



Volume 1 • Issue 5 • November 2025 • ₹ 30

# GEMify Health

Built on Evidence. Driven by Innovation. Powered by GEM Hospital

**BELLY FAT  
AND HEART**

**FROM COIMBATORE TO TOKYO:  
When India's Surgical Pioneer  
Changed Japan's Medical Standard**

**The Hidden  
Control Center of  
Health and Happiness**



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# Wellness Wisdom



Every day at GEM Hospital, I meet patients who have suffered from digestive problems for months, sometimes even years, thinking their symptoms were just part of life. They endure stomach pain, persistent acidity, or ignore warning signs until their condition becomes severe. This is heartbreaking because most digestive diseases, if caught early, can be prevented or treated effectively. This belief drives every decision we make at GEM Hospital - to offer world-class digestive care to every family, regardless of their financial background.

The digestive system, which includes the esophagus, pancreas, liver, gallbladder, and intestines, is one of the most complex and vital systems in the body. Yet, we often treat it carelessly - eating irregularly, ignoring persistent symptoms, relying solely on home remedies, and seeking medical help only when the problem becomes unbearable.

This cultural hesitation to address digestive issues openly costs lives every year. Through more than 65 free medical camps held across Tamil Nadu, we have examined over 47,000 patients. The findings are alarming: people living with advanced digestive diseases that could have been easily managed with early detection.

This is why, three decades ago, I pioneered laparoscopic surgery in South India. Traditional open surgery meant farmers and daily wage workers - the backbone of our economy - would lose months of income during recovery. Through minimally invasive techniques, we revolutionized this reality. Complex stomach surgeries, tumor removals, hernia repairs, and even cancer operations can now be performed through small incisions, enabling patients to return home within days and resume work within weeks.

At GEM Hospital, we have developed several groundbreaking techniques for treating digestive diseases, which are now practiced globally. Our approach to esophageal cancer surgery, methods

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for pancreatic cancer resection, and advanced techniques for stomach cancer treatment have been published in international journals and taught in universities around the world. Yet, these achievements are meaningful only when they translate into better care for people in our communities.

This magazine is designed to bridge that gap. We want every family to understand their digestive health, recognize warning signs, and know that modern medicine offers solutions. Whether it is simple acidity or complex cancer, knowledge is key to seeking timely help and breaking the silence surrounding digestive problems.

Prevention remains our most powerful tool. Many digestive diseases develop slowly, offering us opportunities to intervene early. Regular eating habits, adequate fiber intake, proper hydration, avoiding late-night meals, limiting processed foods, and managing stress - these simple lifestyle changes can prevent many digestive disorders.

Let this magazine guide you in understanding and protecting your digestive health. Share this knowledge with your family, discuss it with your community, and seek medical advice whenever something does not feel right. Together, we can build a healthier World where digestive diseases are caught early, treated effectively, and prevented through awareness and timely action. Your health is your greatest wealth. Protect it wisely.

With warm regards,

**Dr. C. Palanivelu**

Chairman, GEM Hospital  
www.gemhospitals.com



# GEMify Health

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# How Bariatric Surgery Transforms Lives

Obesity isn't just about appearance - it's a medical condition that opens the door to heart disease, diabetes, joint pain, sleep disorders, and fatty liver disease. When years of dieting, exercise, and medications fail to deliver lasting results, bariatric surgery emerges not as a cosmetic quick fix, but as a potentially life-saving medical intervention.

## Who Qualifies for This Life-Changing Procedure?

Bariatric surgery isn't for everyone. Current medical guidelines recommend it for individuals with a BMI of 35 or higher regardless of other health conditions, with consideration for those with BMI 30-34.9 who have metabolic disease. For perspective, someone 5'6" tall weighing 242 pounds would have a BMI of 40.

The ideal candidate has attempted medically supervised weight loss through diet, exercise, and medications for at least six months without significant success. Age typically ranges from 18 to 65, with candidates demonstrating both physical readiness for surgery and commitment to lifelong lifestyle changes.

However, certain conditions exclude candidacy: uncontrolled heart disease, liver failure, pregnancy, active substance addiction, or ongoing cancer treatment require alternative approaches.

## The Journey After Surgery A Month-by-Month Transformation

### Weeks 1-2: The Foundation Phase

Most bariatric procedures are performed laparoscopically, requiring just 1-2 hours and a brief hospital stay. Thanks to minimally invasive techniques, scarring is minimal, pain is reduced, and recovery accelerates. Patients begin with clear liquids - strained soups, water, and buttermilk - consuming just 30-50 ml at a time as the newly smaller stomach adjusts.

### Month 1: Building New Habits

The transition to protein-rich liquids begins. Protein powder mixed with milk,

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strained yogurt, and pureed lentils become dietary staples. Six to eight small meals throughout the day prevent overwhelming the reduced stomach capacity. Daily protein intake of 60-80 grams is essential, alongside 1.5 liters of water - but never during meals, which could cause discomfort.

### **Months 2-3: Visible Progress Emerges**

Soft foods enter the picture: steamed vegetables, finely ground meat, soft flatbreads, and mashed rice. Weight loss becomes dramatically apparent, with patients typically losing 33% of their excess weight during the first three months. Clothing loosens, climbing stairs becomes easier, and breathing improves. Many patients begin reducing diabetes and blood pressure medications under medical supervision.

### **Months 3-6: Momentum Builds**

Patients typically lose two to three pounds weekly during this phase, with about half their excess weight shed by the six-month mark. Gradual reintroduction of regular, healthy foods occurs - though portions remain dramatically smaller. Sugar, fried foods, carbonated beverages, and fast food stay off-limits. Vegetables, fruits, whole grains, lean proteins, fish, and eggs form the dietary foundation. Daily exercise extends to 30-45 minutes of walking, cycling, or swimming. Confidence soars alongside increased social engagement.

### **Year 1: The Major Milestone**

Most patients lose 60-70% of their excess weight within the first year. Someone carrying 50 Kg of excess weight might shed 30 Kg. New exercise routines and healthy eating patterns become second nature. Many patients eliminate diabetes and blood pressure medications entirely. Sleep apnea resolves completely. Joint pain diminishes, energy increases, and both professional performance and family relationships often improve.

### **Long-Term: Sustaining Success**

Maintaining a healthy lifestyle requires ongoing commitment: three balanced meals daily, nutritious snacks, regular exercise, and lifelong vitamin supplementation. Vitamin B12, iron, calcium, and vitamin D are non-negotiable. Quarterly medical check-ups and annual comprehensive blood work ensure continued health optimization.

Some patients experience excess skin, addressable through plastic surgery once weight stabilizes. This represents the final chapter in a profound physical transformation.

### **Preparing for Change**

Bariatric surgery demands readiness. Begin transitioning eating habits before surgery - gradually reducing sweets, fried foods, and fast food while increasing vegetables and fruits. Practice eating from smaller plates and chewing slowly. Start daily walking, even just 10 minutes initially.

Smoking must cease at least one month pre-surgery, as it delays healing and increases complications. Family support proves crucial - when households embrace healthy eating collectively, individual success multiplies.

### **A New Chapter Awaits**

Bariatric surgery represents neither magic nor an easy path. It requires hard work, dedication, and lifelong commitment. Yet it's a powerful tool enabling healthy, joyful, active living for decades to come.

If excess weight controls your life, simple activities feel challenging, and fatigue dominates your days, this intervention deserves consideration. Consult with experienced bariatric specialists for comprehensive evaluation, counseling, and guidance.

Your dream weight, healthy lifestyle, energetic body, and renewed confidence are achievable! ●





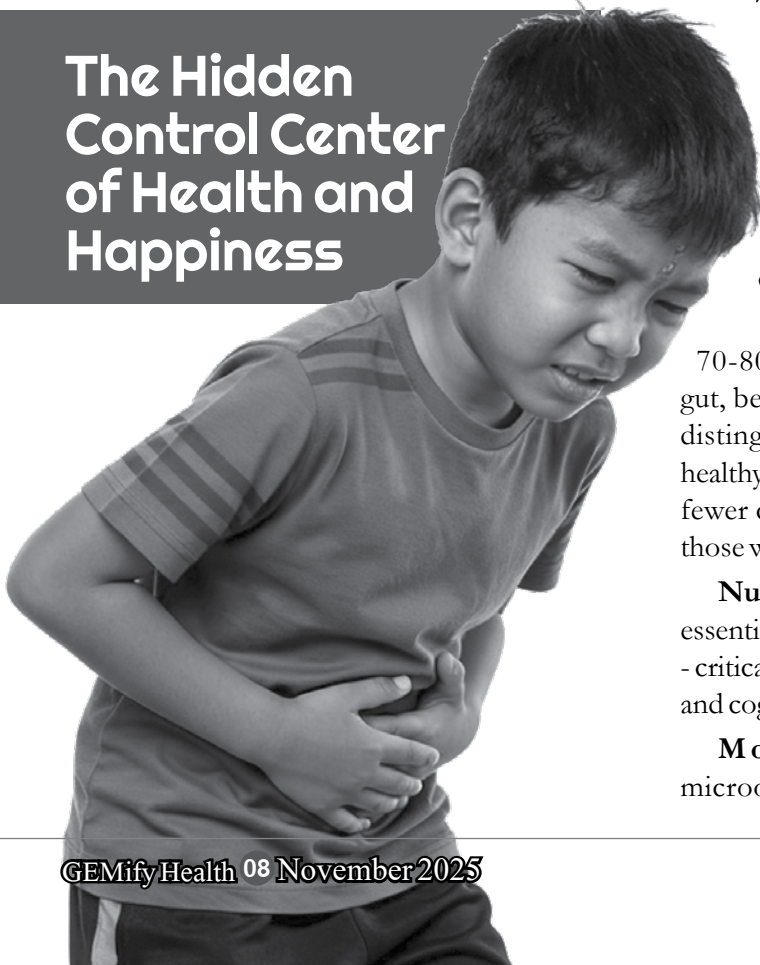
"My tummy hurts, Mom." When your five-year-old resists going to school with this familiar complaint, your first instinct might be skepticism. But what if that stomach ache is actually a sophisticated communication system trying to tell you something profound about your child's emotional and physical wellbeing?

Your child's gut contains over 500 million neurons - more than the spinal cord - forming what scientists now call the "second brain". This intricate neural network communicates directly with the brain through the vagus nerve, creating a two-way information highway that profoundly influences everything from mood to immunity to cognitive development.

### When Emotions Live in the Belly

Up to 40% of children experience stress-related digestive symptoms. That pre-

## The Hidden Control Center of Health and Happiness



**Dr. Fauzia**  
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exam stomach ache, first-day-of-school constipation, or anxiety-induced diarrhea isn't imagination - it's the gut-brain axis in action. When your child says "my stomach hurts," they might actually be saying "I'm nervous" or "I'm scared" in the only language their developing emotional vocabulary knows.

This connection runs deeper than momentary discomfort. Approximately 95% of the body's serotonin - the "happiness chemical" - is produced in the gut, not the brain. A healthy gut microbiome literally manufactures joy, while an imbalanced one can contribute to irritability, mood swings, and difficulty concentrating.

### The Microscopic Army Fighting for Your Child

Your child's gut hosts approximately 100 trillion microorganisms - a thriving metropolis of bacteria, viruses, and fungi working as an invisible health guardian. These microscopic allies perform three critical missions:

**Immune Training Academy:** With 70-80% of immune cells residing in the gut, beneficial bacteria teach immune cells to distinguish friends from foes. Children with healthy gut microbiomes experience up to 50% fewer colds, coughs, and fevers compared to those with imbalanced gut bacteria.

**Nutrient Factory:** Gut bacteria manufacture essential vitamins including B12, K, and folate - critical building blocks for brain development and cognitive function.

**Mood Chemistry Lab:** These microorganisms produce neurotransmitters



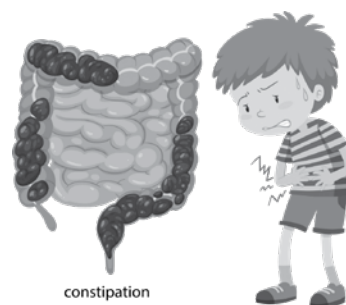
## Parent's Quick Reference

**Critical Period:** Pregnancy to age 2 determines lifelong gut health

**Power Foods:** Daily yogurt, 3-color vegetables, whole grains, legumes, adequate water

**Red Flags:** Chronic stomach pain, irregular bowel habits, persistent bad breath, sleep issues

Your child's gut isn't just processing food - it's manufacturing happiness, building immunity, and shaping their developing brain. When you nourish their gut with intention, you're investing in their physical health, emotional resilience, and cognitive potential for decades to come.



that regulate emotions, explaining why gut health directly impacts behavior, attention span, and emotional resilience.

### The Golden Window: First 1,000 Days

From conception through age two, a critical developmental window shapes lifelong gut health. The gut microbiome normally matures around age three, with 60-70% remaining constant throughout life once adult-like composition is achieved. What happens during this period influences future risks for allergies, asthma, obesity, and diabetes.

**Delivery Method Matters:** Cesarean-section births increase allergy risk by approximately 20%. However, six months of breastfeeding can largely compensate for this difference.

**Breast Milk - Liquid Gold:** Human breast milk contains over 700 types of beneficial bacteria plus unique compounds that feed these microbes. Breastfed infants experience 60% fewer gut infections and develop stronger, more resilient immune systems lasting into adulthood.

### Three Villains Threatening Gut Health

**Villain #1:** Sugar and Processed Foods. Biscuits, chips, and sugary drinks feed harmful

bacteria. Children consuming daily sweetened beverages experience double the rate of stomach complaints.

**Villain #2:** Unnecessary Antibiotics. Each antibiotic course kills both beneficial and harmful bacteria indiscriminately. Gut microbiome recovery can take six months.

**Villain #3:** Fiber Famine. Today's children consume only 40% of the recommended 25 grams of daily fiber, starving beneficial bacteria.

### Warning Signs

#### Your Child's Gut Needs Help

Watch for: fewer than three bowel movements weekly or daily loose stools; stomach pain twice monthly or more; persistent bad breath; sleep difficulties; skin rashes or itching; and unexpected mood changes.

### Five Power Foods for Gut Healing

1. Yogurt and Probiotics
2. Rainbow Vegetables
3. Whole Grains
4. Legumes
5. Water: Target 50ml per kilogram of body weight. A 20kg child needs one liter daily. ●

Here's a revelation that might surprise you: diabetes doesn't actually start in your bloodstream - it begins in your digestive system. While most conversations focus on blood sugar numbers, the real story unfolds deep within your abdomen, where a small but mighty organ struggles under years of metabolic stress.

#### **Your Pancreas: The Sugar Factory Behind Your Stomach**

Hidden behind your stomach lies the pancreas, a 6-inch organ serving as your body's insulin factory. This organ produces digestive enzymes and hormones, with insulin acting as the crucial "key" that unlocks cells to allow glucose entry for energy.

When functioning optimally, your pancreas responds instantly to rising blood sugar. After eating, it rapidly secretes insulin from beta cells, enabling glucose absorption by body cells where it's converted to energy. But what happens when this factory becomes exhausted?

#### **The Journey from Breakfast to Blood Sugar Crisis**

Imagine your morning meal: two idlis, white rice, and sweetened tea. The moment food enters your mouth, digestion begins. Your stomach breaks down the meal, sending it to your small intestine where carbohydrates transform into glucose - rapidly absorbed into your bloodstream.

# **Why Diabetes Really Begins in Your Belly**

## Dr. A.M. Karthick Kumar

MD,DM  
GEM Hospital, Koval



In type 2 diabetes, the body develops insulin resistance. While the pancreas may still produce the hormone, cells cannot use it effectively.

Consequently, the pancreas produces more insulin to compensate, but over time, this demand exhausts the organ, impairing its ability to release insulin. Like a factory running 24/7 overtime, the pancreas eventually cannot keep pace, marking the onset of type 2 diabetes.

### Belly Fat: The Hidden Toxin Factory

The fat surrounding your abdomen isn't just storage - it's a biochemical factory. Visceral fat around abdominal organs alters inflammatory markers, producing cytokines that cause insulin resistance and can damage arteries and the liver.

Research shows that people with normal weight but large waistlines (men: >94 cm; women: >78.5 cm) face the same diabetes risk as those with higher body mass index. This isn't about total weight - it's about fat location. Waist circumference above 90 cm for men or 80 cm for women significantly increases diabetes risk.

### Gastroparesis Diabetes's Digestive Curse

Years of uncontrolled high blood sugar damage stomach nerves, leading to gastroparesis - literally a "paralyzed stomach." The pancreas gradually loses its ability to produce sufficient insulin, while digestive enzyme release also declines.

Symptoms include overwhelming fullness, nausea, vomiting, bloating, and unpredictable blood sugar levels. Insulin timing becomes mismatched with food digestion, making glucose management extraordinarily challenging.

### Gut Bacteria: Hero or Villain?

Emerging research reveals that the trillions of bacteria inhabiting your gut play a significant role in diabetes development. A healthy gut microbiome enhances insulin sensitivity, while excessive sugar, processed foods, and low fiber intake cultivate harmful bacteria, increasing inflammation and worsening insulin resistance.

Think of your gut as a garden: each meal represents a choice - will you nourish beneficial bacteria (flowers) or feed harmful ones (weeds)?

#### Healing Your Gut = Improving Your Diabetes

Here's encouraging news: by healing your digestive system, you can significantly improve or even reverse type 2 diabetes. This isn't just about medications - it's about repairing your digestive health.

### Three Powerful Steps

**Give Your Pancreas Rest:** Overnight fasting (7 PM to morning) allows pancreatic recovery. Studies show that intermittent fasting can improve insulin sensitivity by 20-30% within three months.

**Fiber Becomes Your Ally:** Consuming 30-40 grams of fiber daily feeds beneficial gut bacteria. Vegetables, whole grains, legumes, and fruits are essential. Fiber slows glucose absorption, preventing blood sugar spikes.

**Add Probiotics:** Yogurt, buttermilk, and fermented foods replenish beneficial bacteria. Recent studies show that daily yogurt consumption can reduce HbA1c levels by 0.3-0.8% over six months.

### Warning Signs Your Gut Is Signaling

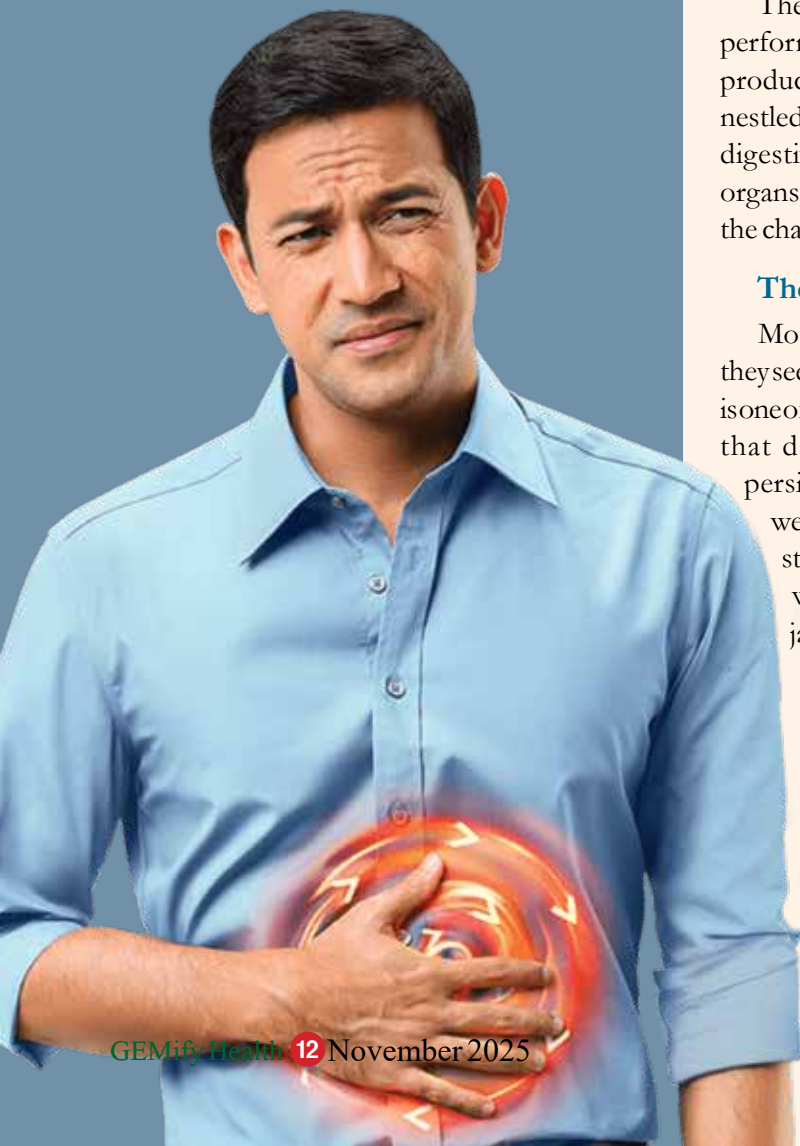
Don't ignore these alerts: prolonged fullness sensation, unpredictable appetite patterns, frequent diarrhea or constipation, post-meal abdominal pain, or unexplained weight changes. These represent early warnings of pancreatic and digestive stress. Taking action today - not next year - yields the best outcomes.





# Why Digestive Cancers

## Demand Your Attention Now



**Dr. K. Shivakumar**

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Gastrointestinal cancers account for a quarter of all cancer cases in India, with rates steadily rising due to lifestyle changes such as increased fast food consumption, alcohol use, tobacco, and a decline in the intake of traditional vegetables and fiber-rich foods. Colorectal cancer is the fourth most common cancer in India, with 64,863 new cases and 38,367 deaths in 2022.

The liver, located in the upper right abdomen, performs over 500 vital functions, including bile production and toxin filtration. The pancreas, nestled near the stomach, produces insulin and digestive enzymes. When cancer strikes these organs, early detection is critical in determining the chances of survival.

### The Whispers You Shouldn't Ignore

Most people miss early warning signs because they seem insignificant. However, loss of appetite is one of the most crucial red flags. Other symptoms that demand immediate attention include persistent abdominal bloating, unexplained weight loss (10 kg in six months), recurring stomach pain, sudden-onset diabetes, pale or white-colored stool, blood in the stool, and jaundice (yellowing of the skin and eyes).

### Understanding Jaundice: A Critical Distinction

There are two types of jaundice that require different treatments. Hepatic jaundice occurs due to liver damage caused by alcohol or fatty liver disease. Obstructive jaundice happens when something physically blocks the bile ducts.

Treating obstructive jaundice with herbal remedies is dangerous and futile as these cannot remove physical blockages. Such delays in proper diagnosis allow cancer to progress unchecked. Medical imaging and appropriate interventions become essential to manage these conditions effectively.

### Who Faces the Highest Risk?

Several factors increase the risk of digestive cancers, including a family history of cancer (not necessarily in the same organ), being over 40 years old, smoking, alcohol consumption, obesity, metabolic syndrome, and diets high in processed foods. Urban areas in India show significantly higher cancer rates compared to rural regions, with some urban areas having double the incidence rates.

Individuals with these risk factors should undergo baseline screenings at age 40, including blood tests, abdominal ultrasounds, and endoscopy. At age 50, colonoscopy should also be added to the list.

### Why Stage Matters Most

The survival rate for localized colorectal cancer is as high as 90.9% over five years. However, survival drops to 73.4% if the cancer has spread regionally, and just 15.6% if it has spread distantly. Pancreatic cancer has a particularly grim prognosis, with only an 8.3% five-year survival rate, while liver cancer has a 13.4% survival rate.

This stark difference - from 90% survival for early-stage cancer to just 15% for late-stage cancer - often results from months of delay caused by diagnostic fear. The earlier the detection, the better the outcome.

### Treatment Options and Hope

Effective treatment options exist for all stages of digestive cancers. Early-stage cancers (Stage 1-2) typically require surgery, with Stage 1



showing up to 99% survival in other cancers like breast cancer due to early detection. Stage 3 may require chemotherapy before surgery to shrink tumors, while Stage 4 focuses on chemotherapy and radiation therapy. Emerging treatments, including targeted therapy and immunotherapy, offer additional hope for patients.

### Fear: The Deadliest Barrier

Fear is often the primary reason people delay seeking medical help. Many self-medicate for months, dismissing symptoms as minor ailments, and only seek help when symptoms like jaundice become undeniable - often by then, it's too late.

The cost of screening should never be an obstacle to early diagnosis.

### Act Now, Not Later

If you're experiencing persistent symptoms, don't wait - consult a doctor immediately. If you have any risk factors, schedule screening at age 40. Make lifestyle changes such as reducing alcohol and tobacco intake, increasing vegetable and fiber consumption, and maintaining a healthy weight. Family support throughout diagnosis and treatment is invaluable.

Don't let fear rob you of decades. That uncomfortable symptom you're ignoring? It deserves medical attention. Your family needs you. Schedule that screening. Make that appointment. Choose life. ●



# The Gift of Life

### How One Person Can Save a Life - And Their Liver Will Grow Back

When Nikko Velazquez learned his girlfriend's father needed a liver transplant, he didn't hesitate. Within weeks, he donated a portion of his liver and was walking the next day. Today, both men are healthy, their livers completely regenerated. This is the miracle of living liver donation.

### THE LIVER'S REMARKABLE POWER

The liver possesses an extraordinary ability: it can regenerate itself. This unique characteristic makes living liver donation possible. When a healthy person donates a portion of their liver, both the donated portion and the remaining liver grow back to nearly full size within months.

"It only takes a portion of a healthy liver to grow into a full-sized liver in a transplant recipient," explains Dr. Rajiv Maharaj, surgeon at GEM

Hospital. "Your healthy liver can become two healthy livers."

In India, more than 15,000 people join the liver transplant waiting list yearly. Tragically, over 2,000 die or become too ill while waiting. A living liver donor can mean the difference between life and death.

### WHO CAN DONATE?

If you're healthy and between 18-60 years old, you could potentially save a life. Donors must meet essential criteria: healthy liver function, good physical condition, psychological stability, no substance use history, and voluntary consent without financial gain.

**Dr Rajiv Maharaj**

MS, DNB  
GEM Hospital, Coimbatore





The evaluation includes blood tests, CT scans, MRIs, cardiac assessments, and consultations with hepatologists, transplant surgeons, independent donor advocates, psychologists, and social workers. Two independent teams evaluate every donor - first for safety, then for final approval.

### THREE WAYS TO DONATE

Directed donation is to someone you know if blood type and liver size are compatible. Paired exchange programs allow incompatible donor-recipient pairs to swap - like GEM Hospital's historic first inter-hospital swap in July 2025, saving two lives. Non-directed donation is anonymous to someone on the waiting list.

### THE SURGERY

The procedure takes four to six hours, removing either the left lobe (20-40%) or right lobe (40-60%). Minimally invasive laparoscopic surgery is increasingly

available at advanced centers like GEM Hospital, India's first to perform laparoscopic living donor surgery in 2017.

"With full laparoscopy, scars are much smaller, recovery is faster, and long-term consequences are minimized," notes Dr. Maharaj. Instead of one 6-12 inch incision, laparoscopic surgery uses several small half-inch incisions, resulting in less pain, shorter hospital stays, and faster recovery.

### THE RECOVERY JOURNEY

Week 1: Hospital stay with close monitoring, typically discharged after 5-7 days.

Weeks 2-3: Early home recovery requires help for daily tasks.

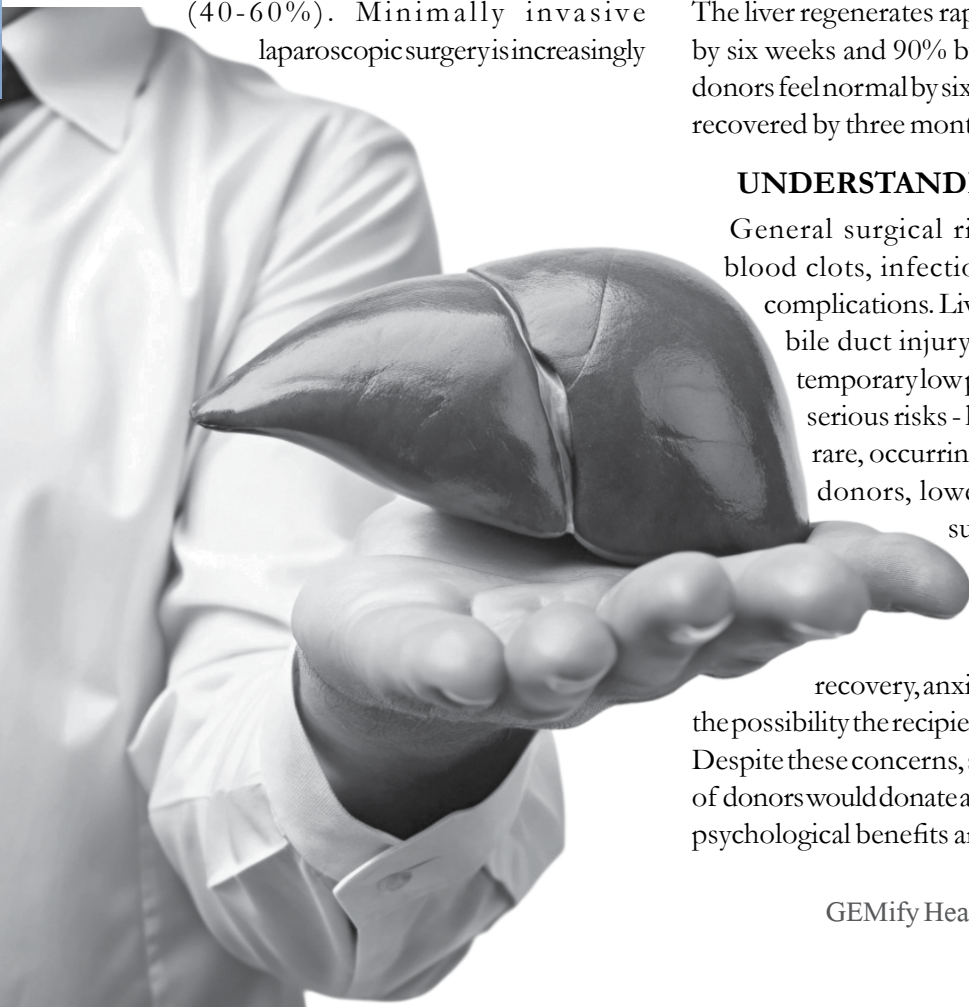
Weeks 4-6: Resume driving and increase activities.

Most donors return to work in 6-8 weeks. The liver regenerates rapidly - reaching 80% size by six weeks and 90% by three months. Half of donors feel normal by six weeks; nearly all are fully recovered by three months.

### UNDERSTANDING THE RISKS

General surgical risks include bleeding, blood clots, infection, and post-operative complications. Liver-specific risks include bile duct injury, incisional hernia, and temporary low platelet counts. The most serious risks - liver failure or death - are rare, occurring in only 0.2% (1 in 500) donors, lower than many common surgeries.

Beyond physical risks, donors may face lost wages during recovery, anxiety about outcomes, and the possibility the recipient's transplant might fail. Despite these concerns, studies show up to 100% of donors would donate again, reporting profound psychological benefits and lasting satisfaction.





## THE BENEFITS

For recipients, living donation offers several advantages: bypassing the waiting list allows surgery before their condition becomes critical; better long-term survival rates, up to 5% better than deceased donor transplants; and faster recovery with a healthier liver.

For donors, there are no long-term health consequences. The liver regenerates fully, and donors live normal, healthy lives. The satisfaction of saving a life creates lasting meaning, with many finding profound fulfillment knowing they made a real difference.

## GEM HOSPITAL PIONEERING INNOVATION

GEM Hospital Coimbatore has led liver transplantation innovation in India. In 2017, they

became India's first to perform laparoscopic living donor liver surgery, revolutionizing donor recovery. In July 2025, GEM Hospital completed India's first inter-hospital swap liver transplant with Sri Ramakrishna Hospital - a historic achievement coordinating surgeries five kilometers apart via real-time video, saving two lives.

Over 25,000 Indians die annually from liver failure, and the shortage of compatible donors is dire. This milestone opens the door for collaborative living donor liver transplant models across hospitals and states.

Both swap transplant donors and recipients went home on day 10, recovering well. This innovation expands possibilities for incompatible donor-recipient pairs and offers hope to thousands waiting.

## MAKING YOUR DECISION

"If you're considering living liver donation, you'll be making one of life's most important decisions," Dr. Maharaj reflects. "Take time to understand all details - the procedure, risks, recovery expectations, and outcomes."

He encourages potential donors to consult their transplant team, which ensures donor health and safety are the top priority, regardless of the decision made.

"The decision to save a life with short-term sacrifice is incredibly powerful," says Dr. Maharaj. "But it's your decision. Make it with full information, understanding, and confidence."

For many donors, the answer is yes. And for thousands waiting for a liver transplant, that "yes" means hope, health, and a second chance at life.

For More Information: GEM Hospital Liver Transplant Program, Coimbatore | Chennai | [www.gemhospitals.com](http://www.gemhospitals.com)



Super Hit Movie

# MY STOMACH'S STORY

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- Rajesh, 45

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**VILLAIN:** Bad  
Eating Habits  
(Destroying  
Everything)

**SPECIAL  
APPEARANCES:**  
Pancreas, Liver,  
Gallbladder

## WARNING SIGNS - DON'T MISS THESE SCENES:

- Persistent stomach pain (2+ weeks)
- Difficulty swallowing
- Unexplained weight loss (5+ kg)
- Blood in vomit or stool
- Chronic heartburn
- Changes in bowel habits (3+ weeks)





On November 8, 1895, German physicist Wilhelm Conrad Röntgen made a discovery that would revolutionize medicine - X-rays. While working with a cathode ray tube shielded by heavy cardboard, he noticed a green fluorescent light caused a platinobarium screen nine feet away to glow, revealing invisible rays capable of penetrating opaque materials.

Röntgen produced an image of his wife Anna Bertha's hand, showing her bones and wedding ring. When she saw the skeletal image, she reportedly exclaimed, "I have seen my death!" But the world saw something far more profound - a window into the human body without surgery. Röntgen received the first Nobel Prize for Physics in 1901.

### The Revolutionary Impact

Radiology fundamentally transformed patient care. Before 1895, diagnosing broken bones or internal injuries required doctors to rely on external symptoms, often necessitating painful and risky exploratory surgery. Today, a simple X-ray provides precise answers within minutes, dramatically reducing patient suffering, risk, and treatment time.

Consider a 50-year-old patient with chest pain arriving at emergency. Before X-rays, doctors would struggle for hours or days to determine the cause, often reaching incorrect conclusions. Today, a chest X-ray instantly reveals pneumonia, enabling immediate treatment and saving lives. This is radiology's magic - making the invisible visible.

### Modern Imaging: Beyond Traditional X-Rays

X-rays are electromagnetic waves acting like light rays, but with wavelengths approximately 1,000 times shorter. From this foundation, radiology has dramatically advanced.

CT scans (Computed Tomography), introduced in the 1970s, create detailed cross-sectional images, excellent for visualizing brain, lungs, and internal organs.

## The Invisible Light That Changed MEDICINE FOREVER



MRI (Magnetic Resonance Imaging) uses powerful magnets to generate stunning images of soft tissues, muscles, and nerves without radiation.

Ultrasound employs sound waves, making it safe for monitoring fetal development during pregnancy.

PET scans (Positron Emission Tomography) display cellular activity throughout the body, helping detect cancer and assess treatment effectiveness.

### Mammography detects breast cancer at early stages when it's most curable

Fluoroscopy offers real-time moving images, assisting physicians in guiding procedures.

Digital radiography has replaced traditional film-based X-rays, offering instant, high-quality images.

### Direct Impact on Patient Lives

Early detection represents radiology's most



crucial benefit. Cancer, tuberculosis, heart disease, and stroke can now be identified before symptoms appear, significantly improving survival rates. Stage 1 non-small cell lung cancer detected through chest X-ray shows a 60-70% five-year survival rate.

Precision is another major advantage. Orthopedic surgeons align fractures with millimeter accuracy using X-rays. Cardiologists visualize blocked blood vessels through angiography and immediately place stents. Neurologists diagnose and treat strokes with CT scans, minimizing brain damage. Dentists detect hidden tooth decay and root problems using dental X-rays.

Minimally invasive surgery became possible through radiology. Surgeons now perform complex procedures through small incisions, guided by real-time imaging. This leads to faster healing, less pain, and shorter hospital stays - procedures once requiring weeks of hospitalization now allow patients home within 24 hours.

## Safety and Challenges

Initially, X-rays were believed to pass harmlessly through flesh like light. However, researchers began reporting burns and skin damage from exposure. Modern equipment uses minimal radiation doses, and doctors prescribe X-rays only when necessary. For pregnant women, radiation-free alternatives like MRI and ultrasound are preferred. Patients receive lead apron protection, and technicians follow strict safety protocols.

## The Exciting Future

Radiology's future sparkles with promise. Artificial intelligence now helps radiologists analyze scans within seconds, detecting abnormalities the human eye might miss. 3D and 4D imaging allows physicians to visualize organs from all angles. Molecular imaging can detect diseases at cellular levels - years before symptoms appear.

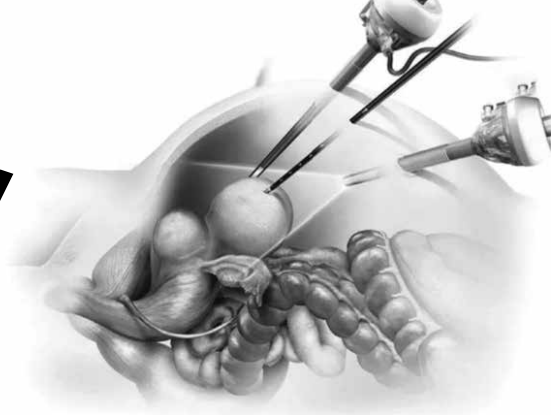
Portable X-ray machines now reach remote villages, making advanced imaging accessible to everyone, not just urban patients. Tele-radiology enables specialists to consult on scans from anywhere globally, connecting rural health centers with city hospitals. In India, this bridges the gap between village clinics and metropolitan expertise.

Röntgen never patented his discovery, ensuring the world could freely benefit from his work. Despite personal sacrifices - including donating his Nobel Prize money to his university - he ensured his legacy endured.

From Röntgen's accidental discovery 130 years ago to today's sharp 3D scans, radiology has become modern medicine's indispensable tool. It transformed diagnosis from guesswork to certainty, surgery from exploratory to precise, and disease detection from delayed to early intervention.

From that first grainy image of Anna Bertha's hand to today's advanced scans, the journey remains remarkable. Every scan saves a life. ●

# ENDOGYNECOLOGY FOR WOMEN



Many gynecological conditions, such as uterine fibroids, ovarian cysts, endometriosis, and uterine prolapse, often require surgical intervention. Traditionally, these procedures involved large incisions, prolonged hospital stays, slow recovery, and significant pain, which deterred many women from seeking treatment. However, endogynecology – a modern approach to minimally invasive surgery – has transformed this experience, offering painless procedures and rapid recovery.

## What is Endogynecology?

Endogynecology refers to minimally invasive surgical procedures performed on the female reproductive organs using small incisions. The primary techniques are laparoscopy and hysteroscopy. In laparoscopy, surgeons use special instruments and a camera inserted through 5-10 millimeter incisions in the abdomen. The procedure is conducted while viewing the surgery on a monitor for precision. Hysteroscopy involves inserting a thin telescope through the vagina into the uterus, requiring no external incision at all.

These advanced techniques accomplish the same tasks as traditional surgery – removing tumors, treating fibroids, performing hysterectomies, correcting tubal blockages, and treating endometriosis – but with far less trauma to the body.

## Minimally Invasive Procedures Available

Laparoscopic Hysterectomy: In cases of uterine

cancer, large fibroids, or uncontrollable bleeding, laparoscopy allows safe removal of the uterus through three to four small incisions, rather than the large 15-20 cm incision required by traditional methods.

**Myomectomy:** This procedure removes uterine fibroids while preserving the uterus – ideal for unmarried women or those who wish to maintain fertility.

**Cystectomy:** Ovarian cysts cause significant discomfort, but laparoscopic surgery removes these cysts while preserving the ovary, which is essential for maintaining fertility.

**Endometriosis Surgery:** Laparoscopy removes abnormal tissue growing outside the uterus, reducing pain and improving fertility for women suffering from endometriosis.

**Hysteroscopic Polyp Removal:** Uterine polyps, which cause abnormal bleeding or miscarriage, can be removed through the vagina with no external incision. Patients can go home the same day.

**Tubal Surgery:** Laparoscopy repairs blocked fallopian tubes, a common cause of infertility, or removes damaged tubes, improving the success rates of fertility treatments like IVF.

**Pelvic Organ Prolapse Repair:** Laparoscopy effectively treats uterine,

**Dr. Sai Darshini**  
MS, OG Fellow in Endogynecology



## PRE-SURGERY PREPARATION CHECKLIST

- Consult with your doctor and ask all questions
- Complete required tests: blood work, ultrasound, ECG
- Stop smoking at least 2 weeks before surgery
- Avoid food for 8 hours before surgery
- Arrange home help for the first week
- Wear loose clothing for comfort
- Follow doctor's instructions carefully for quick recovery
- Avoid heavy physical work for 4-6 weeks



bladder, or bowel prolapse, commonly caused by childbirth or aging, repositioning organs with minimal trauma.

### Recovery Benefits

**Endogynecology offers significant advantages over traditional surgery:**

**Minimal Pain:** Smaller incisions mean much less pain. Many women stop taking pain medication within two to three days.

**Tiny Scars:** Only 5-10 millimeter scars remain, which fade over time, compared to the large 15-20 cm scars from traditional surgery.

**Reduced Blood Loss:** The precision of these techniques minimizes blood loss. Blood transfusions are rarely needed.

**Quick Recovery:** Many patients go home in 1-2 days; some even the same day. Traditional surgery requires 5-7 days of hospitalization.

**Rapid Return to Normal Life:** Most women return to normal activities in 2-3 weeks and to work in 4-6 weeks, compared to 6-8 weeks of rest after traditional surgery.

**Lower Infection Risk:** Smaller incisions significantly reduce infection risk, promoting faster healing.

**Better Cosmetic Results:** Small, nearly invisible scars don't affect body image or confidence.

### When to Consult a Gynecologist

**Consult a gynecologist if you experience:**

Heavy or prolonged menstrual bleeding, bleeding between periods, or bleeding after intercourse. Persistent pelvic or abdominal pain, especially during menstruation. Abdominal swelling or palpable masses. Infertility after one year of trying to conceive.

Emergency symptoms include sudden severe abdominal pain, fever, and vomiting, which could indicate serious uterine or ovarian complications. Women over 40, those who've given birth, and married women should have annual gynecological exams for early detection.

Endogynecology has revolutionized gynecological surgery, offering women a less painful, quicker, and safer option. These minimally invasive procedures help women return to their daily lives faster with fewer complications.

At GEM Hospital, skilled gynecological surgeons perform these modern procedures using advanced technology and expert care, ensuring the best outcomes for women.

Don't ignore symptoms – seek timely treatment and enjoy better health with modern, minimally invasive solutions. ●



## It's time to act – without hesitation!

Swelling in the rectum, pain, and bleeding during bowel movements – these are common symptoms of piles, medically known as hemorrhoids. However, many people suffering from this condition hesitate to see a doctor due to embarrassment or shame. This silence can transform a minor problem into a serious health issue.

### **It's Time to Break the Silence**

Piles is an extremely common condition that affects people of all ages, not just older adults. Prolonged sitting on the toilet, constipation, pregnancy, heavy lifting, and family history are significant contributing factors.

In the early stages, there may be slight bleeding during bowel movements, sometimes without pain. However, many people ignore these symptoms. Over time, pain increases, making sitting or walking difficult. Some may experience prolapsed hemorrhoids, where the hemorrhoids protrude outside the body. It's often only at this advanced stage that most people finally seek medical help.

We rush to the doctor for stomach pain, so why hesitate to seek help for piles? It's a common medical issue, and doctors see many patients with this problem every day. There is nothing to be embarrassed about.

### **Modern Painless Treatments**

Many people fear that piles treatment automatically means surgery. The truth is that modern medicine offers numerous painless, simple treatment options.

For early-stage piles, medications, ointments, and lifestyle changes are often sufficient. A fiber-rich diet, drinking plenty of water, and regular exercise can greatly help.

For second-degree piles, a simple procedure called rubberband ligation is an effective treatment.

# PILES

## WHY SUFFER IN SILENCE?



## WARNING SIGNS – SEE A DOCTOR IMMEDIATELY

- Heavy bleeding during bowel movements or black-colored stools
- Unbearable pain or swelling
- Fever and chills
- Hemorrhoids that cannot be pushed back inside
- Unexplained weight loss or sudden changes in bowel habits
- First-time bleeding after age 50

Note: These symptoms could indicate more serious conditions. Immediate medical examination is essential.

In this procedure, the hemorrhoids are tied off with a small rubber band, stopping blood flow, and they naturally fall off within a few days. This method is easy, quick, and painless.

In sclerotherapy, a medicine is injected into the hemorrhoids to shrink them. Infrared coagulation uses heat to reduce hemorrhoids. All of these procedures are quick, safe, and require little to no downtime.

Only third or fourth-degree piles typically require surgery. However, even in these cases, modern techniques like laparoscopy and laser surgery reduce pain and ensure faster recovery.

### How to Prevent Piles?

Prevention is always the best approach. The key is avoiding constipation. Incorporate fiber-rich foods like ragi, oats, fruits, and vegetables into your diet. Banana stem, leafy greens, papaya, and pears are excellent sources of fiber.

Drinking at least eight glasses of water a day is essential for good digestion. Warm water in the morning can help stimulate bowel movements.

Avoid sitting on the toilet for long periods. Don't take

**Dr. R. Vinoth Kumar**

MD, DM  
GEM Hospital, Chennai



your phone with you; only go when you feel the urge, and don't strain if nothing happens.

Walking for at least thirty minutes daily is vital. Those who sit for long hours at work should make a habit of getting up and walking around frequently. Maintaining a healthy weight is also key.

### When is Surgery Needed?

Not all piles patients require surgery. However, in certain situations, surgery becomes necessary.

Surgery may be needed when hemorrhoids become very large and prolapse outside, when medications no longer work, when frequent bleeding causes anemia, or when there's severe pain. At GEM Hospital, piles surgery is performed using modern methods like laparoscopy and laser techniques. These methods involve small incisions, resulting in minimal pain, tiny scars, and quick recovery – patients can typically go home in two to three days and return to work soon after. ●



# A DANGEROUS WARNING SIGNAL

## A Common Dangerous Misconception

"Eating keezhanelli (phyllanthus) will cure jaundice" is what many believe. This is dangerous. While keezhanelli has traditional use for liver support, there's no scientific evidence it cures jaundice. Jaundice varies—some types resolve naturally, others need immediate treatment, some signal cancer. Herbal remedies should never replace proper medical care.

### What is Jaundice?

Jaundice occurs when bilirubin, a yellow pigment, accumulates in your blood, turning your skin, eyes, and mucous membranes yellow. Newborn jaundice typically disappears within two weeks. Adult jaundice requires careful attention and can be life-threatening.

Your liver processes bilirubin and eliminates it. When the liver is damaged or bile ducts blocked, bilirubin accumulates, causing jaundice.

### Dangerous Causes

Certain medications and excessive alcohol

cause jaundice. But the most dangerous causes are Hepatitis B and C viruses. After initial infection, these viruses remain silent for decades, slowly damaging the liver without symptoms.

This long silent phase is extremely dangerous. When diagnosed in its chronic stage, accumulated liver damage significantly increases the risk of cirrhosis or liver cancer. Your liver is central to your digestive system—it produces bile for digestion, filters blood, and stores nutrients. When the liver suffers, the entire digestive system is affected.

### Warning Signs

Symptoms include fever, fatigue, loss of appetite, and yellow discoloration of the eye whites. Urine turns dark yellow or brown, stools become pale clay-colored, and abdominal pain and itching occur.

**Dr. B HARRI PRASAD**  
D.M.  
GEM Hospital, Coimbatore



## Stay Alert

- Vaccine: Hepatitis B vaccine = 95%+ protection for life
  - Keezhanelli: Traditional use only-no scientific proof, medical treatment essential
  - Silent Decades: Hepatitis damages liver for years without symptoms
  - 2+ Weeks Symptoms: Needs immediate medical attention
  - Hepatitis C Curable: 95% cure rate (8-12 weeks)
  - Test Regularly: HBsAg, Anti-HCV-especially if high-risk
  - Liver Heals: Early detection enables regeneration
  - Prevention: Own razors/toothbrushes, safe sex, avoid alcohol
  - Monitor: Liver tests every 6 months if high-risk
- Early detection saves lives. Trust your doctor-let your liver heal!

Jaundice persisting beyond two weeks, sudden weight loss, persistent abdominal pain, blood vomiting, or breathing difficulty require immediate hospital attention.

### Modern Prevention and Treatment

Hepatitis B vaccine, administered within twenty-four hours of birth, provides over 95% protection-highly effective, near-total protection for life. Vaccines exist for Hepatitis A and E. However, no Hepatitis C vaccine exists yet.

Hepatitis B treatment uses antiviral medications that significantly slow disease progression and reduce liver cancer risk by 60%.

Direct-acting antiviral drugs for Hepatitis C are highly effective, curing 95% of patients within 8-12 weeks. Post-treatment, liver cancer risk decreases by 65%.

### Preventive Measures and Early Detection

Maintain balanced protein diet, walk 30 minutes daily, control body weight (excess weight causes fatty liver), completely avoid alcohol and unnecessary medications. Never share razors,

toothbrushes, or nail clippers. Practice safe sex.

Regular health check-ups are crucial, especially for high-risk individuals. Even feeling healthy, regular liver function monitoring catches issues before symptoms appear. High-risk individuals need liver function tests every six months.

HBsAg and Anti-HCV tests detect Hepatitis B and C infections. Liver function tests assess liver health. Regular ultrasounds detect structural liver changes.

### The Liver's Remarkable Healing Power

Here's hope: your liver possesses extraordinary regenerative capacity. Even when damaged, if caught early and treated properly, the liver can repair itself and restore function. Liver cells regenerate, and with medical intervention, lifestyle changes, and abstinence from harmful substances, significant healing is possible. Early detection gives your liver the best chance to heal completely.

Don't trust home remedies alone. Jaundice can signal serious problems including viral hepatitis and cancer. Always consult qualified medical professionals for proper diagnosis and treatment. Your liver can heal-give it the chance through early medical intervention.





# BELLY FAT AND HEART

The fat accumulating around the belly is often dismissed as merely a cosmetic issue. However, medically, belly fat poses a significant threat to your heart and overall health. This hidden danger silently affects your heart, metabolism, and vital organs.

## The Danger of Visceral Fat

Our body contains two types of fat: subcutaneous fat (under the skin) and visceral fat (surrounding internal organs). While subcutaneous fat is relatively harmless, visceral fat is highly dangerous. It surrounds vital organs like the liver, intestines, stomach, and pancreas.

This internal fat is not just storage – it's an active tissue releasing harmful chemicals and hormones. These travel throughout the body, causing inflammation, insulin resistance, and elevated blood pressure.

Measuring waist circumference is the simplest assessment method. For men, above 90 cm, and for women, above 80 cm indicates the danger zone. This measurement is more important than weight alone. Even some lean individuals may carry excessive visceral fat.

## Heart Disease Risk

Belly fat and heart disease are directly connected. Visceral fat contributes to heart problems through multiple pathways:

**Cholesterol Imbalance:** It raises bad cholesterol (LDL) and lowers good cholesterol (HDL), creating plaque buildup in arteries and narrowing blood vessels. Cardiologists at GEM Hospital observe daily that patients with excessive belly fat have significantly more coronary artery blockages.

**Increased Blood Pressure:** Chemicals released by visceral fat constrict blood vessels, forcing the heart to work harder. Over time, this weakens the heart muscle.

**Chronic Inflammation:** This damages blood vessel walls, leading to atherosclerosis – a major cause of heart attacks and strokes.

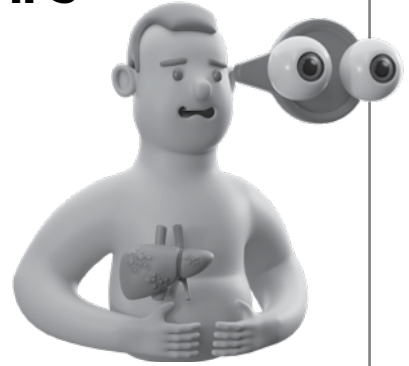
**Blood Clotting:** Visceral fat causes blood to thicken, raising the risk of sudden coronary artery blockage.

**Dr. Kumaran**  
GEM Hospital, Tiruppur



## VISCERAL FAT REDUCTION - QUICK TIPS

- White rice, maida → Brown rice, ragi, oats
- Fried food → Steamed or boiled food
- Sugary drinks → Water, green tea, lemon water
- 30-45 minutes brisk walking daily
- Weight training 2-3 times per week
- Sleep by 10 PM, get 7-8 hours
- Just 5-10% weight loss in 3 months reduces visceral fat and heart risk significantly!



### Metabolic Syndrome

Belly fat is central to metabolic syndrome—a cluster of conditions increasing the risk of heart disease, stroke, and type 2 diabetes. It's diagnosed when three or more of these factors are present: high waist circumference, high blood pressure, elevated blood sugar, high triglycerides, and low HDL cholesterol.

Insulin resistance lies at the core. Visceral fat cells don't respond properly to insulin. The pancreas produces more insulin, but blood sugar remains high, eventually leading to type 2 diabetes.

The liver also suffers, developing fatty liver disease. This can progress to liver inflammation or failure. Hepatologists at GEM Hospital warn of an alarming rise in fatty liver disease, even among younger populations.

### Reversal Strategies – There is Hope

The encouraging news is that belly fat and its dangers can be reduced through proper lifestyle changes:

**Dietary Changes:** Avoid refined flour, sweets, and fast food—these directly increase visceral fat. Focus on whole grains, fiber-rich vegetables, fruits, legumes, fish, and eggs. Limit saturated fats like butter and ghee; choose healthy fats from olive oil and nuts. Eat five small meals instead of three

large ones. Avoid eating after 8 PM. Intermittent fasting with a 12-14 hour gap helps reduce belly fat.

**Exercise:** The most effective way to combat visceral fat is exercise. Aim for at least 150 minutes of moderate-intensity activity weekly. Brisk walking, jogging, cycling, and swimming burn visceral fat effectively. Weight training is equally important—increased muscle mass boosts metabolism. Abdominal exercises like crunches, planks, and leg raises strengthen core muscles, but must be combined with dietary control.

**Stress Management:** Chronic stress increases cortisol hormone, which directly adds belly fat. Practice yoga, meditation, and breathing exercises. Get 7-8 hours of sleep nightly.

**Avoid Smoking and Alcohol:** Smoking increases visceral fat. Alcohol adds excessive calories and damages the liver. Complete avoidance is best.

**Medical Monitoring:** Annual comprehensive health checkups are essential. Monitor blood sugar, cholesterol, liver function, and heart health.

Belly fat is not just a cosmetic problem—it's a life-threatening condition that silently damages your heart, liver, pancreas, and blood vessels. But there is hope. Healthy eating, regular exercise, good sleep, and stress management can transform your life. Start today—your heart will thank you! ●



The pancreas, a small but vital organ located between the stomach and spine, plays a crucial role in digestion and regulating blood sugar levels. However, when cancer develops here, it becomes one of the most dangerous forms of cancer. Often called the "silent killer," pancreatic cancer is challenging to detect early, but timely diagnosis can make all the difference.

## Why is it Called the "Silent Killer"?

Pancreatic cancer earns this name because early symptoms are vague and easily overlooked. Located deep in the abdomen, small tumors can't be detected externally or through routine examinations. Early signs like mild abdominal discomfort, indigestion, or gas are often dismissed as common issues.

# EARLY DETECTION IS KEY



## Dr. S. Srivatsan Gurumurthy

M. S, DNB

GEM Hospital, Coimbatore



As the cancer progresses, clearer symptoms appear - but by then, it's often too late. The cancer has usually spread to nearby or distant organs, making treatment difficult and reducing cure chances. Only 20% of diagnosed patients are candidates for surgery; the rest are diagnosed at advanced stages. However, early detection significantly improves survival rates, and surgical removal can offer a cure.

## Risk Factors and Prevention

Smoking is the most significant risk factor, doubling the risk. Toxic chemicals in tobacco damage the pancreas; quitting reduces risk over time.

Diabetes is linked to pancreatic cancer. Long-term diabetes increases risk, and sudden-onset diabetes after age 50 can be an early warning sign requiring thorough examination.

Chronic pancreatitis, caused by excessive alcohol, gallstones, or genetic factors, raises risk significantly. Recurrent inflammation can lead to cellular changes resulting in cancer.

Obesity and diet are key contributors. Excess weight, particularly belly fat, increases risk. Avoid red meat, processed foods, and high sugar intake. Focus on fruits, vegetables, and whole grains.

Family history matters. If close relatives had pancreatic cancer, your risk is higher. Genetic mutations like BRCA1, BRCA2, and Lynch syndrome also elevate risk.

Age plays a role, with most cases occurring between 60-80, though younger people can be affected.

## New Diagnostic Methods

Medical technology advances have improved early detection.

## WARNING SIGNS - SEE A DOCTOR IMMEDIATELY

- Persistent upper abdominal pain radiating to back
- Unexplained weight loss (over 5 kg/month)
- Jaundice - yellowing of skin and eyes
- Pale stools, dark urine
- New-onset diabetes (especially after age 50)
- Persistent nausea, vomiting, indigestion
- Discomfort after fatty foods

Note: These symptoms may indicate other conditions but shouldn't be ignored. Comprehensive examination is crucial.



CA 19-9 blood test is a tumor marker, used with other tests as it can be elevated in other conditions.

Endoscopic Ultrasound (EUS) is highly accurate. A flexible tube inserted through the mouth provides close-up pancreas views, detecting small tumors and allowing biopsies.

MRCP and CT scans offer detailed imaging of the pancreas, bile ducts, and surrounding organs, assessing tumor size, location, and spread.

PET scans determine cancer spread, aiding treatment planning.

Genetic testing identifies high-risk individuals with family history or genetic mutations.

GEM Hospital's Hepatopancreatobiliary Surgery division uses these advanced tools for accurate, timely diagnosis.

### Treatment Advances

Surgery is most effective if tumors can be completely removed. The Whipple procedure and distal pancreatectomy are complex but life-saving. GEM Hospital's experienced hepatopancreatobiliary surgeons specialize in these intricate procedures.

Chemotherapy has improved with new combinations, offering better outcomes before and after surgery.

Radiation therapy, specifically Stereotactic Body Radiotherapy (SBRT), precisely targets tumors while minimizing damage to healthy tissue.

Targeted therapy and immunotherapy show promise. Drugs targeting genetic mutations and stimulating the immune system are yielding encouraging results in trials.

### Early Detection Save Lives

Pancreatic cancer may be a silent killer, but awareness and early detection save lives. Understand risk factors and take preventive measures: quit smoking, maintain healthy weight, eat balanced meals, and manage diabetes.

Don't ignore warning signs - persistent abdominal pain, unexplained weight loss, jaundice, or digestive problems require immediate medical attention. Those with risk factors should undergo regular checkups.

At GEM Hospital, our multi-disciplinary team of surgeons, oncologists, radiologists, and nutritionists provides comprehensive care. Awareness, early detection, and prompt treatment are keys to beating pancreatic cancer. ●





**1995**, Coimbatore. A patient arrives for gallbladder surgery expecting a six-inch incision, a week-long hospital stay, and months of recovery. Instead, Dr. C. Palanivelu offers something revolutionary: three tiny punctures, discharge the next day, and a return to work within a week. This was South India's first laparoscopic surgery - a moment that would reshape Indian medical history.

Today, GEM Hospital performs over 6,000 such procedures annually. But the story behind this transformation is far more remarkable than the technique itself.

### **From Palm Oil Plantations to Operating Theaters**

Born into an impoverished farming family in Namakkal district, Palanivelu's journey began with tragedy. His six-year-old sister died from pneumonia due to lack of medical access, and villagers perished from treatable cancers. These losses deeply impacted young Palanivelu.

Drought forced his family to Malaysia, where he spent five years working as a laborer in a palm oil plantation. Returning at 21, he completed his education and entered Stanley Medical College. He started his medical career at 40 - an age when most doctors are already established. Yet, he was about to revolutionize the field.

### **Understanding Keyhole Surgery**

Laparoscopic surgery - also known as "keyhole surgery" - replaces large incisions with small punctures of just 0.5-1.5 centimeters. A laparoscope (a camera with light) is inserted to project the abdominal cavity onto a screen in stunning detail. Surgeons operate with specialized instruments while carbon dioxide gas creates space inside for a clear view.

### **The difference is transformative:**

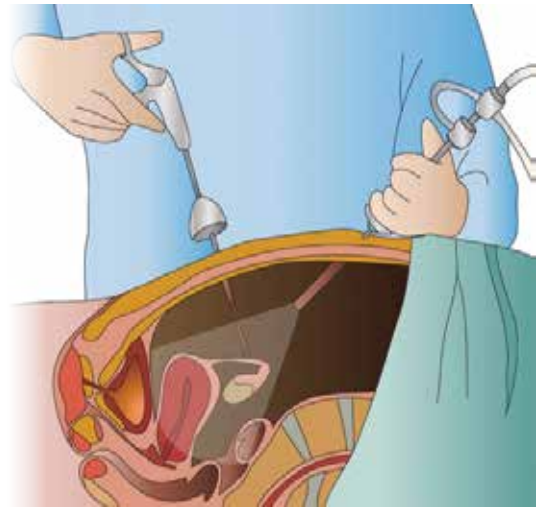
Traditional Surgery: 10-20 cm incisions, 5-7 days hospitalization, 4-8 weeks recovery, severe pain, visible scarring, higher infection risk (up to 15%).

# **How India's Pioneer Transformed Surgery Forever**

## The Laparoscopic Advantage

- Tiny 0.5-1.5 cm punctures vs. large incisions
- 1-2 days hospital stay vs. 5-7 days
- Back to work in 1-3 weeks vs. 4-8 weeks
- 50-70% less infection risk
- Minimal scarring and pain

Ask your surgeon if laparoscopic surgery is right for you.



Laparoscopic Surgery: 0.5-1.5 cm punctures, 1-2 days hospitalization, 1-3 weeks recovery, minimal pain, barely visible scars, 50-70% reduced infection risk.

For India's working population, particularly farmers and daily-wage laborers, this means faster recovery and minimal disruption to livelihood - turning medical advancement into economic survival.

### Techniques That Changed Global Medicine

Dr. Palanivelu didn't just adopt laparoscopic surgery - he pioneered techniques that have become the gold standard worldwide:

The Palanivelu Technique for esophageal cancer is practiced globally. His laparoscopic Whipple procedure for pancreatic cancer was a world-first. The Palanivelu Trocar System for liver hydatid cysts became standard protocol. His single-port colon cancer removal earned the prestigious SAGES award.

His techniques are now taught at medical universities across the United States, the United Kingdom, Japan, China, and Korea. His surgical texts have been translated into Spanish, Chinese,

and Korean - an unprecedented achievement for an Indian surgeon. His surgical videos are used as the benchmark for laparoscopic training worldwide.

### When Is Laparoscopy Recommended?

Laparoscopic surgery is used for a wide range of procedures, including gallstone removal, appendectomy, hernia repair, gastrointestinal cancers, pancreatic diseases, liver cysts, bariatric surgery, kidney removal, and gynecological conditions.

However, it may not be suitable for patients with severe cardiac or pulmonary conditions, extensive abdominal scarring, or active internal bleeding.

### The Lasting Impact

Laparoscopic surgery represents more than just a technological advancement - it's a life-transforming revolution. A farmer's son from Namakkal has changed global medicine, offering thousands a new lease on life.

If you need surgery, ask whether a laparoscopic approach is possible. Less pain, faster recovery, better life - that's the keyhole revolution's promise.

# When India's Surgical Pioneer Changed Japan's Medical Standard



**O**SAKA, OCTOBER 2025 - In a packed auditorium at the 78th Annual Meeting of the Japanese Association for Thoracic Surgery, Professor C. Palanivelu received one of the field's highest honors: Foreign Honorary Membership. But this wasn't just another award ceremony. This was Japan formally acknowledging that an Indian surgeon had fundamentally changed how their nation approaches one of surgery's most challenging procedures.

"You changed the standard thoracic procedure for esophagectomy in Japan," declared Professor Takushi Yasuda, Congress President of JATS 2025. "It is not an exaggeration to say that your contributions to esophageal surgery in Japan are immeasurable."

For a nation renowned for surgical excellence, this wasn't a casual compliment—it was a recognition of revolution.

## The Innovation That Transformed a Nation's Practice

In 2006, Prof. Palanivelu published groundbreaking research in the *Journal of the American College of Surgeons* that introduced the world to thoracoscopic esophagectomy in prone position - a technique for removing cancerous portions of the esophagus through minimally invasive surgery with the patient lying face-down.

The results were extraordinary: just 1.54% perioperative mortality, median hospital stays of only 8 days, and significantly reduced respiratory complications. Traditional approaches, while effective, couldn't match these outcomes.

Japanese thoracic surgeons, known for their meticulous adoption of evidence-based practices, took notice. Within years, hospitals across Japan began shifting from the traditional left-lateral decubitus position (patient on their side) to Prof. Palanivelu's prone position technique. Today, it's become the Japanese standard—a rare instance of an entire nation's surgical practice being transformed by one surgeon's innovation.

## The Palanivelu Prone Position Technique

- Introduced in 2006 research publication
- Now the standard approach in Japan
- Just 1.54% perioperative mortality
- 8-day median hospital stay
- Superior visualization and ergonomics
- Significantly reduced respiratory complications

A Tamil Nadu innovation that changed Japanese surgical practice - testament to India's growing global medical influence.

### Why the Prone Position Works

Esophageal cancer surgery ranks among the most technically demanding procedures in medicine. The esophagus, a muscular tube connecting throat to stomach, runs through the chest cavity surrounded by vital structures: the heart, major blood vessels, and lungs.

The prone position offers distinct advantages. With patients face-down, gravity naturally moves the lungs away from the operative field, providing surgeons with superior visualization. The ergonomic positioning reduces surgeon fatigue during these lengthy procedures - often lasting 4-6 hours. Most crucially, the technique maintains remarkably low respiratory complication rates, a major concern in esophageal surgery.

Multiple international studies have since validated the technique's effectiveness, with research confirming outcomes comparable or superior to traditional approaches. But Japan's wholesale adoption stands as the technique's most powerful validation.

### Beyond Technical Excellence

The Japanese honor arrives as Prof. Palanivelu's GEM Hospital continues demonstrating that surgical excellence and accessibility aren't mutually exclusive.

"To see the prone position technique widely adopted across Japan and contributing to improved patient outcomes is the greatest reward for any surgeon," Prof. Palanivelu reflected during the award ceremony. "This honor belongs to my entire team at GEM Hospital and to all the surgeons who have embraced and refined this technique."

### The Broader Impact

The Japanese Association for Thoracic Surgery's annual honorary membership recognizes overseas doctors who have made significant contributions to Japanese thoracic surgery's progress. Previous recipients represent the field's global elite - surgeons whose work fundamentally advanced practice.

Prof. Palanivelu's inclusion in this distinguished group signifies more than personal achievement. It represents India's growing influence in global surgical innovation and validates the principle that transformative medical advances can emerge from anywhere when driven by clinical excellence and genuine commitment to patient outcomes.

For esophageal cancer patients in Japan and increasingly worldwide, the prone position technique offers hope through improved outcomes and faster recovery. ●



## PANCREATIC CANCER SURVIVORS MEET

GEM Hospital Chennai hosted an inspiring Pancreatic Cancer Survivors Meet, bringing together patients who have successfully battled this challenging disease. Survivors shared their journeys from diagnosis to recovery, offering hope to newly diagnosed

patients and families. The gathering featured interactions with GEM's specialist surgeons who pioneered laparoscopic pancreatic surgery in India. Attendees formed support networks and learned about warning signs, early detection importance, and modern surgical advances. The event proved that with expert care and minimally invasive techniques, pancreatic cancer can be defeated.



## BREAST CANCER AWARENESS PROGRAM

GEM Hospital conducted a comprehensive Breast Cancer Awareness Program at Hindustan College, empowering young women with life-saving knowledge. Medical experts demonstrated breast self-examination techniques and addressed common myths about breast cancer. Students learned that monthly self-checks, healthy lifestyles, and early detection lead to 95%+ survival rates. The interactive session broke cultural taboos around breast health discussions.

# World- class expertise meets world- class technology to fight against cancer



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