especially in the surgical site. This allows to overcome the chance of infection and contamination during surgery.
2. **Physiological Evaluation:** A healthcare practitioner conducts a thorough physical examination before surgery to address accurate surgery preparation and concerns.
3. **Anaesthesia administration:** An anaesthetist administers the prescribed dosage and type of anaesthesia to the patients.

After Haemorrhoidectomy

Patients often get concerned about what happens after piles operation. After the surgical piles treatment, patients undergo a recovery period.

During this recovery time patients effectively adjust to their new health situation and overcome post-operative risks. The estimated recovery time can last 2-6 weeks, depending on the patient's treatment.

Standard precautions and instructions provided for a quick recovery after piles surgery include:

1. **Anaesthetic Side-effects:** Some patients have side-effects towards the general or local anaesthesia administered during the surgical treatment. Consultation with the doctor is necessary if the patient experiences any discomfort.
2. **Pain Management:** After a haemorrhoidectomy, patients may experience mild pain. Doctors prescribe pain medications to manage the recovery pain. Standard recovery pain after the piles operation lasts for four weeks.
3. **Diet:** During the recovery period after haemorrhoidectomy, patients are asked to increase fibre intake or take fibre supplements. Drink six to eight glasses of water every day. This prevents constipation and strenuous bowel movements.
4. **Lifestyle:** Patients should avoid heavy lifting and straining the pelvic region after surgery. Post-surgery care includes sitz baths, warm water baths, and gentle anal cleaning.
5. **Quit Smoking:** For a rapid recovery after piles surgery, most healthcare practitioners advise patients to quit smoking.
6. **Follow-up:** Attending the prescribed follow-up after the piles surgery is essential. During follow-up, doctors assess the recovery rate.

Benefits of Haemorrhoidectomy

Haemorrhoidectomy procedure offers patients with recurring and extensive piles issues to gain long-lasting and rapid cure. A haemorrhoids surgery is not just responsible for curing piles but allows patients to improve their overall quality of life.

Some of the expected benefits of haemorrhoidectomy surgery are discussed below:

1. **Long-term Relief:** Haemorrhoidectomy removes the source of haemorrhoids, providing long-term relief.
2. **Reduced Overall Discomfort:** The procedure reduces pain, itching, and discomfort associated with haemorrhoids.
3. **Better Physical Activity:** Patients can resume their normal activities without any restrictions after recovery.
4. **Reduced Bleeding:** It lowers the risk of bleeding and infection.
5. **Improvised Quality of Life:** Haemorrhoidectomy surgery subsequently promotes a better quality of life.

Risk and Complications of Haemorrhoidectomy

While this procedure is generally safe and effective, like any surgery, there are certain factors to be aware of. Being informed about post-operative risks allows patients to avoid complications, identify any potential health threats, and seek appropriate medical assistance on time.

The risks and complications of haemorrhoidectomy surgery include the following:

1. **Bleeding:** There may be some bleeding and fluid discharge from the anus, but it is usually minimal within 4-6 weeks.
2. **Pain:** Another prominent complication observed after haemorrhoidectomy surgery is pain in the pelvic region. The pain after Haemorrhoidectomy also subsides in a few weeks, allowing complete recovery.
3. **Urinary Retention:** Some patients may experience difficulty in emptying their bladder after the surgery, but this is usually temporary.
4. **Infection:** Although rare, there is a small risk of developing an infection at the surgical site. Chills, fever, and severe pain may indicate a postoperative infection and should be reported to a healthcare professional immediately.
5. **Anal Stenosis:** In rare cases, scarring from the surgery can cause narrowing of the anal canal, leading to difficulty in passing stools.
6. **Incontinence:** Although rare, there is a possibility of temporary or permanent loss of bowel control after the surgery.

If a patient observes any of the above-mentioned risks and complications it is best advised to seek medical assistance from the doctor.

Although, it must be kept in mind that common risks like pain, bleeding, and swelling can subside on their own within 4-6 weeks. If the issues pertain even after the recovery time or are extensively high, consult the doctor.

Risk of Delayed Haemorrhoidectomy

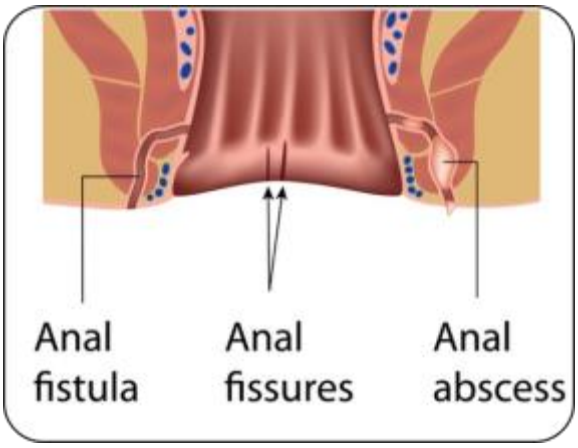
Haemorrhoids patients are reported to be highly reluctant towards seeking medical treatment for piles owing to social stigma. Although, doctors highlight prominent risk associated with delaying haemorrhoidectomy surgery. It is vital to address severe piles promptly to avoid worsening symptoms and potential complications.

It is essential to understand the potential consequences of postponing the procedure.

1. **Worsening Symptoms of Piles:** If a patient delays getting a surgical treatment, it can cause increased pain and discomfort, prolonged recovery time, and potential complications such as infection or anal stenosis.
2. **Thrombosis:** In some cases, untreated piles can lead to complications such as thrombosis, which occurs when a blood clot forms within a haemorrhoid. This can cause severe pain and require more invasive treatment.
3. **Strangulated Internal Piles:** Another risk is strangulated internal haemorrhoids, where blood flow to the vein can be cut off. This can quickly form an infection if surgery is delayed.
4. **Poor Quality of Life:** The progression of piles and worsening symptoms due to delayed surgical treatment can deteriorate the quality of life for the patient.

Fistula

There are certain surgical conditions that are very common, well researched and a piece of cake for most surgeons. On the other hand, there are certain conditions like fistula, that are not life-threatening, but rather challenging to treat by even the most experienced medical practitioners. An important reason for this is that for a long time anal fistulas remained sidelined by the medical community. Obviously, operating on the gall-bladder or appendix was more important as ignorance here could lead to serious complications. To top this, a lot of shame is attached to anorectal conditions. People are hesitant to speak up about conditions like fistula, piles, prolapse etc. This led to a growing tribe of quacks who claimed to cure with “simple herbs”.



To understand the role of an accurate intervention, let's get to the basics of this condition. The problem with fistula, especially a long standing one is that a narrow tunnel is formed between the rectum/anal canal and a neighboring part of the body. As with any disease, the body tries to fight it, repair it. However, if these earlier attempts by the body fail, the fistula becomes chronic and it is almost impossible that it would heal on its own. At such a stage, no amount of medicines can cure it, simply because it needs a physical repair. Thus, **a chronic fistula will always need a surgery.** Going to quacks or experimenting with herbs will only lead to waste of precious time and money,and possible complications.

Dr Surendra Pal Singh is amongst the top few General Surgeons in the country who deals with anorectal conditions like fistula, piles, fissure, appendicitis, hernias, gall-bladder stones etc. etc. In his career spanning over a decade, Dr S.P. Singh has treated hundreds of fistulas surgery including **complicated and recurrent ones.**

Rectal Prolapse

Rectum is last part of the intestine where feces or stools is stored before being passed. When the rectum lining becomes weak or detached from the body, rectum starts protruding from the anus, a condition called as rectal prolapse.

Types of rectal prolapse

There are two types of rectal prolapse:

- 1. Partial thickness prolapse (also called internal intussusceptions).
- 2. Full-thickness prolapse (also called external prolapse).

Partial thickness rectal prolapse is a condition when only the innermost lining of rectum or mucosa protrudes only. Since the prolapse is not complete or full thickness, the amount of prolapse is quite small.

Majority of patients with partial prolapse present with constipation or feeling of incomplete evacuation.

Full thickness rectal prolapse is when the entire wall of rectum becomes so loose that it completely falls out of anus while passing stools.

Partial thickness rectal prolapse is usually less than 2 cm and produces radial folds.

Full thickness rectal prolapse is 3-5 cm and produces concentric rings.

Causes of Rectal Prolapse

- Advancing age
- Multiple pregnancies leading to repeated trauma of pelvic floor.
- Chronic or long-term constipation
- Chronic cough
- Neurological conditions like multiple sclerosis, spinal cord tumors

SYMPTOMS OF RECTAL PROLAPSE

- The most common symptom is lump coming out of anus. In the initial stages, it happens only while passing stools but as the time passes by, it may happen while coughing, sitting or walking.
- In the early course of disease, the lump can be pushed back into the anus after defecation but latter the prolapse can be permanent.
- Mucous discharge from the anus or occasional bleeding.
- In case of partial prolapse, there is feeling of incomplete emptying after bowel motion.
- About 50% of patients complain of constipation.

Although a few numbers of patients, especially with partial rectal prolapse can be managed conservatively and certain dietary and life style modifications, majority of patients will require some form of surgical intervention for permanent cure of this disease.

Surgical management of rectal prolapse can have two approaches:

- **Abdominal approach** - Through the belly.
- **Perineal approach** - Through the bottom or anus.

Although there are several procedures, but the type of surgery and approach depends on patients age, existing health problems, extent of the prolapse and his general health.

The abdominal approach has always better outcome. If patient is fit and healthy, it must undergo laparoscopic surgery as the results are far satisfying and long lasting

The various procedures conducted by our surgical team include:

STARR Procedure (Stapled Trans Anal Rectal Resection):

The procedure is performed through the anal canal (trans anal approach).

It is an innovative, technically safe and minimally invasive procedure useful in carefully selected and well-informed patients having partial or internal prolapse.

The procedure resects the internal rectal prolapse by means of staplers inserted into the anal canal.

No surgical incision, minimal pain, same day discharge and rapid recovery make this procedure an attractive option in appropriate patients.

Other Perineal Procedures:

- Mucosal Sleeve Resection **(Delorme Procedure)** & Perineal Proctosigmoidectomy **(Altemeier Procedure)** are the other two perineal or trans anal procedures performed by our team.
- Only done in selected group of patients especially elder patients not fit for transabdominal or laparoscopic surgery due to associated medical illness.
- Each procedure has got its own indication, benefits and proper selection of patients is a must for achieving best outcomes.

Laparoscopic or Minimally Invasive Rectopexy With Possible Bowel Resection

The procedure of choice for complete rectal prolapse in patients fit to undergo general anaesthesia
It is associated with best functional outcomes and minimal chance of recurrence.
3 tiny incisions of 0.5 cm are created on the belly and the rectum is pulled upwards and secured to the sacrum (back wall of the pelvis) either with the help of sutures directly or using a Mesh.
The basic purpose is to hold the rectum in its normal anatomical position until such a time as scarring occurs.
When patients complain of chronic or long-term constipation, removal of a part of colon may be necessary to improve bowel function (recto sigmoidectomy).

ADVANTAGES OF LAPAROSCOPIC SURGERY

- **Long lasting results**
- **Almost zero percent chance of recurrence**
- **Rapid recovery**
- **Early and easy mobility**
- **Less tissue trauma and less post-operative pain**
- **Less Dependence on pain reliever tablets**
- **Low risk of infection**
- **Almost no risk of hernia**

Psoas Abscess (PA)

What is Psoas Abscess?

Psoas abscess is commonly known as iliopsoas abscess. A localised collection of pus in the iliopsoas muscle compartment characterises this uncommon disease. Primary psoas abscess, which is brought on by the hematogenous or lymphatic dissemination of a pathogen, and secondary psoas abscess are the two types.

Infections of the gastrointestinal or musculoskeletal systems are the most frequent reasons for secondary psoas abscesses. S. aureus and E. coli are the most commonly isolated bacteria in infections, which are frequently monomicrobial. The majority of polymicrobial lesions have gastrointestinal origins. The most preferred diagnosis method is computed tomography. Following the acquisition of blood cultures and, if practical, abscess cultures, empiric antibiotic treatment should be started right away. In a nonseptic patient, a small (3.5 centimetre) abscess can be treated solely with antibiotics.

Larger or multiloculated abscesses should be surgically removed or drained under image supervision. Any type of psoas abscess should have the underlying reason examined and treated.

What is Psoas Muscle?

If you have queries about psoas Abscess, then it is essential to know about Psoas Muscle.

They connect to your femur after passing through your pelvic and your fifth lumbar vertebra, which is located between your 12th and fifth thoracic vertebrae. They are the sole muscles that attach your spine to your thighs, in actuality.

Your psoas muscles enable you to squat and bend your legs and hips towards your chest, such as when climbing steps. When you sprint or walk, they also assist in the propulsion of your leg forward.

When you stoop to gather something up off the floor, your psoas muscles flex your trunk forward. Additionally, they support your vertebrae and trunk while you're sitting or moving around.

Various Causes of Psoas Abscess

The psoas abscess can be encountered by you in the following ways:

A primary psoas abscess is brought on by the hematogenous or lymphatic dissemination of a pathogen from a far-off source.

- most frequently brought on by a particular pathogen
- Injuries to the psoas muscle, such as trauma or ischemia, raise the risk of infection.
- Greater prevalence in Asia and Africa

Psoas secondary cellulitis is caused by the pathogen's continuous spread from a nearby infectious centre.

The primary emphasis could be:

- IBD (particularly Crohn's disease), colitis, appendicitis, diverticulitis, and pancreatitis are gastrointestinal conditions.
- Musculoskeletal conditions include osteomyelitis, especially of the spine, Pott disease, paraspinal abscesses, septic arthritis, typically of the child's hip, and infections of prosthetic joints
- Genitourinary: for instance, cystitis and pyelonephritis
- Cardiovascular: such as contaminated aortic endograft, endocarditis, and infectious endocarditis
- After vascular surgery, arterial catheterization, spinal surgery, or urinary system instrumentation, for example.

Different main infectious foci are linked to various causative pathogens.

Risk factors:

- Immunodeficiency (e.g., diabetes mellitus, HIV)
- Use of intravenous drugs
- Trauma
- Responsible bacteria
- The majority of the time, primary and secondary psoas infections are monomicrobial.
- Compared to primary abscesses, secondary abscesses are more apt to be polymicrobial.

Features Seen in Patients Suffering from Psoas Abscess:

<u>Various clinical features are</u>:

- A painful walk
- a lower back ache (flank pain)
- Fever

Symptoms that are not particular include lower abdominal pain, fatigue, and weight loss.

At repose, the affected hip is externally rotated and flexed.

Pain is brought on by passive extension and/or internal movement of the injured hip.

It's possible to feel a sensitive or non-tender mass in the ipsilateral inguinal or iliac area.

Additional characteristics: the presence of signs of underlying conditions (e.g., colitis, UTI).

Primary psoas abscess, which accounts for 30% of cases and is more prevalent in children, is caused by the hematogenous or lymphatic spread of infection from a distant occult site. Patients with immunocompromised conditions, like diabetes mellitus, are most likely to develop this condition. HIV/AIDS immunosuppressive medication drug use through injection kidney failure.

The majority of instances of secondary psoas abscess are caused by the direct growth of nearby inflammatory or infectious processes, which are most frequently linked to Crohn's disease.

Various gastrointestinal issues, such as diverticulitis, appendicitis, or colorectal cancer; genitourinary issues, such as urinary tract infections, cancer, extracorporeal shock wave lithotripsy, or instrumentation of the upper renal tract; and musculoskeletal issues, such as vertebral osteomyelitis, septic arthritis, or infectious sacroiliitis; are also linked to a secondary psoas abscess

<u>Breast abscesses</u>

Breast abscesses is a condition where there is an accumulation of pus-swollen lump on the skin caused by a bacterial infection. It is a common complication faced by patients who are dealing with or have dealt with mastitis in the past. Research shows that one in ten women are affected by this infection, especially new mothers who have to breastfeed their babies. Breast abscesses can be very painful and tend to recur if you have not completed the antibiotics medicine course prescribed by the doctor;

One of the primary causes behind breast abscesses is a bacterial infection. It leads to the collection of pus on the skin which in turn can cause inflammation, rashes and painful lumps on the surface of the breast. Bacteria mainly enters the breast during breastfeeding, or through the cracks in the nipples or the areola. Mastitis, a medical condition where the milk ducts are blocked by a bacterial infection, can also cause breast abscesses if left unchecked for long.

Other causes behind breast abscesses are;

- External injury to the breast such as a cut or a bruise
- Cracked or injured nipples
- Nipple piercing can also cause a bacterial infection
- Breast implants and other surgeries
- High sugar and high blood pressure
- Wearing tight bras or corsets

- Weaning the baby quickly and unsteadily
- Obesity
- Habits such as smoking and consuming alcohol

Note that just because young breastfeeding mothers are susceptible to breast abscesses, other women cannot suffer from this condition. We would recommend you get regular checkups every once a while, especially if you notice any swelling, redness or pain in the breasts

Common Signs And Symptoms

There are several tell-tale signs are early symptoms that you should look out for which can lead to breast abscesses and even inflammatory cancer if left undetected. Breast abscesses caused during breastfeeding is called lactational breast abscesses- where pus collects inside the breast tissues leaving swollen lumps that are visible on the surface. We would recommend you consult your doctor immediately if you come across these symptoms listed below;

- Tenderness around the areolas and nipples
- Swollen lumps in and around the breast.
- Intense pain and discomfort in the affected area
- Inflammation, rashes, and redness in and around the breasts
- Fever, chills and general nausea
- Muscle cramps, body ache, and fatigue
- Malaise

Breast abscesses if untreated can also lead to cancer and other fatal health risks. All women between ages 15-45 years are susceptible to breast abscesses and other breast-related conditions, so get regular checkups and contact your gynecologist asap if you notice any or all of these signs. If you are looking for a reliable and credible healthcare centre for treatment, then Apollo Cradle Jayanagar is a smart option. The hospital is equipped with the medical tools, a team of dedicated doctors, nurses and staff and has enough experience in dealing with such cases to ensure a high success rate.

The Health Risks Involved

Breast abscesses though a fairly common condition and easily detectable can lead up to some major health concerns if aggravated. A significant health risk would be breast cancer that can be fatal if untreated. Other health risks involved with breast abscesses are ;

- Breast hypoplasia: is a rare condition where insufficient glandular tissue or IGT can cause little to no milk production and underdeveloped mammary glands
- Sepsis: Sepsis is a life-threatening condition when the body is unable to fight the bacterial or viral infection. It is caused when the chemicals and hormones released to fight infections aggravates the damage.
- Scarring: scarring occurs in and around the breast because of the accumulation of fat in the breast tissue. Though not fatal, scarring can lead to breast cancer if left unchecked
- Fistula: Zukas disease is a rare condition caused by breast duct fistulas and recurrent breast abscesses in and around the nipples.
- Functional mastectomy: mastectomy or removal of mammary tissues, nipples, and areolas from both the breasts is usually the last resort to treat breasts abscesses
- Necrotizing fasciitis: aka the flesh-eating disease is another threat associated with extreme cases of breast abscesses.

These health risks are caused by extreme cases and can prove to be quite life-threatening. If you experience any of the above-mentioned symptoms contact your doctor immediately before things got worse.

Is Breastfeeding Safe With An Abscesses?

It is safe for women who are suffering from mastitis to continue breastfeeding their babies from both breasts. In fact, with regular breastfeeding, the milk ducts would clear faster and relieve you of the pain and discomfort you had to otherwise suffer through. Usually, a gentle massage or a warm compress is recommended to stimulate milk flow.

However, in the case of breast abscesses, breastfeeding can become quite painful for the mother. Most doctors recommend patients with breast abscesses to use a breast pump rather than allow the baby to latch on to the breast directly. So, yes, breastfeeding is possible if you are suffering from breast abscesses only as long as it doesn't block the milk duct or become unbearably painful.

Consult your doctor or breastfeeding nurse for professional advice on which approach you should opt for so as to prevent the risk of breast abscesses or mastitis in the future.

Treatment And Diagnosis

What starts out as a small lump in the breasts the size of a pimple might grow to become a dangerous and possibly fatal condition for women if left undetected. Don't worry though, breast abscesses are treatable. Doctors are coming up with innovative ways to drain out the abscesses quickly and effectively, causing the least amount of pain and interruption during breastfeeding.

Lactational breast abscesses are treated by the incision and drainage method, although for other abscesses you can resort to antibiotics and some self-care techniques. Opt for surgery only as of the last resort. diagnosing breast abscesses requires close examinations, scans, and ultrasounds of the affected area along with all the preliminary tests checking the blood pressure and sugar levels in the body.

Antibiotics

Usually, breast abscesses in the initial stages can be cured by a dose of antibiotics. It is only obvious because the condition caused primarily as a result of bacterial infection. The most common bacteria responsible for abscesses is the Staphylococcus aureus. Although ensure that you complete the course and not leave it midway even if you find the abscesses cured. Leaving the antibiotics medicines halfway can cause a recurrence of breast abscesses in the future. Also, we do not recommend the over-the-counter antibiotics for the treatment, take only the meds prescribed by the doctor after a thorough checkup.

Incision And Drainage Method

In the incision and drainage method, the pus in the breast abscesses has to be drained out. Most breast abscesses can be drained out using a needle and some local anesthesia to numb the affected area for minimum pain. For this, doctors have to first locate the exact location of the abscesses on the breast with an ultrasound scan. If the abscesses are in the initial stages then it can be treated with a needle, however, in case of large abscesses, doctors have to resort to surgery. In surgery, a small incision or cut is made on the affected area to drain out the pus.

Once the pus has been removed, the wound would be closed or packed with cotton. Ensure that the wound is not tightly packed with gauze as it can cause more problems later.

Some Self-Care Tips

There are several measures that one can take up to reduce the damage caused by breast abscesses. Ensure that your body and mind is well rested. Stress and depression in young mothers often render their immune systems weak, thereby making them vulnerable to bacterial attacks. Follow a healthy diet (as prescribed by your doctor), be hydrated, drink plenty of fluids to flush out the toxins. Exercise regularly and gently massage the tender breasts to unblock the milk ducts. You can also use a warm compress on the affected area to reduce pain and swelling. You can also take some pain killers or anti-

inflammatory medicine, of course with the permission of your doctor, to reduce the pain caused by the breast abscesses.

Post-Procedure Care

After the surgery, you will have to take some extra measures to ensure a speedy recovery. Abscesses in and around the breasts are treated using the I&D technique. However, you will have to take a few medications and antibiotics to ensure that the abscesses don't return. Some of the cases where medicines and surgery both are required for treating abscesses are;

- When the abscesses have spread out to multiple locations including the face and genitalia
- When abscesses are accompanied by fever and nausea
- When the patient is old and has sugar and blood pressure issues

At home, patients can change the dressing and clean out the abscesses. Anti-steroid medication, warm compresses and plenty of rest would do the trick.

Some Preventive Measures

There are several ways that you can adapt to prevent the risk of breast abscesses. First of all, you need to learn how to breastfeed the baby properly. Don't rush the process up. Some simple preventive measures are;

- Ensure that the baby is latching on to the breast properly before you begin breastfeeding
- Refrain from wearing tight innerwear and uncomfortable clothes
- Try to encourage the baby to drain as much milk from each breast as possible
- You can also switch to a breast pump to pump out the milk and unblock the milk ducts
- Wash your breasts with warm water and soap after breastfeeding
- After breastfeeding wipe the areolas and nipples with cotton soaked in warm water or breast milk
- Keep the skin in and around the breast moisturized. Apply lanolin cream daily on the nipples to prevent cracking

Abdominal Surgery

Abdominal surgery is a type of surgery that involves the abdomen, which is the area between the chest and the pelvis. Abdominal surgery can involve a wide range of procedures, from exploratory laparotomy to organ removal or repair. It may also involve hernia repairs, gallbladder removal, or appendix removal.

Types of Abdominal Surgery:

- **Appendectomy:** Removal of the appendix.
- **Cholecystectomy:** Removal of the gallbladder.
- **Hernia Repair:** Repairs a hernia in the abdominal wall.
- **Colectomy:** Removal of all or a portion of the patient's colon.
- **Splenectomy:** Removal of the spleen.
- **Pancreatectomy:** Removal of all or part of the pancreas.
- **Laparoscopy:** A surgical technique that uses a small camera and thin instruments inserted through small incisions in the abdomen to diagnose and treat various conditions and diseases.
- **Bariatric Surgery:** Weight loss surgery that helps reduce excess weight by restricting food intake, reducing absorption, or both.

Benefits of abdominal surgery include:

- **Improved quality of life:** Those who suffer from persistent stomach pain or discomfort as a result of disorders such as hernias or adhesions may benefit from abdominal surgery, which may help improve their quality of life.
- **Improved organ function:** Abdominal surgery can help improve the functioning of organs by removing any blockages or obstructions that may be present due to scar tissue, tumors, or other issues.
- **Reduced risk of infection:** Abdominal surgeries are typically done under sterile conditions, which helps reduce the risk of infection and other complications associated with open surgeries.
- **Faster recovery time:** Most abdominal surgeries are minimally invasive procedures that require only small incisions and generally have shorter recovery times than open surgical procedures would require.
- **Lower cost:** Because most abdominal surgeries are minimally invasive procedures, they tend to be more affordable than traditional open surgical procedures would be.

Abdominal surgery is done to treat a variety of medical conditions, including hernias, appendicitis, gallstones, Crohn's disease, ulcerative colitis, diverticulitis, abdominal abscesses and tumors.

It can also be used to remove organs or parts of organs for transplantation or for diagnostic purposes. Abdominal surgery may also be necessary in cases of trauma or injury to the abdomen.

Abdominal surgery is a type of surgery that involves making an incision in the abdomen to access organs and structures within the abdomen. This type of surgery may be used to treat a variety of conditions including hernias, appendicitis, gallbladder disease, cancer, and other abdominal disorders.

The surgeon will create an incision in the abdominal wall and then use specialised tools to undertake the essential surgical procedures.

Additionally, the surgeon will use sutures or staples to seal any wounds formed during the operation. After surgery, patients may experience pain, swelling and bruising around their abdominal area which should resolve over time with proper care.

Steps to perform Before the procedure

- Obtain informed consent from the patient.
- Conduct a physical exam and assess the patient's health history.
- Order any necessary pre-operative laboratory tests or imaging studies to assess the patient's condition before surgery.
- Administer pre-operative medications as ordered by the surgeon, such as antibiotics and sedatives, to reduce risk of infection and help the patient relax before surgery.
- Ensure that all necessary surgical instruments and supplies are readily available in the operating room before starting surgery.
- Prepare a sterile operating field by cleaning and draping it with sterile towels or sheets to prevent contamination during surgery.
- Place an intravenous (IV) line for administering fluids, medications, or blood products during surgery if needed for the procedure being performed.

Steps to perform During the procedure

- Create an incision in the abdomen.
- Identify and expose the affected area.
- Remove any diseased tissue or organs, if necessary.
- Reconstruct or repair the affected area, if necessary.

- Close the incision with sutures or staples.
- Apply dressings to the wound.

Steps of perform After the procedure

- Check the patient's vital indicators, such as temperature, heart rate, breathing rate, and blood pressure.
- Assess the patient's pain level and provide appropriate pain relief measures as needed.
- Ensure that all wound dressings are kept clean and dry to prevent infection from developing in the incision area.
- Encourage deep breathing and coughing exercises to help prevent pneumonia and other complications from developing after surgery.
- Provide adequate nutrition and hydration to promote healing and recovery following abdominal surgery.

What to eat after Abdominal Surgery?

It is important to eat a healthy diet after abdominal surgery. Consuming meals that are rich in protein, low in fat, and packed with vitamins and minerals is one way to achieve this goal.

Included in the list of foods to consume are lean meats, fish, eggs, fruits and vegetables, low-fat milk products, whole grains, and legumes. Avoiding fried or greasy foods and processed sugars is recommended as well. It is also important to drink plenty of fluids such as water or herbal teas to stay hydrated.

Is Abdominal Surgery safe?

Yes, abdominal surgery is generally considered to be a safe procedure when performed by an experienced surgeon in a well-equipped hospital. The risks associated with abdominal surgery are minimized when the patient is carefully monitored and the surgeon has experience performing the procedure. In addition, the development of new technologies has made abdominal surgery far less risky than it was in years gone by.

Is Abdominal Surgery painful?

Yes, abdominal surgery can be painful. The degree of pain that one feels after surgery will be influenced both by the specific procedure that was performed and by their own pain tolerance. In general, the majority of abdominal surgeries include some level of discomfort and pain after the treatment has been completed.

How long does it take to recover from Abdominal Surgery?

The amount of time needed for recovery after having abdominal surgery is highly variable and is dependent on the kind of operation as well as the specific patient. In general, a complete recovery might take anything from a few days to several weeks' duration of time.

Most patients are able to return to their normal activities within two weeks, although some may need more time. During the time that you are recovering, it is essential to pay attention to the directions that your doctor gives you and to avoid pushing yourself too hard.

What are the side effects of Abdominal Surgery?

The most frequent side effects of abdominal surgery are discomfort, edoema, infection, and bleeding.

Other potential side effects can include nausea and vomiting, fatigue, constipation or diarrhea, urinary retention or incontinence, and wound healing problems.

In rare situations, a patient may have an adverse response to anaesthesia or other drugs used during surgery. Additionally, patients may experience emotional distress due to the stress of the procedure and recovery process.

Abdominal Surgery Aftercare:

It is crucial to relax and care for your body after abdominal surgery. Here are some tips for proper aftercare:

- **Rest:** Rest is essential for recovery from abdominal surgery. Following your doctor's instructions, limit physical activity and get plenty of sleep to allow your body time to heal.
- **Eat a Healthy Diet:** Eating healthy foods can help promote healing and provide the nutrients needed for a successful recovery. Consuming oily or processed meals might hinder the healing process.
- **Drink Plenty of Water:** Drinking plenty of water helps keep your body hydrated and can help reduce swelling and inflammation around the surgical site.
- **Take Medications as Prescribed:** Take medications as prescribed by your doctor to reduce pain, swelling, and infection risk at the surgical site.
- **Follow Up With Your Doctor:** Make sure you follow up with your doctor as recommended after abdominal surgery to ensure that you are healing properly and that any complications are addressed quickly.

Conclusion:

Abdominal surgery is a sophisticated and delicate process that needs the knowledge of a competent surgeon. It may be used to treat a broad range of medical disorders, from hernias to cancer. Although it is a major surgery and carries risks, it can also provide relief from pain and improve quality of life.

Patients should speak to their doctor about their individual risks and benefits before deciding whether or not abdominal surgery is the right choice for them. With proper care and follow-up, many patients are able to recover quickly and go on to live healthy, active lives.

Appendectomy

An appendectomy is a surgical procedure to remove your appendix. Appendectomy is the standard surgical treatment for appendicitis, a painful inflammation of the appendix. Because an inflamed appendix has the potential to rupture, appendicitis is considered a medical emergency. A ruptured appendix can be very dangerous. A healthy appendix, on the other hand, doesn't appear to have any essential function.

What is the appendix?

Your appendix is a small, tubular pouch that protrudes from the bottom of your colon, like a little tail. It's about the length of your pointer finger. It's located on the lower right side of your abdomen. (If you have appendicitis, you'll feel the painful spot acutely.) Scientists aren't sure if your appendix serves any purpose at all. If it does, it's a small one. No one has ever observed any consequence from removing it.

Why is appendicitis an emergency?

Because it's so small, your appendix swells quickly with inflammation and doesn't take much to burst. A burst appendix can spread infectious agents throughout your abdominal cavity, leading

to peritonitis (inflammation in your abdominal lining). If the infection spreads to your bloodstream, it can lead to sepsis, a serious systemic illness. Sepsis can be life-threatening. Your appendix can rupture within 36 hours of your first symptoms of appendicitis, so when you seek treatment, time is of the essence.

Why is the appendix removed?

In most cases, appendectomy is considered the safest treatment for appendicitis. There are a few exceptions — for example, some people might be unfit for surgery. Some people might respond to antibiotics alone if their appendicitis is uncomplicated and caught early enough. These people are at risk of recurrent appendicitis, however. Ultimately, the risk of rupture is much greater than the low risk associated with the surgery. If your appendix is inflamed enough to rupture, it's safest to remove it.

Laparoscopic appendectomy

For a laparoscopic appendectomy, your surgeon will begin with a tiny incision near the belly button. They'll insert a tiny port into the incision, and through the port, they'll insert a tiny tube called a cannula. The cannula is used to inflate your abdominal cavity with carbon dioxide gas. This makes more room for the operation and allows the abdominal cavity and its contents to show up more clearly in photographic images.

After that, they'll remove the cannula and insert a laparoscope — a long, thin tube with a tiny light and high-resolution camera attached. The camera will display the surgery on a video screen, allowing the surgeon to locate the appendix and guide the instruments through one to three tiny incisions. Occasionally, the laparoscope may reveal complications that weren't expected, and a laparoscopic surgery may need to convert to open surgery to manage them.

Open appendectomy

For an open appendectomy, your surgeon will make one larger incision in your lower right abdomen. They will open the abdominal cavity and separate your abdominal muscles to locate the appendix beneath. If your appendix has ruptured, there may be an abscess or fluid in the abdominal cavity to drain before they can perform the appendectomy. Then they will rinse the abdominal cavity with a saline solution.

In both procedures, your appendix is tied off with stitches, then detached from the intestine and removed. Excess fluids and gas will be drained through your incisions. If you had peritonitis, your surgeon may leave a drainage tube in your abdomen to continue draining fluids and remove it later. Your breathing tube will be removed and your incisions will be closed with stitches, cleaned and dressed. You'll be moved to a recovery room until you wake up.

Cholecystectomy

A cholecystectomy (koh-luh-sis-TEK-tuh-me) is a surgery to remove the gallbladder. The gallbladder is a pear-shaped organ that sits just below the liver on the upper right side of the abdomen. The gallbladder collects and stores a digestive fluid made in the liver called bile.

A cholecystectomy is a common surgery. It is a safe operation and usually carries only a small risk of complications. In most people this surgery is done using small incisions, and you can go home the same day of your cholecystectomy.

A cholecystectomy is usually done by inserting a tiny video camera and special tools through several small incisions to see inside your abdomen and remove the gallbladder. This is called a laparoscopic cholecystectomy.

In some cases, one large incision may be used to remove the gallbladder. This is called an open cholecystectomy and requires a longer hospital stay and recovery.

A cholecystectomy is most often used to treat gallstones and the complications they cause.

Your health care team may recommend a cholecystectomy if you have:

- Gallstones in the gallbladder that are causing symptoms, called cholelithiasis.
- Gallstones in the bile duct, called choledocholithiasis.
- Gallbladder inflammation, called cholecystitis.
- Large gallbladder polyps, which can turn cancerous.
- Pancreas inflammation, called pancreatitis, from gallstones.
- Concern for cancer of the gallbladder.

Laparoscopic cholecystectomy

During a laparoscopic cholecystectomy, the surgeon makes small incisions in your abdomen. A tube with a tiny video camera is placed in your abdomen through one of the incisions. Your surgeon watches a video monitor in the operating room while using tools inserted through the other incisions to remove your gallbladder.

If your surgeon is worried about possible gallstones or other problems in your bile duct, an imaging test may be used. This might include an X-ray or ultrasound. Then your incisions are closed, and you're taken to a recovery area. A laparoscopic cholecystectomy takes 1 to 2 hours.

A laparoscopic cholecystectomy isn't right for everyone. Sometimes your surgeon may begin with a laparoscopic approach and find it necessary to make a larger incision. This may be because of scar tissue from previous surgeries or complications.

Open cholecystectomy

During an open cholecystectomy, the surgeon makes a 6-inch, or 15-centimeter, incision in your abdomen below your ribs on your right side. The muscle and tissue are pulled back to reveal your liver and gallbladder. Your surgeon then removes the gallbladder.

The incision is closed, and you're taken to a recovery area. An open cholecystectomy takes 1 to 2 hours.

Hernia

A hernia occurs in the abdomen when a piece of tissue or an organ sticks out through one of the weakened muscle walls that surround the abdominal cavity. The sac that swells through the weak muscle area in the groin or abdominal wall contains the fatty lining of the colon or a piece of intestine.

In case if a hernia occurs via the diaphragm, the muscles that separate the abdomen from the chest, then the sac may contain a part of the stomach. They are the most common in the stomach, but they can also appear in the groin areas, belly button, and upper thighs. In most cases, hernias are not life-threatening, but they don’t go on their own. They might require hernia operation or hernia surgery to prevent potentially hazardous complications.

There are mainly four types of hernias affecting the humans

1. Inguinal Hernia:

It is one of the most common types of hernia making up to 75%. Inguinal hernias arise when the intestines tear or push through the weak spot in the lower abdominal wall, mostly in the inguinal canal.

In men, inguinal canal found in the groin where the spermatic cord passes to the scrotum from the abdomen. In women, the inguinal canal holds the ligament that helps seize the uterus in place.

Men are affected more with an inguinal hernia than women because their testicles are descended through the inguinal canal right after they are born. Thus, men undergo inguinal hernia treatment as a resolution.

2. Hiatal Hernia

This type of hernia occurs when a piece of your stomach tissue sticks out through your diaphragm into your chest cavity. A hiatal hernia is a common disorder amongst individuals aged 50 and above. Hiatal hernia treatment in Delhi is carried out by some of the best doctors.

3. Umbilical Hernia

This type of hernia is the most common in newborns under 6 months old. An umbilical hernia occurs when a child's intestine bulge through his/her weak abdominal wall.

4. Incisional Hernia

An incisional hernia occurs rarely after you have undergone an abdominal surgery.

5. **Femoral hernia.** A femoral canal is a deeper passageway located in the upper thigh/outer groin area. Women are more likely to develop them than men, and they are much less common than inguinal hernias. In addition, if they are not repaired, they may cause worse complications.

Signs and Symptoms of Hernia

The most common sign of hernia occurrence is the formation of lump or bulge in the affected area. In case of an inguinal hernia, you may notice bulginess on either side of your pubic bone where your thigh and groin meet. You can feel your hernia by touching during when you bend down, cough, or stand up.

signs and symptoms of an inguinal hernia :

- Aching, gurgling, or burning sensation at the site of the lump
- Experiencing heaviness, pressure, or weakness in the abdomen
- Discomfort or pain in the affected area while lifting, coughing, or bending

signs and symptoms of a hiatal hernia:

- Difficulty in swallowing
- Chest pain
- Acid reflux

signs and symptoms of an umbilical hernia:

- Your baby might have a hernia is he/she has a bulge near the belly button

Incisional hernias can develop after abdominal surgery. They happen after up to 15 to 20 % from trusted Source of abdominal operations involving incisions. Certain factors may increase or decrease your risk for developing an incisional hernia.

Symptoms of Abdominal Incisional Hernia

The most noticeable symptom of an incisional hernia is a bulge near the incision site. It's often most visible when you strain your muscles, such as when you stand up, lift something, or cough.

Besides a visible bulge, incisional hernias might also cause:

- nausea and vomiting
- fever
- burning or aching near the hernia

- abdominal pain and discomfort, particularly around the hernia
- faster heartbeat than usual
- constipation
- diarrhea
- thin, narrow stool

While you're most likely to develop a hernia between three and six months after your surgery, hernias can occur before or after this time frame.

Reducible vs. irreducible

Hernias are often categorized as reducible or irreducible:

Reducible hernias can be pushed back in. They may also shrink when you lie down.

Irreducible hernias happen when part of your intestine pushes into the hernia, making it hard to push the hernia back in.

Irreducible hernias can lead to bowel obstruction, which can then lead to a strangulated hernia. This requires immediate treatment.

Causes of Abdominal Incisional Hernia

Incisional hernias happen when the surgical cut in your abdominal wall doesn't close properly after surgery. This can cause your abdominal muscles to weaken, allowing tissue and organs to form a hernia.

Several things can prevent the surgical cut from healing properly, including:

- putting too much pressure on your abdomen
- becoming pregnant before the cut fully heals
- getting back into physical activities too soon after surgery

Sometimes, there's no clear reason why a surgical cut doesn't properly heal.

Hernias are more likely after emergency surgery or surgery that requires a large incision. If the edges of the wound aren't properly aligned after surgery, the incision may not heal well, increasing the likelihood of a hernia. The sewing technique used to close the incision can also play a part.

About your hernia surgery

You'll need surgery to fix your hernia. There are different types of hernia surgeries, including an open surgery or a laparoscopic surgery. Your surgeon will speak with you about what type of hernia surgery is best for you.

Laparoscopic surgery

In a laparoscopic surgery, your surgeon will make a few small incisions in your abdomen. Your abdomen will be inflated with air so that your surgeon can see your organs. Your surgeon will insert a thin, lighted scope called a laparoscopy through the incision. They'll insert tools to repair the hernia through the other incisions.

Open surgery

In an open surgery, your surgeon will make an incision large enough to remove scar tissue and fat from your abdominal wall near the hernia. They may also apply a mesh patch to hold the weakened area in your abdominal wall. The mesh patch will be attached to your abdominal wall, covering the hole or weakened area beneath it. Over time, this patch will be absorbed by your inner abdominal wall.

Your surgery will take about 3 hours.

Advanced Hernia Surgery

Hernia surgery is a procedure designed to mend the discomfort and potential health risks caused by hernias. A hernia occurs when an organ or tissue pushes through a weak spot in the surrounding muscle or tissue, creating a bulge or lump. Hernias can bring pain and inconvenience, impacting daily life.

Steps involved in Hernia Surgery Procedure

Hernia surgery is performed to repair a hernia, Hernia is a medical condition wherein an organ or tissue protrudes through a weak spot in the surrounding muscle or tissue, resulting in a bulge. The surgical procedure for hernia treatment may differ depending on various factors, including the type of hernia., its size, location, and the patient's overall health. Here's what generally happens during a hernia surgery procedure:

- **Anesthesia:** Before the surgery, anesthesia is administered to ensure the patient is comfortable and doesn't experience pain during the procedure. The type of anesthesia used can vary, including general anesthesia (you are asleep) or local anesthesia (only the surgical area is numbed).
- **Incision:** The surgeon makes an incision at the site of the hernia. The size and location of the incision depend on the type of hernia and the chosen surgical technique.
- **Pushing Back Protruding Tissue:** If the hernia involves protruding tissue or organs, the surgeon gently pushes them back into their proper place within the abdominal or chest cavity.
- **Reinforcing the Hernia Opening:** In most cases, the weakened abdominal wall is repaired using a mesh patch. The mesh provides support to the area and helps prevent the hernia from recurring. The mesh can be made of various materials and can be placed using different techniques.
- **Suturing or Stapling:** The surgeon closes the incision using sutures (stitches) or staples. Dissolvable sutures may be used, eliminating the need for suture removal.
- **Laparoscopic Approach (Minimally Invasive):** In some cases, hernia surgery can be performed using laparoscopic techniques. This involves making small incisions and using specialized instruments and a tiny camera (laparoscope) to repair the hernia.
- **Closure and Dressing:** The incision is closed and covered with a sterile dressing to protect the surgical site and promote healing.
- **Recovery and Post-Operative Care:** After the surgery, the patient is monitored in the recovery area until the effects of anesthesia wear off. Patients are usually discharged the same day or after a short hospital stay.

Who will Treat for Hernia Surgery Procedure

A hernia surgery is typically performed by a surgeon who specializes in general surgery or abdominal surgery. This type of surgeon is trained and experienced in diagnosing and treating a variety of conditions, including hernias. Here are the healthcare professionals involved in treating hernia surgery:

- **General Surgeon:** General surgeons are the primary specialists who perform hernia surgeries. They have the expertise to evaluate the type of hernia, determine the best surgical approach, and carry out the procedure.
- **Surgical Team:** A team of healthcare professionals, including surgical assistants, nurses, and anesthesiologists, supports the general surgeon during the surgery. They ensure the procedure is safe and successful.
- **Gastrointestinal Surgeon:** Gastrointestinal surgeons specialize in surgeries involving the digestive system, including the stomach, intestines, and related structures. Some hernias, such as hiatal hernias, may fall under their expertise.
- **Hernia Specialist:** While most hernia surgeries are performed by general surgeons, some healthcare providers specialize exclusively in hernia treatment and surgery. These specialists may offer additional experience and expertise in hernia management.

- **Medical Team:** Your medical team may include your primary care physician or a gastroenterologist who diagnoses the hernia, discusses treatment options, and refers you to a specialist for surgery.
- **Anesthesiologist:** An anesthesiologist is responsible for administering anesthesia during the surgery, ensuring your comfort and safety throughout the procedure.

Preparing for Hernia Surgery

Preparing for hernia surgery involves several important steps to ensure that you are physically and mentally ready for the procedure. Here's a guide on how to prepare:

- **Consultation with Surgeon:** Schedule a consultation with the surgeon who will be performing the hernia surgery. They will assess your condition, explain the procedure, and answer any questions you have.
- **Medical Evaluation:** Undergo a thorough medical evaluation to assess your overall health. This may include blood tests, imaging scans, and other tests to ensure you are fit for surgery.
- **Medication Review:** Inform your surgeon about all medications, supplements, and herbal remedies you are taking. Some medications may need to be adjusted before the surgery.
- **Fasting Instructions:** Follow the fasting instructions provided by your surgeon. You will likely need to avoid liquids & food for a specified period before the surgery.
- **Stop Smoking:** If you smoke, consider quitting or at least refraining from smoking before and after the surgery. Smoking can interfere with the healing process.
- **Arrange Transportation:** Plan for transportation to and from the surgical facility, as you might not be able to drive immediately after the procedure due to anesthesia.
- **Arrange Support:** Enlist a family member or friend to provide support during your recovery period.
- **Mental Preparation:** Educate yourself about the procedure, its benefits, and potential risks. Understanding the process can help alleviate anxiety.
- **Preoperative Instructions:** Follow any preoperative instructions provided by your surgeon. This might include guidelines on medication intake, bathing, and other preparations.
- **Pack Essentials:** Bring any required documents, identification, and essentials like comfortable clothing and personal items to the hospital.
- **Notify Medical History:** Inform your surgical team about any allergies, medical conditions, and previous surgeries you've had.
- **Plan for Recovery:** Arrange a comfortable and quiet space at home for your recovery. Stock up on any necessary supplies and medications.
- **Dietary Restrictions:** Follow any dietary restrictions provided by your surgeon, especially regarding food and beverages in the hours leading up to the surgery.

Recovery after Hernia Surgery Procedure

Recovery after hernia surgery is a gradual process that requires following your surgeon's post-operative instructions for optimal healing. The specifics of your recovery can vary based on the type of hernia surgery you underwent, your overall health, and other individual factors. Here are some general guidelines for recovery after hernia surgery:

- **Hospital Stay:** The length of your hospital stay depends on the type of surgery and your individual condition. Some hernia surgeries are performed on an outpatient basis, while others may require a short hospital stay.
- **Pain Management:** You may experience some pain or discomfort at the incision site. Your surgeon will prescribe pain medication to manage any discomfort during the early days of recovery.
- **Incision Care:** Keep the incision area clean and dry as directed by your surgeon. Follow their guidelines for changing dressings, keeping the incision site free from infection, and caring for sutures or staples.
- **Physical Activity:** Follow your surgeon's advice regarding physical activity. Initially, you'll need to avoid strenuous activities, heavy lifting, and excessive bending to prevent strain on the surgical area.

- **Dietary Considerations:** Your surgeon may provide dietary guidelines to ensure proper healing. Adequate hydration and a balanced diet can support the recovery process.
- **Gradual Resumption of Activities:** As you heal, you can gradually resume your regular activities. Listen to your body and avoid pushing yourself too hard too soon.
- **Avoiding Infection:** Follow your surgeon's recommendations to prevent infection. Keep the incision site clean, avoid submerging it in water, and watch for signs of infection such as redness, swelling, or increased pain.
- **Return to Work:** The timing for returning to work will depend on the nature of your job and your individual recovery. Your surgeon will guide you on when it's safe to resume work activities.
- **Lifestyle Adjustments:** As you recover, you may need to make temporary lifestyle adjustments, such as modifying your exercise routine and avoiding heavy lifting for a specified period.
- **Signs of Complications:** Be aware of signs that could indicate complications, such as excessive bleeding, persistent pain, fever, or changes in the appearance of the incision site. Contact your surgeon when you notice any unusual symptoms.

Lifestyle changes after Hernia Surgery Procedure

After undergoing hernia surgery, adopting certain lifestyle changes can contribute to a smoother recovery and overall well-being. While the specific changes may vary depending on the type of hernia surgery and your individual circumstances, here are some general lifestyle adjustments to consider:

- **Rest and Recovery:** Allow yourself sufficient time to rest and recover after surgery. Listen to your body and avoid pushing yourself too hard too soon.
- **Gradual Resumption of Activities:** Gradually reintroduce physical activities and exercises as advised by your surgeon. Begin with mild movements and gradually escalate the intensity as time goes on.
- **Avoid Heavy Lifting:** Avoid lifting heavy objects during the initial weeks after surgery to prevent straining the surgical area. Follow your surgeon's recommendations for lifting restrictions.
- **Maintain a Balanced Diet:** A balanced diet rich in nutrients can support your healing process. Focus on foods that are high in protein, vitamins, and minerals to aid in tissue repair.
- **Stay Hydrated:** Remember to drink enough water throughout the day to keep yourself properly hydrated., which supports overall healing and well-being.
- **Quit Smoking:** If you smoke, consider quitting or at least reducing smoking to promote healing and reduce the risk of complications.
- **Manage Stress:** Engage in stress-relieving activities such as deep breathing, meditation, or gentle yoga to aid in the healing process.
- **Avoid Straining During Bowel Movements:** If constipation is a concern, incorporate fiber-rich foods and stay hydrated to prevent straining during bowel movements, which can strain the surgical site.
- **Follow Dietary Guidelines:** Follow any dietary guidelines provided by your surgeon. Certain foods may need to be avoided initially to prevent discomfort or digestive issues.
- **Avoid Alcohol:** Limit or avoid alcohol consumption during your recovery period, as alcohol can interfere with healing and pain management.
- **Wear Supportive Clothing:** Opt for loose-fitting and comfortable clothing that won't place pressure on the surgical site.
- **Maintain Good Posture:** Practice good posture to avoid unnecessary strain on your abdominal muscles and promote healing.
- **Attend Follow-Up Appointments:** Regularly attend your scheduled follow-up appointments with your surgeon to monitor your healing progress and address any concerns.
- **Communicate with Your Surgeon:** If you experience any unusual symptoms, discomfort, or concerns, don't hesitate to communicate with your surgeon. Early intervention can prevent complications.
- **Resume Activities Gradually:** As you regain your strength, gradually return to your usual activities, and consult your surgeon before starting any new exercise routine.

What is a Diaphragmatic Hernia?

A diaphragmatic hernia is a medical condition characterized by a hole in the diaphragm – the muscle that separates the abdomen from the chest cavity. This hole allows the abdominal organs to move up into the chest cavity, which can lead to serious complications. Symptoms of a diaphragmatic hernia include difficulty breathing, chest pain, and abdomen pain. Other symptoms may include coughing, vomiting, and the presence of a mass in the abdomen.

There are two types of diaphragmatic hernia, including

- **Acquired diaphragmatic hernia (ADH):** ADH occurs due to accidental injuries such as gunshots, road accidents, etc, which makes a hole in the diaphragm.
- **Congenital diaphragmatic hernia (CDH):** It occurs due to abnormal development of the diaphragm when the fetus is developing.

Krishna Medical Centre is one of India's trusted and most reliable healthcare centers, providing the best and latest Diaphragmatic Hernia Surgery. We leverage traditional and laparoscopic techniques to treat hernia. We have a team of the best laparoscopic surgeons with more than 10 years of hands-on experience performing hernia repair surgeries with a maximum success rate. Our hospital is well-equipped with the latest advancements and all the facilities essential for the best care.

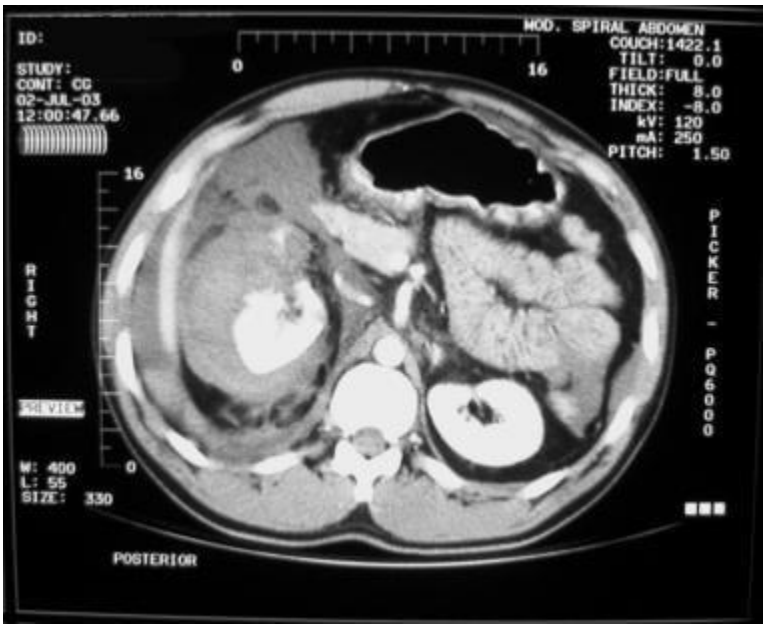
Here are some reasons you should choose KMC for Diaphragmatic Hernia Surgery.

- Our laparoscopic surgeons are highly experienced in performing surgeries with maximum success rates.
- We provide multiple payment options such as cash, credit card, debit card, no- cost EMI, etc.
- We provide a dedicated care coordinator to each patient to assist them throughout their treatment journey.
- We provide insurance assistance in claiming your insurance hassle-free.

Contact KMC and schedule your appointment with our expert laparoscopic surgeon if you are also diagnosed with a diaphragmatic hernia.

Blunt Injury Abdomen

Blunt abdominal trauma (see the image below) is a leading cause of morbidity and mortality among all age groups. Identification of serious intra-abdominal pathology is often challenging; many injuries may not manifest during the initial assessment and treatment period.



Blunt abdominal trauma. Right kidney injury with blood in perirenal space. Injury resulted from high-speed motor vehicle collision.

Signs and symptoms

The initial clinical assessment of patients with blunt abdominal trauma is often difficult and notably inaccurate. The most reliable signs and symptoms in alert patients are as follows:

- Pain
- Tenderness
- Gastrointestinal hemorrhage
- Hypovolemia
- Evidence of peritoneal irritation

However, large amounts of blood can accumulate in the peritoneal and pelvic cavities without any significant or early changes in the physical examination findings. Bradycardia may indicate the presence of free intraperitoneal blood.

On physical examination, the following injury patterns predict the potential for intra-abdominal trauma:

- Lap belt marks: Correlate with small intestine rupture
- Steering wheel–shaped contusions
- Ecchymosis involving the flanks (Grey Turner sign) or the umbilicus (Cullen sign): Indicates retroperitoneal hemorrhage, but is usually delayed for several hours to days
- Abdominal distention
- Auscultation of bowel sounds in the thorax: May indicate a diaphragmatic injury
- Abdominal bruit: May indicate underlying vascular disease or traumatic arteriovenous fistula
- Local or generalized tenderness, guarding, rigidity, or rebound tenderness: Suggests peritoneal injury
- Fullness and doughy consistency on palpation: May indicate intra-abdominal hemorrhage
- Crepitation or instability of the lower thoracic cage: Indicates the potential for splenic or hepatic injuries

Diagnosis

Assessment of hemodynamic stability is the most important initial concern in the evaluation of a patient with blunt abdominal trauma. In the hemodynamically unstable patient, a rapid evaluation for hemoperitoneum can be accomplished by means of diagnostic peritoneal lavage (DPL) or the focused assessment with sonography for trauma (FAST). Radiographic studies of the abdomen are indicated in stable patients when the physical examination findings are inconclusive.
Diagnostic peritoneal lavage

DPL is indicated for the following patients in the setting of blunt trauma:

- Patients with a spinal cord injury
- Those with multiple injuries and unexplained shock
- Obtunded patients with a possible abdominal injury
- Intoxicated patients in whom abdominal injury is suggested
- Patients with potential intra-abdominal injury who will undergo prolonged anesthesia for another procedure

FAST

Bedside ultrasonography is a rapid, portable, noninvasive, and accurate examination that can be performed by emergency clinicians and trauma surgeons to detect hemoperitoneum.

The current FAST examination protocol consists of 4 acoustic windows (pericardiac, perihepatic, perisplenic, pelvic) with the patient supine.
An examination is interpreted as positive if free fluid is found in any of the 4 acoustic windows, negative if no fluid is seen, and indeterminate if any of the windows cannot be adequately assessed.
Computed tomography
Computed tomography is the standard for detecting solid organ injuries. CT scans provide excellent imaging of the pancreas, duodenum, and genitourinary system.
CT scanning often provides the most detailed images of traumatic pathology and may assist in determination of operative intervention [1, 2, 3, 4] Unlike DPL or FAST, CT can determine the source of hemorrhage.

Management

Treatment of blunt abdominal trauma begins at the scene of the injury and is continued upon the patient's arrival. Management may involve non operative measures or surgical treatment, as appropriate.
Indications for laparotomy in a patient with blunt abdominal injury include the following:

- Signs of peritonitis
- Uncontrolled shock or hemorrhage
- Clinical deterioration during observation
- Hemoperitoneum findings on FAST or DPL

Non operative management

In blunt abdominal trauma, including severe solid organ injuries, selective nonoperative management has become the standard of care. Non operative management strategies are based on CT scan diagnosis and the hemodynamic stability of the patient, as follows:

- For the most part, pediatric patients can be resuscitated and treated non operatively; some pediatric surgeons often transfuse up to 40 mL/kg of blood products in an effort to stabilize a pediatric patient
- Hemodynamically stable adults with solid organ injuries, primarily those to the liver and spleen, may be candidates for non operative management
- Splenic artery embolotherapy, although not standard of care, may be used for adult blunt splenic injury
- Nonoperative management involves closely monitoring vital signs and frequently repeating the physical examination

Empyema thoracis

Empyema thoracis (ET) is defined as the collection of pus in the pleural cavity [1]. The commonest cause of ET in developed countries is the infection of a para-pneumonic effusion complicating community-acquired pneumonia [2]. In developing countries like India, however, tuberculosis (TB) is one of the leading causes [3]. The evolution of empyema is in three stages: stage 1, the exudative phase; stage 2, the fibrino-purulent stage; and stage 3, the organising stage [4]. Stages 1 and 2 are managed medically by antibiotics and drainage. The management of stage 3 is essentially surgical. The four open surgical procedures commonly employed in the treatment of ET are (1) decortication, (2) thoracoplasty, (3) window procedure (Eloesser flap) and (4) rib resection.

In an ET requiring surgery, the surgeon makes the decision as to which procedure to employ, based on patient factors, pathology involved, experience and expertise.

Acute thoracic empyema is defined as active inflammation and effusion between the parietal and visceral pleural space. Despite improvement in healthcare practices, mortality from pleural infection remains high (1). Guidelines state that treatment for thoracic empyema depends on its stage at diagnosis (2-4). Suggested treatment involves the administration of antibiotics and drainage of pleural effusion (2-5).

Thyroid Surgery

A thyroidectomy is the surgical removal of all or some of the thyroid gland. This surgery is used to treat benign thyroid nodules and large goiter (noncancerous enlargement of the thyroid). In most cases, thyroidectomy is the preferred treatment of thyroid cancer. A total thyroidectomy removes the entire thyroid, whereas a hemi-thyroidectomy removes a portion of the gland.

The thyroid gland is located in the front section of the neck. The gland captures iodine that has been absorbed into the blood from food and uses the iodine to produce thyroid hormones. Thyroid hormones play a major role in regulating the body's metabolism, the body's process of using food for energy and growth.

Thyroidectomies are usually successful, and recovery time is generally rapid. In rare cases, significant complications may follow the procedure. The American Thyroid Association says the risk of such outcomes is significantly reduced when experienced surgeons perform the thyroidectomy.

Thyroid surgery is performed in a number of circumstances :-

- as a treatment for thyroid cancer
- when an enlarged thyroid (goiter) or multiple nodules cause cosmetic, breathing or swallowing problems
- in a pregnant woman, when her hyperthyroidism is not controllable by antithyroid drugs, and requires immediate treatment
- when other forms of treatment for hyperthyroidism -- i.e,. antithyroid drugs or radioactive iodine have not been effective. (This is applicable in the U.S. Outside the U.S., surgery is sometimes performed as a hyperthyroidism treatment before or instead of radioactive iodine.)
- in children, if the practitioner or parent wishes to avoid radioactive iodine
- when the patient refuses antithyroid medications or radioactive iodine
- when a patient wants to try to get pregnant quickly after treatment

There are three main types of thyroid surgery : -

- **Total Thyroidectomy -- Complete Removal of the Thyroid**
  This is the most common type of thyroid surgery, and is often used for thyroid cancer, and in particular, aggressive cancers, such as medullary or anaplastic thyroid cancer. It is also used for goiter and Graves'/hyperthyroidism treatment.

- **Subtotal/Partial Thyroidectomy -- Removal of Half of the Thyroid Gland**

  For this operation, cancer must be small and non-aggressive -- follicular or papillary -- and contained to one side of the gland. When a subtotal or partial thyroidectomy is performed, typically, surgeons perform a bilateral subtotal thyroidectomy which leaves from 1 to 5 grams on each side/lobe of the thyroid. A Harley Dunhill procedure is also popular, in which there's a total lobectomy on one side, and a subtotal on the other, leaving 4 to 5 grams of thyroid tissue remaining.

- **Thyroid Lobectomy -- Removal of Only About a Quarter of the Gland**

  This is less commonly used for thyroid cancer, as the cancerous cells must be small and non-aggressive.

The issue of a subtotal/partial, vs. total thyroidectomy is controversial. Some practitioners prefer to perform a partial thyroidectomy whenever possible, believing that they will leave behind enough thyroid tissue to prevent hypothyroidism. (A total thyroidectomy has nearly a 100 percent chance of causing hypothyroidism).

The risk of hypothyroidism with subtotal thyroidectomy is, however, quite high, and some experts say that more than 70 percent of patients receiving a subtotal thyroidectomy will become hypothyroid. Since one of the main reasons for subtotal thyroidectomy is to prevent hypothyroidism, and that goal is achieved in only a minority of cases, experts increasingly believe that there is no added benefit to subtotal thyroidectomy, and are more routinely recommending a total thyroidectomy.

What You Are Likely to Experience

In most cases, surgery of the thyroid is not highly complicated, and usually takes no more than two hours. Removal of half of the thyroid takes 45 minutes to an hour, so if the entire gland is being removed, the surgery will last about an hour and a half.

Check with your surgeon about medications you are taking, and what you should/shouldn't take in the days prior to surgery. You will most likely be asked to check into the hospital the morning of your surgery. Typically, your surgeon will ask that you refrain from eating or drinking after midnight the night before surgery.

Varicose Veins Surgery

Varicose veins are twisted, enlarged, and reddish-green veins present superficially on your skin. These are commonly seen in the lower legs since prolonged standing or sitting can exert excess pressure on your lower body. This usually occurs due to disturbance in the one-way valve system of the veins, causing abnormal blood pooling around the affected veins, leading to their enlargement. Varicose veins could be mild with only cosmetic concerns, but it can be painful for some, leading to more severe problems. Treatment may include conservative methods (compression stockings and lifestyle changes) as a first-line treatment or surgical intervention (vein ligation and stripping, sclerotherapy, radiofrequency ablation, laser surgery, etc.) as a last resort.

Causes of Varicose Veins

Veins have a one-way valve system that prevents blood from flowing backward. When these valves fail, weaken, or get damaged, the blood pools around the affected vein instead of continuing toward your heart. This causes increased pressure within the vein leading to the stretching of the vein walls and enlarging them.

Some potential risk factors increase your likelihood of developing varicose veins, such as:

- **Family history**: Varicose veins could be inherited if it runs in your family.
- **Aging**: People above the age of 45 years are the most vulnerable.
- **Gender**: The condition is more common among women than their male counterparts.
- **Obesity:** Being overweight since increased weight can exert excess strain on the lower part of the body.
- **Prolonged standing or sitting:** This can adversely affect the veins in your lower legs due to increased pressure exerted.
- **Hormonal imbalance:** As seen during pregnancy, the growing fetus's hormonal changes and weight impair valve function.

- **Smoking:** This leads to vasoconstriction (narrowing of the veins), which increases muscle tone and inhibits normal blood flow.
- **Restrictive clothes and footwear:** Wearing tightly-fitted clothes and high heels can further increase your risk.

How Varicose Veins Are Diagnosed

Varicose veins are easy to diagnose due to the characteristic features such as twisted and enlarged bluish-green veins in your lower legs. Your doctor will evaluate your symptoms and record your medical history to rule out other pre-existing medical conditions like diabetes (increased blood sugar levels), hypertension (high blood pressure), blood disorders, and other diseases related to your heart, lungs, or kidneys.

Your provider/doctor will conduct a physical examination and order a few diagnostic tests to confirm varicose veins.

Physical examination

- Your doctor will clinically examine your legs while standing and sitting to check for signs of swelling and bluish-purple veins.
- He/she will press against your affected leg to check for any tenderness and discomfort.
- Your doctor will also examine for skin changes and ulceration.

Diagnostic tests

- These are mostly imaging tests that help to confirm the presence of varicose veins, which gives the doctor a clear understanding of the stage of varicose veins being suffered.
- This helps the doctor determine the treatment that best suits your condition.

Venous Doppler Ultrasound Scan

- This scan uses high-frequency sound waves to check the blood circulation within the affected vein.
- It shows the presence of any blockage in the veins by blood clots formed due to abnormal pooling of the blood.

Colour Duplex Ultrasound Scan

- This scan uses a device to distinguish the blood flow through different colors. The blue color on the scan indicates normal blood flow, whereas the red color indicates abnormal blood flow through the suspected veins.
- This test provides a detailed picture of any blockages within the blood vessels, faulty valves, and incorrect blood flow, which is known as ‘reflux.’

Venogram

- During this test, your doctor will inject a special dye into your lower legs and captures the X-ray images.
- The dye appears on the X-ray images indicating normal blood flow. Any break or discontinuity of the dye on the images indicates a blockage.
- These diagnostic tests also help rule out other blood disorders that may mimic symptoms like pain and swelling in your legs.

Treatment Options For Varicose Veins

Treatment of varicose veins depends on the stage and severity of the condition, although you cannot permanently cure it. Treatment usually helps to cosmetically benefit your legs' appearance and relieve symptoms like pain, swelling, and skin changes.

Conservative Treatment

This is the first line of treatment option when you observe early signs of varicose veins, such as spider or blue veins. Your doctor may suggest the following:

Self-care

- Avoid standing or sitting for long periods to reduce pressure on your lower legs.
- Make sure to elevate your legs using a small stool to improve the blood circulation in your lower legs since it prevents abnormal blood pooling.

Lifestyle changes

- Maintain a healthy and balanced weight to minimize the strain on your legs. This can be achieved by a nutritious and well-balanced diet loaded with fiber (fruits, vegetables), proteins (eggs, lean meat), and good water intake.
- Regular exercise (including walking, jogging, swimming, and cycling) is an important factor that helps maintain an ideal weight and improves blood circulation.

Your doctor may recommend surgery if the above non-surgical methods fail to provide relief.

Invasive Surgery (Vein Ligation and Stripping)

This is a traditional surgery performed under general anesthesia (a numbing agent that sedates your whole body and puts you to sleep during the surgery). It involves large, extensive incisions or cuts to access the affected vein, which is surgically removed (stripped). The cut ends are tied together (ligated) to stop the blood flow.

Minimally Invasive Surgery

These are minimally invasive since the procedure involves small incisions or cuts to access the affected vein.

- Ambulatory phlebectomy- This procedure helps to remove varicose veins close to your skin surface. It involves small cuts to access the affected veins and removal of the diseased varicose part of the vein.
- Sclerotherapy- Your doctor will inject a special chemical solution directly into the affected vein, which causes the vein walls to stick together. These form scar tissue which eventually fades away.
- Endoscopic Vein Surgery- During this procedure, your doctor will make small keyhole-sized incisions near the affected vein. An endoscope (consisting of a tiny camera and light source) will be inserted through the incision to gain access and capture images of the surgical site. Tiny surgical instruments will be inserted through other incisions to remove the diseased varicose vein.
- Radiofrequency Ablation- This procedure involves using a device that emits radiofrequency energy to heat up the vein walls. The heat destroys the walls of the diseased varicose vein and seals it.
- Laser Vein Surgery- This involves using a laser beam targeted at the diseased varicose veins. The light energy emitted from the laser source penetrates the tissue layers and gets converted to heat energy to close the diseased veins.

How to Prevent Varicose Veins?

You may not be able to prevent varicose veins if it is inherited; however, you can reduce your chances of developing them by the following preventive measures.

- Elevate your legs to improve blood flow from your leg veins to your heart.
- Get rid of excess weight (by consuming a healthy and well-balanced diet) to reduce pressure inside your leg veins.
- Avoid long periods of standing or sitting and take regular breaks in between to encourage normal blood flow.
- Stay active through regular exercises such as walking, jogging, swimming, cycling, etc. A sedentary/inactive lifestyle can sluggish blood flow, putting excess pressure on your leg veins.
- Quit smoking since it damages your blood vessels and slows the blood flow.
- Use compression stockings to help compress or squeeze your veins to help in blood circulation.
- To encourage blood flow, wear clothes that fit properly.
- Avoid wearing high heels that compromise your body posture and strain your lower legs excessively.