



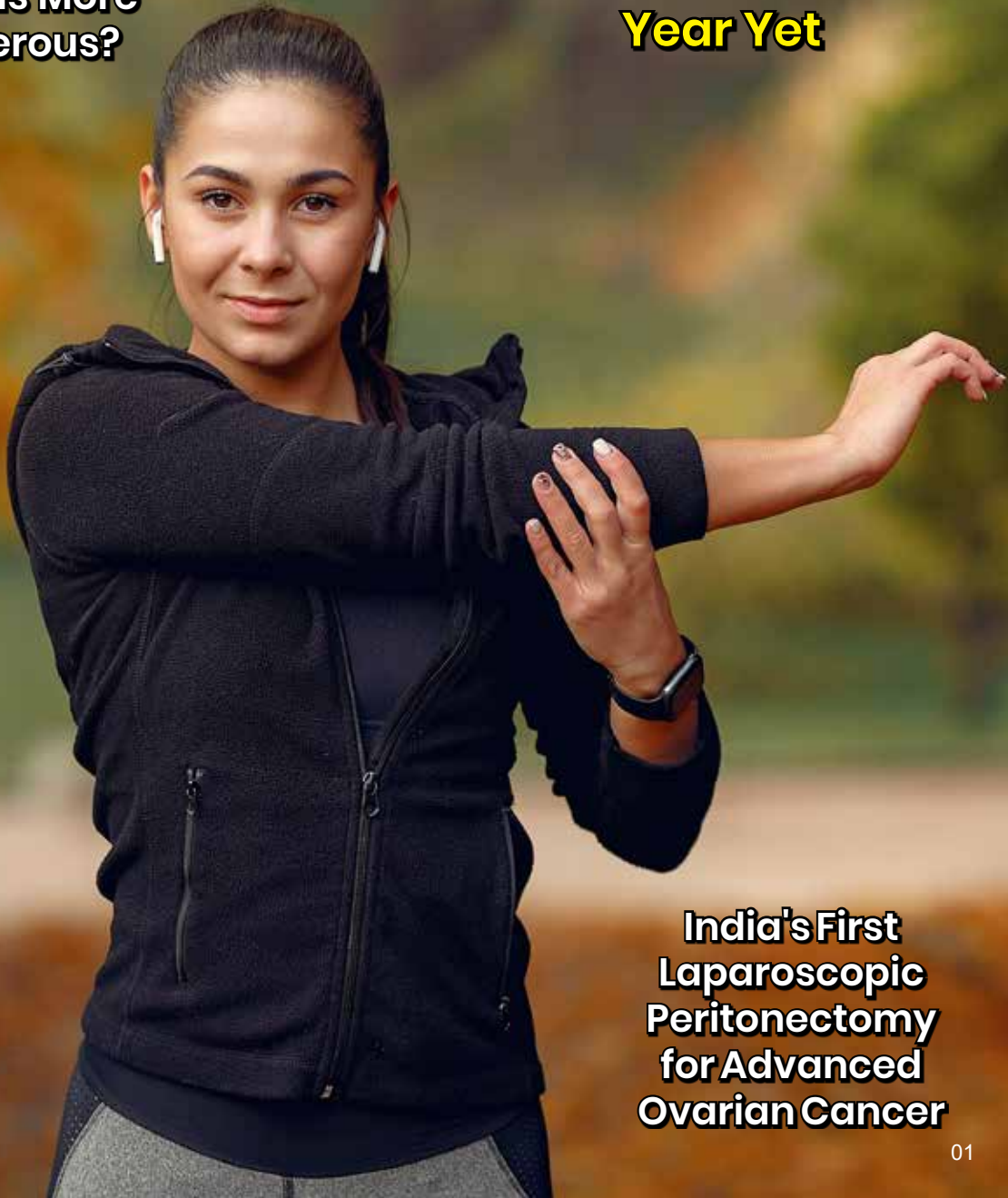
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# GEMify Health

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

**Binge Drinking  
or Daily Drinking  
Which Is More  
Dangerous?**

**26 Ways to Make  
Your Healthiest  
Year Yet**



**India's First  
Laparoscopic  
Peritonectomy  
for Advanced  
Ovarian Cancer**

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Hospital featuring a  
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# Wellness Wisdom

“**D**octor, something's wrong with my stomach...! I hear this every day. Behind these simple words lie deep worries - a mother's concern, a father's anxiety, a child's pain. After more than thirty-five years of listening to these stories, I still see the faces of my village folk in every patient I meet. Many of us turn small problems into big ones, simply because we lack the right information-or we delay seeking help out of fear.

This is why I believe so strongly in the power of knowledge. It's not meant to frighten you, but to empower you. To help you make better choices, prevent issues before they start, and face any health challenge with confidence.

## Your 'Second Brain'

Did you know that your digestive system isn't just a food-processing machine? It's often called your 'second brain'- and for good reason. Over 500 million nerve cells line your gut, making it the most complex neural network in your body outside your skull. This powerful brain-gut connection works in both directions: stress can upset your stomach, and digestive problems can influence your mood.

Understanding this connection is a crucial first step toward better

health. By paying attention to both your mind and body, you're not just treating symptoms, you're addressing the root causes of many health issues.

## The Revolution in Surgery

The landscape of surgery has changed dramatically in recent years. Procedures that once required long incisions can now be done through tiny openings. Laparoscopic surgeries often allow patients to go home within just two or three days. Robotic surgery, with its magnified views and three-dimensional precision, enables surgeons to perform operations with extraordinary accuracy.

The best part? These advanced treatments are now available to everyone, not just the wealthy. With smaller incisions, less pain, faster recovery, and fewer scars, patients are experiencing quicker healing and better outcomes.

## Prevention is Better Than Cure

But the most important lesson I've learned over the years is this: prevention is far easier than treatment. I often think, 'If only they had known earlier, this could have been avoided.' Many of the conditions I see could have been prevented with just a little more knowledge and timely action.

Start by eating mindfully-stop when you're about 75% full, rather than waiting to feel completely satisfied. This small change alone can prevent countless digestive issues. Equally important is managing stress through yoga, meditation, or deep breathing exercises; find what works for you and practice it regularly.



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Movement matters too. A brisk 30-minute walk every day can do wonders for your digestion and overall well-being. Be mindful of timing as well-avoid lying down for at least three hours after dinner, a simple habit that helps prevent acid reflux and improves sleep quality. And when it comes to medications, always follow your doctor's instructions on timing; this ensures effectiveness while protecting your stomach.

These may seem like small changes, but they have a powerful impact. Remember, good health isn't something that happens to you-it's something you actively create.

### **Sharing Knowledge with Your Loved Ones**

Every home deserves access to reliable health information. It's like having a trusted family doctor right there with you, offering advice and reassurance whenever you need it.

I encourage you to share what you've learned with your family and friends. Sometimes, a single piece of information shared at the right moment can prevent serious illness. It can even save a life.

Your health is the greatest gift you have. And as a doctor, nothing gives me greater satisfaction than seeing you smile, knowing you're free from pain and worry.

Let's make sure we share that knowledge, empower each other, and embrace a healthier future together.

With warm regards,  
**Dr. C. Palanivelu**  
Chairman, GEMHospital  
www.gemhospitals.com



# GEMify Health

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Medical Disclaimer: The information in this publication has been carefully prepared in consultation with medical experts. However, individual medical needs vary based on health status, environment, age, and lifestyle factors. Readers are advised to consult qualified healthcare professionals before implementing any treatment or health practices mentioned herein.



# Bariatric Surgery Is It Right for Everyone?

Understanding who truly benefits from weight-loss surgery and who should explore other options first.

‘Health is wealth,’ as our elders wisely said. No matter how much you own, it means little without good health.

For those struggling with severe obesity that significantly limits daily life, bariatric surgery - a procedure performed on the stomach and intestines-is often recommended. But does this surgery work for everyone who carries extra weight? The answer may surprise you.

## Who Is an Ideal Candidate?

Bariatric surgery isn’t prescribed for everyone who wants to lose weight. It’s reserved for those who have been unable to control their weight through conventional methods.

According to current medical guidelines, you

may be a suitable candidate if your BMI exceeds 40. To put this in perspective, someone who is 5 feet 6 inches tall and weighs more than 110 kilograms would fall into this category. If your BMI is between 35 and 40, and you have related health conditions like high blood pressure, diabetes, joint pain, or thyroid disorders, surgery may be considered.

Updated 2022 guidelines from leading bariatric surgery societies now recommend surgery for individuals with a BMI of 35 or above, regardless of whether they have additional health conditions. For those with metabolic disease, surgery can even be

**Dr. P. Praveen Raj**  
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considered at a BMI of 30 or higher when other approaches have failed.

### Who Should Not Have This Surgery?

Surgery is typically recommended only after at least six months of supervised weight-loss efforts-including diet modifications, exercise, and medication-have proven unsuccessful.

Certain individuals are generally advised against bariatric surgery. These include people with uncontrolled heart disease or liver failure, pregnant women, those struggling with alcohol or substance dependency, cancer patients currently undergoing treatment, and individuals with severe mental health conditions.

### A Lifelong Commitment

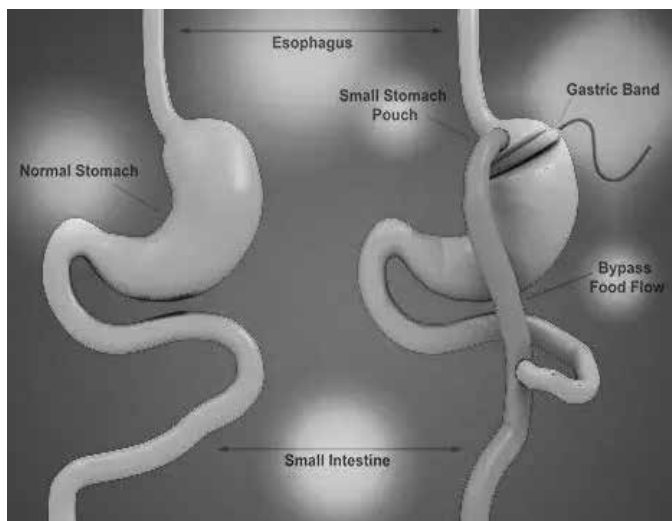
Deciding to have bariatric surgery is not a simple choice. It requires a lifelong commitment to dietary and lifestyle changes.

Start preparing well before the procedure by gradually reducing sweets, fried foods, and fast food, while increasing your intake of vegetables and fruits. Practice eating from smaller plates and chewing slowly. Daily walking becomes essential. If you smoke, you'll need to quit at least one month before surgery.

### The Post-Surgery Journey

After surgery, the first two weeks require a liquid-only diet. This surgery isn't merely about losing weight-it's about embracing an entirely new way of living.

Drink approximately 1.5 litres of water daily, but avoid drinking during meals. After the initial liquid phase, you can gradually transition to soft foods, then to regular healthy meals over three to



six months. During this period, light exercise-such as walking and swimming-can begin, with rest as needed when fatigue sets in.

### What Results Can You Expect?

Weight loss begins gradually but steadily after surgery. Within the first year, most patients lose 60 to 70 percent of their excess body weight. Many find that their diabetes and blood pressure medications can be reduced or even stopped. Sleep apnoea often improves significantly, joint pain decreases, and energy levels rise noticeably.

### Hospital Stay and Recovery

After surgery, you can expect to stay in the hospital for two to five days, depending on the procedure and your recovery. Once home, you'll continue following your medical team's guidance closely.

Remember: bariatric surgery is a powerful tool, but lasting success depends entirely on your commitment to the healthy habits that follow. ●



# Surgery Without the Fear

How keyhole surgery is transforming patient experiences with smaller incisions, faster recovery, and less pain

**L**atha, 45, was diagnosed with gallstones. When her doctor mentioned surgery, fear gripped her immediately—a reaction more common than many realise. She imagined a large incision, weeks of pain, and a month confined to bed. Sleep became impossible.

Then her surgeon explained an alternative: laparoscopic surgery. Just three tiny incisions, two days in hospital, and back to work within a week. That's exactly what happened. This is the remarkable reality of modern surgical care.

## What Is Laparoscopic Surgery?

Laparoscopy—also called keyhole surgery or minimally invasive surgery—represents a fundamental shift from traditional techniques.

While conventional open surgery requires incisions of 10 to 25 centimetres, laparoscopy uses just two to four small openings, each measuring only 0.5 to 1.5 centimetres.

Through these tiny incisions, surgeons insert a laparoscope—a slender instrument equipped with a high-definition camera and light source. The abdomen is gently inflated with carbon dioxide gas to create working space and optimal visibility. The camera transmits magnified images to a large screen, allowing the surgeon to

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MS  
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operate with remarkable precision using specialised instruments.

### **What Procedures Can Be Performed?**

Today, an impressive range of surgeries are performed laparoscopically. These include gallbladder removal, appendix removal, hernia repair, hysterectomy, removal of uterine fibroids and ovarian cysts, weight-loss surgery, and certain cancer operations. Diagnostic laparoscopy also helps identify the cause of unexplained abdominal problems by allowing surgeons to examine internal organs directly.

### **The Benefits Are Significant**

Research consistently demonstrates laparoscopy's advantages over open surgery.

Patients benefit from shorter hospital stays because the body heals faster with less tissue trauma. Studies show laparoscopic patients average just two days in hospital compared to four or five days for open surgery. Recovery accelerates dramatically-most patients return to normal activities within two to three weeks rather than the four to eight weeks typical of open procedures.

Blood loss decreases substantially-approximately 30 percent less than open surgery, with some procedures showing reductions of 50 percent or more.

Infection risk drops considerably. Research indicates wound infection rates of around 5 percent with laparoscopy versus 9 percent with open techniques, with some analyses showing reductions of 48 to 70 percent.

Pain and scarring are minimised. Smaller incisions mean less tissue trauma, reduced need for pain medication, and scars so small they're barely visible. Patients can typically walk within hours of surgery-this early movement helps prevent blood clots and speeds recovery.

## **Laparoscopy represents a major leap forward in surgical techniques!**

It offers...

1. Smaller incisions (0.5–1.5 cm) compared to traditional surgery (10–25 cm)
2. Shorter hospital stays (just 2 days vs. 4–5 days)
3. Faster recovery (2–3 weeks vs. 4–8 weeks)
4. Reduced blood loss (30% less)
5. Lower infection rates and minimal scarring

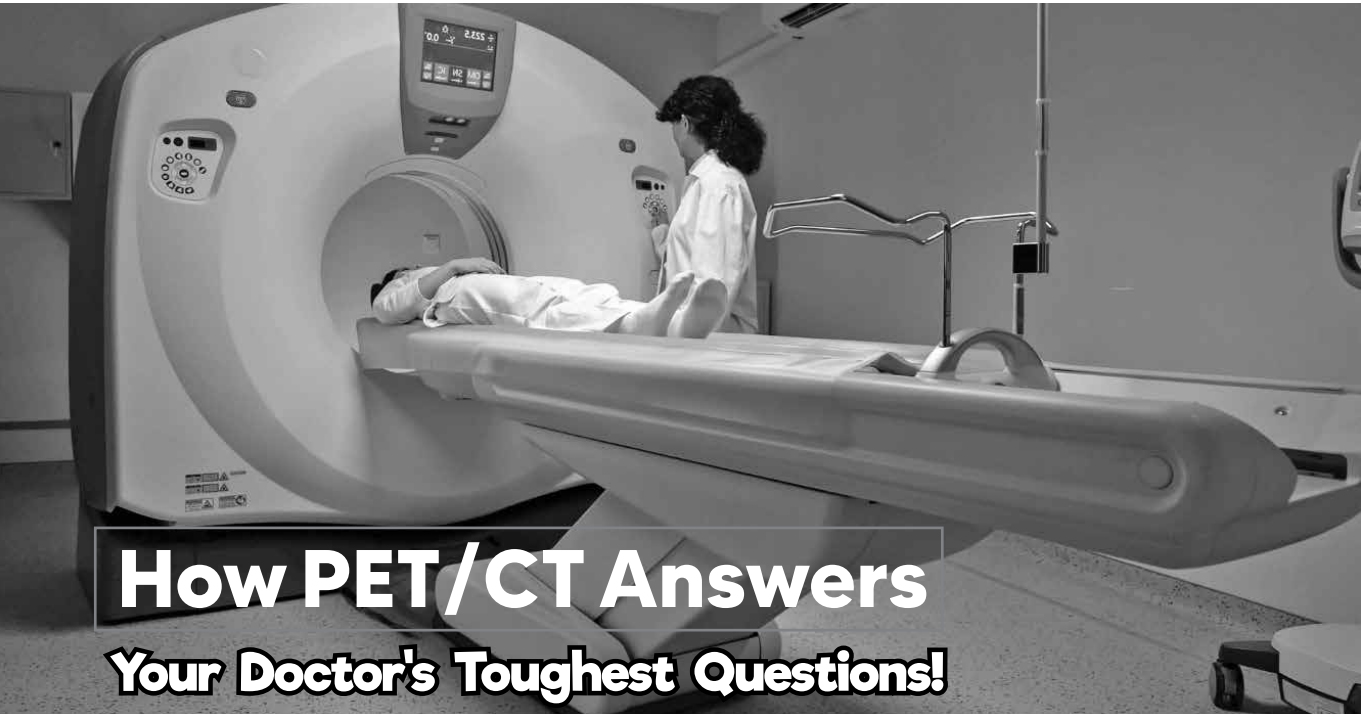
While not suitable for all patients, laparoscopic surgery has revolutionized the surgical experience for many.

### **Who May Not Be Suitable?**

Laparoscopy isn't appropriate for everyone. Patients with severe inflammation, significant bleeding complications, extensive scar tissue from previous surgeries, or certain heart and lung conditions may be better served by open surgery. Your surgeon will carefully evaluate your individual situation. If unexpected complications arise during a laparoscopic procedure, surgeons are trained to convert safely to open surgery when necessary-patient safety always comes first.

### **A New Era in Surgery**

The days when 'surgery' meant weeks of painful recovery are behind us. Laparoscopic technology has made surgical treatment easier, safer, and faster. If you're facing a procedure, ask your doctor whether laparoscopy might be right for you. The answer could transform your experience entirely. ●



# How PET/CT Answers Your Doctor's Toughest Questions!

**I**magine a medical scan that doesn't just show where a problem is, but also what that problem is doing. That's the revolutionary power of the PET/CT (Positron Emission Tomography-Computed Tomography)-a dynamic diagnostic tool that acts like an all-seeing medical detective, guiding patient care from common infections to complex cancers.

## **Anatomy Meets Activity: The Two-in-One Advantage**

The genius of the PET/CT lies in its name: it's a fusion of two established technologies working in perfect sync.

**The CT Scan (The Map):** Provides high-detail anatomical pictures, essentially giving doctors a precise map of the body's structures-the size and exact location of organs and tissues.

**The PET Scan (The GPS):** This part tracks the body's metabolism (how cells use energy). Before the scan, the patient receives a tracer, usually a type of radioactive sugar called

FDG. Since aggressive cells (whether they are cancer or infection-fighting immune cells) consume sugar at a much higher rate, they 'light up' brightly.

By merging the images, doctors can pinpoint exactly where that high activity is happening on the body's map. This eliminates guesswork and ensures treatment is targeted precisely.

## **The Infection Detective: When a Fever Won't Quit**

While it is famous for cancer, the PET/CT's ability to find active, energy-hungry cells makes it a hero in cases of stubborn infection.

When a patient suffers from a Fever of Unknown Origin (FUO)-a fever that lasts for weeks with no clear cause-the PET/CT performs a whole-body search. It can find tiny pockets of hidden infection, like an abscess in deep tissue or an infection around a joint replacement, that other scans might miss. It gives a name to the invisible enemy.

## Dr. Brithika T Y

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### The Cancer Game Changer: Precision Treatment

For oncologists, the PET/CT has become a cornerstone, helping them make life-altering decisions with confidence throughout a cancer patient's journey.

#### Accurate Staging

When cancer is first diagnosed, the scan is essential for staging. It helps doctors see if the disease has spread (metastasized) to other organs or lymph nodes. This accurate staging is critical, as it determines whether the patient needs surgery, localized radiation, or systemic chemotherapy.

#### Monitoring the Response

One of the greatest benefits is its speed in evaluating treatment. After a few rounds of chemotherapy, a PET/CT can quickly show if the cancer cells have stopped consuming the sugar tracer. If they are no longer 'lighting up,' the treatment is working—often before the tumor has had time to visibly shrink on a standard CT scan. If the activity persists, doctors know immediately to switch strategies, saving precious time.

#### Catching Recurrence Early

For survivors, follow-up scans help distinguish between non-threatening scar tissue left over from treatment (which is metabolically inactive) and a genuine, active cancer recurrence (which will light up).

### The Scan Safe and Simple?

Yes! The procedure is generally very straightforward:

**Preparation:** You may be asked to fast (not eat) for a minimum 4 hours before the scan to ensure the sugar-tracer works properly.

**The Injection:** You'll receive the small injection of the tracer. You won't feel anything from the tracer itself.

**Waiting:** You'll relax for about an hour while the tracer travels throughout your body.

**The Scan:** You will lie down on a comfortable table that slides into the large, doughnut-shaped scanner. The scan itself typically takes 20 to 30 minutes. You just need to lie still!

**Afterward:** The tiny amount of tracer leaves your body naturally very quickly. You can usually go back to your normal activities right away.

### A New Era of Personalized Care

The PET/CT scan provides doctors with a comprehensive, functional portrait of a patient's health, delivering a level of detail that was unimaginable a generation ago. It shifts the focus from simply identifying a lump to understanding the

biological activity within it, ushering in a new era of truly personalized and highly effective medical care.

### When is PET/CT Scan Recommended?

- Unexplained fever lasting several weeks
- Cancer staging after diagnosis
- Evaluating response to chemotherapy or radiation therapy
- Checking for cancer recurrence
- Detecting deep-seated infections





# India's First Laparoscopic Peritonectomy for Advanced Ovarian Cancer



## GEM Cancer Institute achieves landmark milestone in minimally invasive cancer treatment

GEM Cancer Institute in Coimbatore has achieved a major milestone by performing India's first laparoscopic complete parietal peritonectomy for advanced ovarian cancer. This groundbreaking procedure represents a significant leap in minimally invasive treatment for abdominal cancers that have spread to the peritoneum.

### Understanding Peritoneal Carcinomatosis

Peritoneal carcinomatosis occurs when cancer spreads to the peritoneum—the thin membrane that lines the abdominal cavity and covers internal organs. Think of the peritoneum as 'wallpaper' lining the inside of your abdomen. In advanced cancer, this wallpaper becomes contaminated with tumour deposits. This condition is most commonly associated with advanced ovarian, colorectal, and gastric cancers, and patients historically faced poor survival outcomes.

For years, systemic chemotherapy was the primary treatment. However, because the peritoneum has poor blood supply, chemotherapy drugs often cannot effectively reach these areas. This challenge led to the development of a combined approach: cytoreductive surgery (CRS) paired with hyperthermic intraperitoneal chemotherapy (HIPEC)—heated chemotherapy delivered directly into the abdominal cavity during surgery.

Research shows that this combined treatment can significantly improve symptom relief in 26.5 to 100 percent of cases, with durable disease control achieved in up to 90 percent of patients. While earlier debulking surgeries extended survival, cancer recurrence and severe symptoms remained major challenges.

### The Laparoscopic Revolution

The peritonectomy technique was pioneered by Dr. Paul Sugarbaker and became the gold standard in treating peritoneal cancers. Traditional CRS requires large incisions, leading to significant

bloodloss, higher complication rates, and longer recovery times—typically resulting in a five-year survival rate of about 31 percent. Today, advances in technology allow surgeons to perform this complex surgery through small keyhole incisions, dramatically improving patient outcomes.

GEM has now successfully transitioned this gold-standard open technique into a laparoscopic procedure—essentially 'peeling off the contaminated wallpaper' through tiny holes rather than a large incision.

Using high-definition magnified imaging (10 to 15 times magnification), surgeons can identify micrometastases—tiny cancer seeds that the naked eye might miss during open surgery. Additionally, Indocyanine Green (ICG) fluorescence technology enhances accuracy by causing cancerous tissues to glow, enabling their complete identification and removal.

### **Benefits of the Laparoscopic Approach**

Patients treated laparoscopically experience less pain, reduced blood loss, shorter hospital stays, and faster recovery. In traditional open peritonectomy, patients often spend weeks in hospital recovering. With this laparoscopic approach, patients can walk within hours of surgery, significantly reducing the risk of post-operative pneumonia and blood clots. Because blood transfusions are minimised, the risk of cancer recurrence may also be reduced, while the patient's immune system remains better protected.

### **GEM's Pioneering Achievement**

GEM Cancer Centre has successfully performed laparoscopic complete parietal peritonectomy on five patients with advanced ovarian cancer—marking India's first such procedures.

All patients received neoadjuvant chemotherapy before surgery to control systemic disease. The surgical team then performed laparoscopic cytoreductive surgery including radical hysterectomy, removal of ovaries, and complete peritonectomy. In two patients, laparoscopic HIPEC was additionally administered.

These complex procedures were led by Dr. C. Palanivelu, Founder and Chairman of GEM Hospital, alongside gynaecologic oncologists Dr. Kavitha and Dr. Sai Darshini. Dr. Bharath Rangarajan administered the HIPEC following peritonectomy completion.

### **Comprehensive Cancer Care**

GEM Cancer Centre also treats peritoneal carcinomatosis arising from gastrointestinal cancers. The specialist team includes surgical oncologists Dr. Shiv Kumar and Dr. Arul Murugan for gastrointestinal cancers, Dr. R. Parthasarathy for oesophagogastric cancers, and Dr. Rajapandian for colorectal cancers. Dr. Madhu Sairam provides radiotherapy services.

### **New Hope for Women**

Although advanced ovarian cancer traditionally carries challenging survival statistics, early detection combined with timely surgery, modern chemotherapy, and targeted therapies significantly improves outcomes. In carefully selected patients, five-year survival rates now exceed 90 percent.

The successful execution of India's first laparoscopic complete parietal peritonectomy represents a significant leap forward in treating abdominal cancers. This pioneering procedure not only enhances survival rates but also improves quality of life for patients—paving the way for a future where minimally invasive treatments become the standard in cancer care. ●



# HOW DIABETES

## Quietly Affects Your Eyes and Gut

**Understanding the surprising connection between blood sugar, vision, and digestion**

Many people with diabetes ask, 'What does diabetes have to do with my eyes?' The truth is, diabetes isn't just about blood sugar levels. It can silently affect various organs, particularly your

eyes and digestive system. Understanding this connection could save your sight and improve your quality of life.

### **The Silent Threat: Glaucoma**

Glaucoma is often called the 'silent thief of sight' because it occurs without pain or obvious symptoms. Pressure builds gradually inside the eye, damaging the optic nerve—the vital cable transmitting images to your brain. What makes this condition particularly deceptive is that it attacks peripheral (side) vision first. Most people don't notice this gradual narrowing until significant damage has already occurred. Left untreated, glaucoma leads to irreversible blindness.

Here's what matters: research shows diabetes increases glaucoma risk

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by approximately 36–48%. High blood sugar damages tiny blood vessels in your eyes, interfering with the delicate fluid drainage system and causing pressure to build.

Crucially, standard vision tests—reading letters on a chart—cannot detect glaucoma. Only a comprehensive dilated eye exam can reveal this hidden damage.

### **When Your Stomach Slows Down**

Diabetes can also disrupt your digestive system. A condition called gastroparesis—essentially a sluggish stomach—affects roughly 5–12% of people with long-standing diabetes.

High blood sugar damages the vagus nerve, which controls stomach muscle contractions. When this nerve malfunctions, food moves too slowly from stomach to intestine. The result? Digestive symptoms like bloating, nausea, early satiety (feeling full after only a few bites), and occasional vomiting.

Here's the troubling twist: gastroparesis creates a vicious cycle. When food absorption becomes unpredictable, blood sugar levels swing wildly—making diabetes even harder to control.

### **The Common Thread**

What links your eyes and your gut? Nerve damage caused by uncontrolled blood sugar—a condition called neuropathy. Think of chronically high glucose as a slow-acting toxin that gradually erodes the body's delicate nerve networks. It affects the optic nerve in your eyes just as readily as the vagus nerve controlling your stomach. This explains why people with poorly controlled diabetes often experience both eye and digestive issues simultaneously.

### **Protecting Yourself: Practical Steps**

The encouraging news? Most complications are preventable.

Keep blood sugar in check. Maintaining

## **Key Takeaways**

- Diabetes increases glaucoma risk by 36–48%—symptoms appear only in late stages
- Standard vision tests cannot detect glaucoma; dilated exams are essential
- Keep HbA1c below 7% and manage blood pressure to protect your eyes
- Gastroparesis creates a vicious cycle that worsens blood sugar control
- Report persistent bloating, nausea, or early fullness to your doctor

HbA1c below 7% significantly reduces your risk. This single metric reflects your average blood sugar over three months.

Manage blood pressure too. High blood pressure accelerates eye damage—controlling it is just as vital as blood sugar management for protecting your vision.

Get annual dilated eye exams. Both the CDC and American Diabetes Association recommend yearly comprehensive eye examinations. During these exams, special drops widen your pupils, allowing doctors to spot early damage before symptoms appear. More than 90% of diabetes-related vision loss is preventable with early detection.

Don't ignore digestive symptoms. Persistent bloating, unexplained nausea, or feeling unusually full after small meals warrant a conversation with your doctor—especially given the blood sugar control implications.

Diabetes is much more than a blood sugar condition—it affects your whole body. By staying vigilant about your eye and digestive health, you can significantly reduce the risk of complications. Your annual eye exam isn't just routine—it's essential to protecting your vision. Take action now for a healthier future. ●



# Precision Beyond the Human Hand

**H**ow advanced technology is transforming cancer treatment with smaller incisions and faster recovery?

When 58-year-old Murugesan was diagnosed with prostate cancer, the thought of surgery filled him with dread. He imagined large incisions, prolonged recovery, and the complications he'd heard about. Instead, he underwent robotic surgery—tiny incisions, minimal pain, home within three days, and back to normal life in just two weeks. 'It felt like magic,' he recalls.

His experience reflects a global shift. Today, more than 90% of prostatectomies in the United States are performed robotically, and this technology is expanding rapidly across cancer types worldwide.

### What Is Robotic Surgery?

Despite the name, robots don't operate independently. Robotic surgery uses advanced

systems like the da Vinci Surgical System, where a skilled surgeon controls robotic arms from a console. Each hand movement is mirrored by miniature instruments inside the patient's body, offering precision beyond human capability. The robot is only as good as the surgeon at the console—experience matters enormously.

### The Robot's Remarkable Capabilities

The robot's capabilities are unparalleled, starting with 10x magnification and 3D HD vision, offering crystal-clear views of microscopic structures. Unlike traditional laparoscopy's flat 2D images, this high-definition imaging helps surgeons distinguish cancerous tissue from healthy structures with exceptional clarity.

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GEM Hospital, Coimbatore



The system also filters out natural human hand tremors, ensuring sub-millimetre precision during delicate procedures. With seven-axis instrument movement, the robot can reach and manoeuvre in tight spaces impossible for human hands-particularly revolutionary in the narrow pelvis, where traditional instruments literally struggle to fit and move.

The latest da Vinci 5 system, FDA-cleared in 2024, introduces force feedback technology, allowing surgeons to feel tissue resistance. Studies show this results in up to 43% gentler handling of delicate tissues.

### Which Cancers Benefit?

Robotic surgery proves valuable across multiple cancer types: prostate, cervical, uterine, colorectal, kidney, lung, and head and neck cancers. Rectal cancer surgery shows particularly excellent results due to the robot's ability to navigate the pelvis's confined anatomy with precision.

### Real Benefits for Patients

Patients experience remarkable improvements with robotic surgery. While open surgery typically requires six to eight weeks of recovery, many robotic surgery patients return to work in two to four weeks-some go home within one to two days.



Key Feature	Patient Benefit
10x magnification with 3D vision	Crystal-clear view ensuring precision in delicate surgeries
Tremor filtration	Sub-millimetre accuracy impossible with human hands
7-axis instrument movement	Reaches confined spaces, especially in pelvic surgery
Force feedback (da Vinci 5)	Up to 43% gentler tissue handling
100% surgeon control	Robot is a tool; surgeon expertise determines outcomes

The benefits extend beyond speed: less blood loss (transfusions are rarely needed), fewer complications, and significantly lower infection risk due to smaller incisions. Most importantly, better functional preservation occurs in prostate surgery, where the magnified 3D view helps surgeons protect nerves controlling urinary continence and sexual function.

### Important Considerations

Robotic surgery isn't suitable for everyone. Highly advanced cancers, patients with extensive previous surgeries, or those with certain heart or lung conditions may benefit from alternative approaches. Availability also varies by hospital, and costs may be higher than traditional laparoscopy. Your cancer specialist will determine the most appropriate path based on your individual situation.

Robotic surgery represents a remarkable blend of human expertise and machine precision, providing patients with faster recovery, fewer complications, and better outcomes. If you or a loved one are facing cancer surgery, ask your doctor whether robotic surgery might be right for you. ●



We've all experienced it-bloating after a heavy meal, the burn of acid reflux, or days of uncomfortable constipation. But how do you know when symptoms need attention? Here are expert answers to the most common digestive questions, with practical advice you can start using today.

### Why does gas trouble me so often?

Bloating and flatulence typically stem from everyday habits rather than serious conditions. Eating quickly, talking while chewing, and drinking carbonated beverages introduce excess air into your digestive system. Certain foods-legumes, cabbage, and cauliflower-contain fermentable fibres that gut bacteria break down, producing gas.

Small adjustments like chewing slowly, taking a short walk after meals, and adding digestive aids like asafoetida or ginger to your cooking can make a noticeable difference.

### How can I manage frequent acid reflux?

That burning sensation occurs when stomach acid travels upward into your oesophagus. Common triggers include spicy and fried foods, caffeine, citrus fruits, and mint. Try finishing your evening meal at least two to three hours before going to bed, and elevate your head slightly while sleeping. Gradual weight reduction often brings relief.

When acid reflux occurs more than twice weekly and persists for several weeks, it may indicate gastro-oesophageal reflux disease (GERD)-a condition that can damage the oesophageal lining and requires medical evaluation.

### What helps long-standing constipation?

Chronic constipation usually results from insufficient fibre, inadequate hydration, or sedentary habits. Women under 50 need approximately 25 grams of fibre daily, while men need about 38 grams-yet most people consume barely half this amount.

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MS  
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Aim for two to three litres of fluids daily, including water, soups, and watery fruits. Combine this with 30 minutes of walking each day.

A simple tip: use a footstool to elevate your knees while on the toilet, which aligns the colon for easier passage. Never ignore the urge-delayed response worsens the problem. If symptoms don't improve or worsen despite these changes, consult your doctor.

Your Digestive



## When should diarrhoea concern me?

Occasional loose stools from dietary changes resolve naturally. However, seek immediate medical attention if diarrhoea continues beyond two weeks, contains blood, or accompanies fever and unexplained weight loss. These may indicate conditions like irritable bowel syndrome (IBS) or inflammatory bowel disease (IBD). Meanwhile, oral rehydration solutions prevent dangerous fluid loss.

## Seek Immediate Medical Attention If You Experience...

- Blood in stool or black-coloured stools
- Sudden, severe abdominal pain
- Difficulty or pain while swallowing
- Persistent vomiting, especially with blood
- Jaundice (yellowing of eyes or skin)
- Unexplained weight loss
- Sudden changes in bowel habits (constipation alternating with diarrhoea)
- Chronic bloating unresponsive to lifestyle changes

## Do gallstones always require surgery?

Not necessarily. Small, silent stones often need only regular monitoring. Surgery becomes important when you experience severe upper-right abdominal pain, nausea, vomiting, or jaundice. Modern laparoscopic cholecystectomy offers minimal discomfort and typically allows patients home within a day.

## Is endoscopy painful?

An upper endoscopy uses a thin, flexible camera-equipped tube to examine your digestive tract. The procedure typically takes just 5–15 minutes. You'll receive a sedative (such as Midazolam) that prevents pain—you may feel only mild discomfort, if anything. Because sedation causes drowsiness, arrange for someone to drive you home afterward.

## Should I worry about fatty liver?

Fatty liver disease, often linked to insulin resistance and diabetes, has become remarkably common. Early-stage cases frequently reverse with lifestyle modifications. However, untreated fatty liver can progress to inflammation and eventually cirrhosis.

Evidence shows that losing 5–10% of body weight significantly improves liver health. Combine this with regular exercise, reduced sugar and fat intake, and avoiding alcohol. Schedule liver function tests every six months. ●

Questions Answered



## Small changes, big rewards

The start of a new year is the perfect time to prioritise your health. By making small, sustainable changes, you can set yourself up for your healthiest year yet. These 26 evidence-based tips will help you build lasting habits that benefit both body and mind.

### Eating Habits

1. Never skip breakfast-eating between 7–9 AM kickstarts your metabolism and steadies energy levels.
2. Chew slowly, aiming for 20–30 times per bite to improve digestion and recognise fullness faster.
3. Use smaller plates to naturally reduce portions without feeling deprived.
4. Increase fibre intake through vegetables, fruits, and whole grains for digestive health.
5. Finish dinner by 7 PM, allowing two to three hours before sleep to prevent acid reflux.
6. Limit fast food to once weekly at most.
7. Reduce sugary treats like sodas and sweets gradually-let fresh fruit satisfy your sweet tooth.
8. Prioritise home-cooked meals where you control ingredients and hygiene.

# 26 Ways to Make



# Your Healthiest Year Yet





## Hydration

9. Drink 2–3 litres of fluids daily, including water, soups, and watery fruits—your needs may vary with activity and climate. In warmer regions, add electrolyte-rich options like tender coconut water.
10. Start mornings with warm water to gently activate your digestive system after rest.
11. Avoid large amounts of water during meals; wait 30 minutes after eating.
12. Reduce or eliminate alcohol for liver health.
13. Swap coffee for green tea or ginger tea, both rich in antioxidants.

## Exercise

14. Walk 30 minutes daily for heart health, digestion, and mood.
15. Take stairs instead of the lift—small choices add up over time.
16. Practice yoga or breathing exercises two to three times weekly for flexibility and stress relief.
17. Add bodyweight exercises like squats twice weekly to support muscle mass and bone density.
18. Stand and walk five minutes every hour if you work at a desk.

## Your 30-Day Kickstart Challenge

**Week 1:** Tips 9 & 14 – Drink 2 litres daily + walk 20 minutes

**Week 2:** Tips 6 & 4 – Eliminate fast food + add vegetables

**Week 3:** Tips 5 & 20 – Dinner by 7 PM + sleep 7 hours

**Week 4:** Tips 24 & 7 – Meditate 10 minutes + reduce sugar

Repeat the challenge next month to solidify your new habits.

19. Take a gentle post-meal stroll of 10–15 minutes to aid digestion and regulate blood sugar.

## Sleep

20. Sleep 7–8 hours nightly for optimal immune function and mental clarity.
21. Avoid screens one hour before bed—blue light suppresses melatonin, your sleep hormone.
22. Maintain a consistent sleep-wake schedule to support your circadian rhythm.
23. Limit daytime naps to 15–20 minutes to avoid disrupting nighttime sleep.

## Mental Wellness

24. Manage stress actively through meditation, deep breathing, or music—stress directly impacts digestion.
25. Schedule an annual health check with your healthcare provider to catch issues early.
26. Nurture relationships and gratitude—maintain social connections and note three things you're thankful for daily. If you smoke, make this the year you quit.

*Small changes create lasting transformation. Choose one tip each week and build from there—your healthier self is waiting. ●*



## Cervical cancer is preventable

Every eight minutes, an Indian woman loses her life to cervical cancer. That's someone's mother, daughter, or sister—a tragedy we can prevent. In a country contributing nearly one-fifth of the world's cervical cancer cases and close to 80,000 deaths annually, protecting our daughters has never been more urgent.

### Understanding the Silent Threat

Cervical cancer develops in the cells of the cervix, the lower part of the uterus. Unlike many cancers, we know exactly what causes it: persistent infection with Human Papillomavirus (HPV).

HPV is the world's most common sexually transmitted infection—so widespread that most sexually active individuals encounter it at some point, much like a common cold of the skin. Over

100 HPV types exist, but two high-risk strains—HPV 16 and HPV 18—cause approximately 70–77% of cervical cancers in India. Most infections clear naturally within one to two years, but persistent infections can progress to cancer over 10–20 years. Crucially, HPV infection often shows no symptoms, making vaccination before exposure essential.

### The Power of Prevention

HPV vaccines train the immune system to recognise and fight cancer-causing strains before infection occurs. Three types are available: bivalent (HPV 16, 18), quadrivalent (adding HPV 6, 11), and nonavalent (nine strains).

India achieved a milestone in 2022 with Cervavac—the nation's first indigenous HPV vaccine from the Serum Institute of India.

# The Vaccine That Could Save Your Daughter's Life



This quadrivalent vaccine offers protection comparable to imported alternatives at a potentially lower cost, making widespread vaccination more feasible for Indian families.

### Who Should Be Vaccinated-and When?

The World Health Organization recommends that girls aged 9–14 receive the HPV vaccine, ideally before any exposure. For this age group, a two-dose schedule (at 0 and 6 months) provides effective protection. Those aged 15 and older typically require three doses.

India's 2024 Union Budget announced plans to incorporate HPV vaccination into the national immunisation programme, aiming to make it more accessible to girls across the country. For those who missed the optimal window, catch-up vaccination remains effective up to age 26.



**Dr. Kavitha Yogini**  
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## Your Action Plan

Age Group	Action
9–14 years	HPV vaccine (2 doses, 6 months apart)
15–26 years	Catch-up vaccination (3 doses)
21+ years	Pap smear every 3 years
30+ years	HPV DNA test + Pap smear
Any age	Consult doctor for unusual bleeding, discharge, or pelvic pain

While the focus is on girls, some doctors also recommend vaccinating boys to reduce transmission and prevent other HPV-related cancers.

### Vaccination Alone Isn't Enough

Even after vaccination, regular screening remains essential because vaccines don't cover all cancer-causing HPV types. Pap smear tests beginning at age 21, repeated every three years, and HPV DNA testing from age 30 are crucial for early detection. In areas where Pap smears aren't readily available, Visual Inspection with Acetic Acid (VIA) is recommended for women aged 30–65.

Thanks to early detection, cervical cancer is one of the few cancers with a nearly 100% cure rate when caught early. Your proactive steps today can save lives.

### Safety You Can Trust

Decades of global research confirm HPV vaccines are safe. Minor side effects— injection site soreness, mild fever, or temporary swelling— resolve quickly. Over 140 countries have incorporated HPV vaccination into their national programmes, with millions of doses administered safely.

*By vaccinating your daughters today and encouraging regular screenings, you hold the power to protect their future. Together, we can eliminate cervical cancer in India.*



## Why Your Medicine Might Upset Your Stomach - And How to Fix It

If you've ever taken a painkiller for a headache, only to be met with stomach discomfort afterward, you're not alone. Digestive troubles are among the most common side effects of everyday medications-but with the right strategies, you can protect your gut while still benefiting from your treatment.

### **Pain Relievers: Handle With Care**

Nonsteroidal anti-inflammatory drugs (NSAIDs) like ibuprofen, aspirin, and diclofenac are household staples. However, these medications inhibit prostaglandins-chemicals that protect your stomach lining from acid. Without this protective shield, the stomach becomes vulnerable to irritation and damage. Studies

show 10–50% of users experience digestive discomfort, and up to 15% of long-term users may develop peptic ulcers-often without warning symptoms.

### **Antibiotics: Disrupting the Balance**

Antibiotics save lives, but they don't discriminate between harmful bacteria and beneficial gut microbes. This disruption triggers diarrhoea in 5–35% of users. In some cases, when antibiotics eliminate protective bacteria, harmful



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organisms like *Clostridioides difficile* can overgrow, leading to severe diarrhoea and abdominal pain requiring medical attention.

### **Metformin: A Common Challenge for Diabetics**

Metformin remains the cornerstone of type 2 diabetes treatment, yet approximately 20% of users experience digestive side effects—diarrhoea, nausea, bloating, or discomfort. Some patients abandon this effective medication, potentially compromising blood sugar control.

### **Iron Supplements: A Hidden Culprit**

Many women taking iron supplements for anaemia experience constipation, nausea, or stomach pain. Taking iron with food (though this slightly reduces absorption) or choosing gentler formulations can help.

### **Practical Protection Strategies**

Take with food and water. Never take NSAIDs or metformin on an empty stomach. Drink a full glass of water (at least 200ml) to prevent pills from dissolving in your oesophagus, which can cause irritation.

### **Seek Immediate Medical Attention If You Experience:**

- Blood in stool or black, tarry stools
- Vomiting blood or coffee-ground-like material
- Severe abdominal pain
- Persistent diarrhoea lasting more than 3 days
- Dizziness, fainting, or excessive thirst

Time your probiotics wisely. When taking antibiotics, consume probiotics at least two hours apart—otherwise, the antibiotic may kill the beneficial bacteria before they can help. Choose probiotic-rich foods like yoghurt, buttermilk, or kefir, or supplements containing *Lactobacillus* and *Bifidobacterium* strains.

Start low and go slow. For metformin, begin with lower doses and increase gradually. Extended-release formulations are significantly gentler on the stomach.

Ask about protective medications. If you need long-term NSAID therapy, your doctor may prescribe a proton pump inhibitor (PPI) such as omeprazole or pantoprazole to shield your stomach lining from ulcers.

Stay hydrated. Adequate fluid intake is crucial, especially with antibiotics or metformin, as dehydration worsens gastrointestinal symptoms and diarrhoea.

Limit alcohol. Alcohol compounds digestive irritation from both painkillers and diabetes medications.

Understanding these side effects empowers you—but don't let fear prevent you from taking prescribed medications. Work with your healthcare provider to find the right balance for you. ●



# YOUR MOUTH

**The Remarkable  
First Stop of  
Digestion**

**H**ow teeth, tongue, and saliva work as a team to power your body? Bite into a crispy samosa, and in just seconds, your mouth transforms into a bustling factory—slicing, mixing, and beginning the breakdown of food. It's amazing how much happens in just 5 to 30 seconds! This small space is the first stop in your digestive journey, where your body begins its incredible process of breaking down food.

## The Tooth Team: 32 Specialized Tools

Your teeth are like special tools for your mouth. Each of your 32 teeth has its own job, working together like a perfectly coordinated team.

The eight incisors at the front are your slicers—they cut through food like scissors cutting paper. When you bite into an apple or tear a piece of roti, your incisors do the work.

The four canines (those slightly pointed teeth) are your tearers. Sharp and strong, they grip and tear tougher foods like grilled chicken or fibrous vegetables.

The premolars and molars at the back are your grinders. They crush and grind food into tiny pieces, just like using a grinder or mortar and pestle. This grinding breaks food down so your body can digest it more easily.

## The Amazing Power of Enamel

Enamel is the hardest substance in your body—even stronger than bone! It protects your teeth from wear and tear. But here's the important part: once enamel is damaged, it can't heal on its own. Unlike a cut on your skin that heals or a broken bone that mends, damaged enamel is

## DID YOU KNOW?

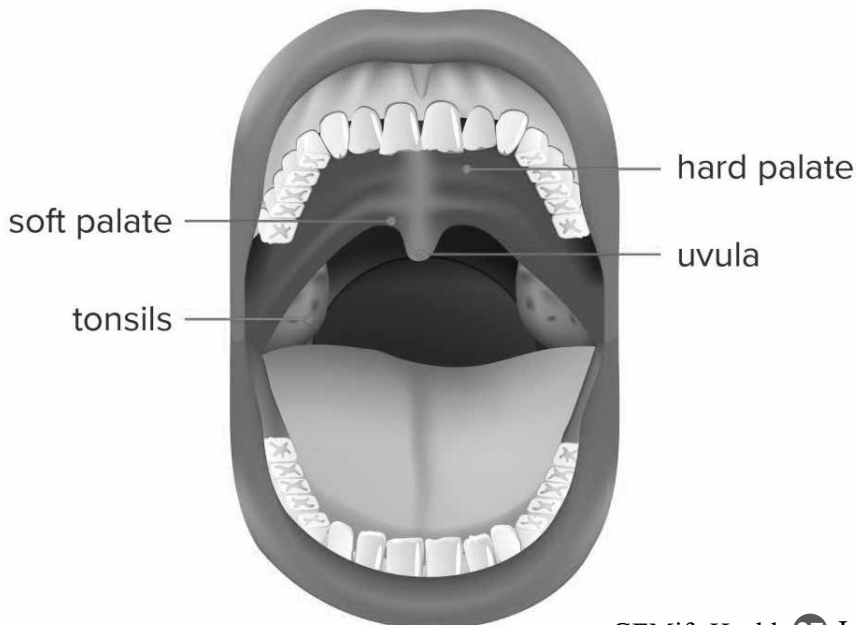
- You produce enough saliva in a lifetime to fill two swimming pools!
- Your tongue print is as unique as your fingerprint!
- A blue whale's tongue weighs as much as an entire elephant!
- Tooth enamel is the hardest substance in your body—stronger than bone!

gone forever. That's why protecting it by brushing with fluoride toothpaste is so important.

Quick tip: After eating something sugary or acidic, rinse your mouth with water. This helps wash away acids and gets your saliva working to protect your teeth faster!

## The Tongue: Strong, Flexible, and Unique

Your tongue is one of the most remarkable muscles in your body. It moves food around in your mouth, positioning it perfectly between your teeth for chewing. It mixes food



thoroughly with saliva, and shapes chewed food into a smooth ball (called a bolus) that's safe and easy to swallow.

### **The Taste Detective**

Your tongue houses about 10,000 tiny taste buds that detect five basic flavors: sweet (like sugar), salty (like chips), sour (like lemon), bitter (like coffee), and umami-that savory taste in foods like cheese and soy sauce. These taste buds send messages to your brain in milliseconds, telling you what you're tasting!

For years, textbooks showed a 'tongue map' claiming different areas of your tongue tasted different things. Science has proven this completely wrong! All areas of your tongue can detect all five tastes. This mistake came from a mistranslation over 100 years ago.

### **Your Tongue is One of a Kind**

Just like your fingerprint, your tongue print is unique! The patterns of bumps and ridges on your tongue belong only to you.

Hygiene tip: Gently clean your tongue with your toothbrush or a tongue scraper. This removes bacteria that cause bad breath and keeps your mouth healthier!

## **KEY TAKEAWAY**

Remember, chewing each bite 20 to 30 times isn't just for digestion-it's a simple habit that can help you avoid overeating, protect your teeth, and enjoy your food to the fullest. Fast eaters often overeat because their brain doesn't receive the 'I'm full' signal in time!

Slow down, chew well, and your body will thank you! Don't forget to drink plenty of water throughout the day to keep your saliva flowing.

### **Saliva: The Unsung Hero**

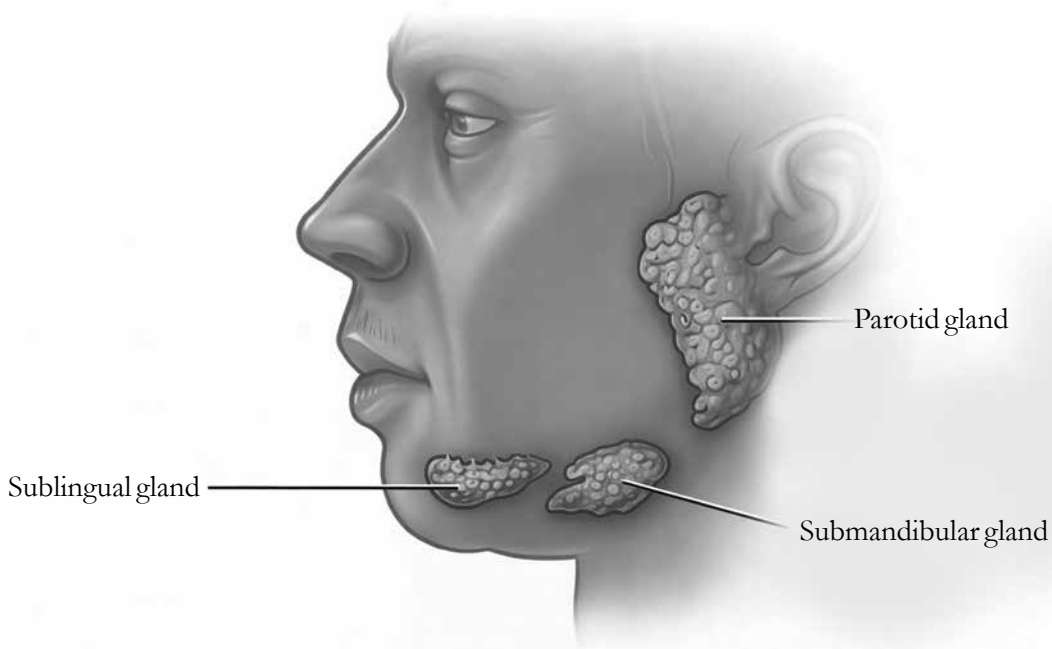
Saliva isn't just a wet substance-it's a powerful liquid that does amazing things! Three pairs of salivary glands in your mouth produce 0.5 to 1.5 liters every day. Over your lifetime, you'll produce enough saliva to fill two swimming pools!

### **What Makes Saliva So Special?**

Saliva contains powerful ingredients that work together:

Amylase enzyme: This special chemical immediately starts breaking down





starches (like in bread or rice) into sugars. Try this experiment: chew a plain piece of bread for 30 seconds without swallowing. Notice how it starts to taste sweet? That's amylase turning starch into sugar!

**Mucin:** This is a slippery substance in saliva that helps coat and bind food together, making it easier to swallow. Without mucin, dry foods would be very hard and uncomfortable to swallow.

**Lysozyme:** This is a natural germ fighter in saliva that helps kill harmful bacteria. It's your mouth's defense system, working 24/7 to keep you healthy and protect your teeth from decay.

**Acid neutralizers:** Saliva contains special chemicals that neutralize harmful acids from bacteria and acidic foods, protecting your tooth enamel from damage.

### Why Drinking Water Matters

Without enough water, your mouth becomes dry, and there's less saliva to wash away food particles and bacteria. This makes eating and swallowing difficult, reduces your ability to taste (because saliva helps dissolve food molecules so your taste buds can detect them), and increases your risk of cavities.

Stay hydrated! Drink 8-10 glasses of water daily to keep your saliva flowing and your digestion working smoothly.

Your mouth may be small, but it's the first and most important part of your body's incredible digestive system. Take care of your mouth by brushing twice daily with fluoride toothpaste, cleaning your tongue, staying hydrated, and chewing your food well. By giving your mouth the care it deserves, you'll ensure your digestive system stays healthy and works efficiently for years to come!



# Binge Drinking or Daily Drinking Which Is More Dangerous?

Many believe liver cirrhosis only affects long-term heavy drinkers. However, groundbreaking research from University College London, Oxford, and Cambridge Universities reveals that binge drinking—consuming large amounts of alcohol in a short period—dramatically increases cirrhosis risk, potentially more than daily drinking.

Published in *Nature Communications* (December 2023), this study followed over 312,599 participants for more than a decade,

analyzing their drinking patterns alongside genetic factors and other health conditions. The findings challenge conventional wisdom about alcohol and liver disease.

## What is Binge Drinking?

According to the National Institute on Alcohol Abuse and Alcoholism (NIAAA), binge drinking means consuming enough alcohol to bring blood alcohol concentration to 0.08% or higher within about two hours. This typically means four or more drinks for women, or five or more for men. One standard drink equals 1.5 oz (44 ml) of spirits, a small glass of wine (5 oz), or one beer (12 oz)—many people underestimate their actual intake.

Binge drinking creates an immediate toxic shock to your liver. Unable to process such large volumes at once, your liver experiences sudden inflammation and cell damage. This pattern also triggers 'Holiday Heart Syndrome'—irregular heartbeat or atrial fibrillation caused by

excessive alcohol-along with sudden blood pressure spikes, acute pancreatitis, and weakened immunity. These sudden health events strain your body's organs, increasing vulnerability to chronic conditions.

### What is Daily Heavy Drinking?

The CDC defines daily heavy drinking as more than 8 drinks weekly for women (averaging more than one drink daily) or 15 drinks weekly for men (averaging more than two drinks daily). For instance, a woman having two glasses of wine four nights a week would exceed this threshold.

This pattern causes chronic liver damage through continuous exposure to acetaldehyde-the toxic byproduct of alcohol metabolism that causes those familiar hangover symptoms and damages your cells over time. Daily heavy drinking leads to permanent DNA damage, progressive scarring, and increased cancer risk. Your liver never gets a chance to repair itself.

### The Surprising Discovery

Both patterns harm your liver, but how you drink matters enormously. Study author Dr. Gautam Mehta explains: 'Our results suggest that it would be more damaging to drink 21 units over a couple of sessions rather than spread evenly over a week'. The research reveals that drinking pattern is just as critical as total consumption.

### Understanding Your Risk

The study found that cirrhosis risk increases dramatically with specific factors. Here's what the numbers mean in practical terms:

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MS, DNB  
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## PROTECT YOUR LIVER

- Limit alcohol per occasion-never binge drink
- Drink slowly with food; alternate alcoholic drinks with water
- Avoid drinking in rounds or 'pre-loading' before going out
- Try non-alcoholic beer, wine, or mocktails as alternatives
- Set a spending limit for alcohol and stick to it

- Binge drinking only: 3 times higher risk-meaning binge drinkers are three times more likely to develop cirrhosis than moderate drinkers
- High genetic risk only: 4 times higher risk
- Type 2 diabetes only: 2 times higher risk
- Binge drinking + high genetic risk: 6 times higher risk
- All three factors combined (binge drinking + genetic risk + diabetes): Up to 24 times higher risk

### The Good News

The good news is that you have control over your risk. By moderating your alcohol intake and avoiding binge drinking episodes, you can dramatically reduce your risk of liver cirrhosis and other severe health issues. Even if you have genetic risk factors or type 2 diabetes, changing your drinking pattern can make a significant difference.

Remember-even small changes have a big impact. The safest choice is limiting consumption to the lowest possible levels, spreading any drinking over multiple days, and avoiding binge episodes entirely. Your liver-and your overall health-will thank you.

Source: *Nature Communications*, December 2023 | UK Biobank Study (312,599 participants)

We all know that sleep is important for feeling rested, but did you know that inadequate sleep could be a major factor in weight gain and obesity? Sleep deprivation doesn't just leave you tired-it wreaks havoc on your metabolism and contributes to fat accumulation in ways you might never expect.

It's easy to overlook the impact of sleep on weight management, especially when juggling busy schedules and daily demands. Yet when discussing weight management and obesity, the spotlight typically falls on diet, exercise, and genetics, while sleep remains in the shadows. Understanding how poor sleep affects your hormones and metabolism can be a game-changer in your weight loss journey.

When sleep is insufficient or irregular, every metabolic pathway controlling body weight begins to malfunction. Hormonal balance deteriorates, hunger intensifies, insulin function declines, and the body enters 'metabolic chaos'-a primary contributor to persistent obesity.

### Why Sleep Is Essential for Metabolic Balance

Sleep is when your body resets and repairs itself. During deep sleep, critical processes occur: hormones regulating hunger, stress, digestion, and energy storage are rebalanced; blood sugar levels stabilize; cortisol (the stress hormone) reduces; and cells undergo repair while the body rejuvenates.

When sleep is inadequate, this natural regulatory system fails. Metabolism slows, hunger increases, and fat storage accelerates-even without significant changes in eating habits.

### How Sleep Deprivation Disrupts Hunger Hormones

Inadequate sleep directly affects two crucial appetite-controlling hormones:

#### Ghrelin Increases (The Hunger Hormone)

Sleep deprivation causes your hunger hormone, ghrelin, to increase by up to 28%, making you feel much hungrier than usual. Produced by the stomach, this hormone sends powerful signals to your brain that you need to eat-even when you don't.

#### Leptin Decreases (The Satiety Hormone)

When you don't get enough sleep, your body produces less leptin-the hormone that tells you when you're full. With leptin reduced by



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approximately 18%, you feel hungrier for longer and never quite feel satisfied, no matter how much you eat.

This hormonal imbalance creates a perfect storm for weight gain: overeating becomes habitual, cravings for high-calorie foods intensify, late-night snacking increases, and desire for candy, cookies, and cake surges-while interest in fruits and vegetables barely changes.

Sleep-deprived individuals consume an extra 300-500 calories daily. One controlled study found participants ate an additional 328 calories from snacks alone after sleep restriction. The ghrelin-to-leptin ratio can increase by 71% after just one night of restricted sleep, fundamentally altering your body's hunger-satiety balance. Over time, this leads directly to significant weight gain.

### How Sleep Deprivation Slows Metabolism

Beyond hormonal disruption, inadequate sleep directly impairs metabolic function. Basal Metabolic Rate (BMR) declines-you burn fewer calories at rest. Sleep restriction mimics the insulin resistance seen in aging or diabetes, even in healthy young individuals, making cells less responsive to insulin and promoting fat storage. Elevated cortisol drives fat accumulation, particularly around the abdomen.

Additionally, exhausted individuals exhibit lower Non-Exercise Activity Thermogenesis (NEAT)-they simply move, fidget, and stand less throughout the day, further decreasing calorie burn. Body weight gradually increases even without major dietary changes.

### The Sleep Apnea Connection

This creates a vicious cycle that's particularly insidious: sleep deprivation fuels obesity, and obesity worsens sleep problems. As weight increases, especially around the neck, it can lead to Obstructive Sleep Apnea (OSA), where soft tissue blocks airways during sleep. This prevents you from reaching the deep sleep stages needed for metabolic repair and hormone rebalancing. OSA doesn't just result from obesity-it actively exacerbates the condition, worsening metabolic dysfunction and making the cycle increasingly difficult to break.

### Long-Term Health Risks of Chronic Sleep Deprivation

Persistent sleep deficiency contributes to type 2 diabetes, cardiovascular disease, non-alcoholic fatty liver disease (NAFLD), polycystic ovary syndrome (PCOS), hormonal disorders, and mood disorders. Lack of sleep affects mood and mental health, leading to emotional eating as a coping mechanism. Combined with hormone imbalances, this makes controlling cravings for unhealthy foods even harder, linking mental and physical health in weight management struggles.

### Treatment Approaches for Sleep-Related Obesity

Obesity is not merely a cosmetic concern-it's a metabolic disorder. When lifestyle modifications alone prove insufficient, medical interventions play a crucial role.

### Pharmacological Treatment

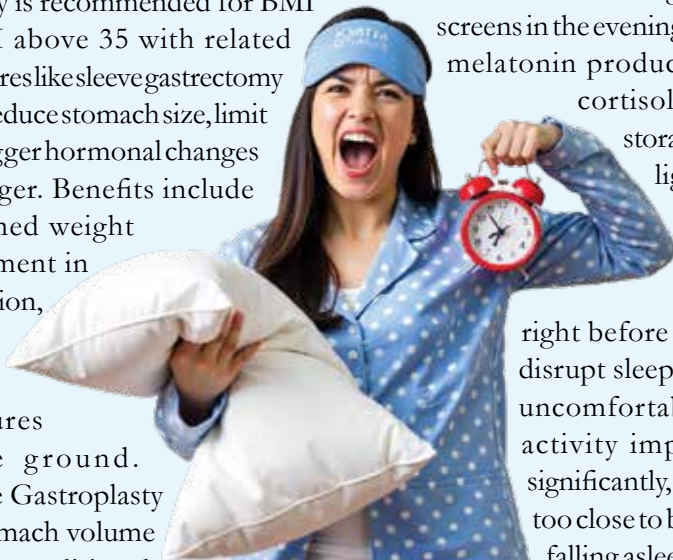
Medications are typically recommended when BMI exceeds 27 with obesity-related conditions (diabetes, hypertension) or when BMI exceeds 30 and lifestyle changes have failed. Medications like Orlistat, which reduces fat

absorption, or GLP-1 agonists, which regulate appetite and improve insulin function, can be particularly effective. For individuals with sleep-related obesity, medications that address insulin resistance and appetite regulation may be especially beneficial, helping restore metabolic equilibrium disrupted by chronic sleep deprivation.

### Surgical and Minimally Invasive Options

Bariatric surgery is recommended for BMI above 40, or BMI above 35 with related conditions. Procedures like sleeve gastrectomy and gastric bypass reduce stomach size, limit food intake, and trigger hormonal changes that decrease hunger. Benefits include significant sustained weight loss and improvement in diabetes, hypertension, and sleep apnea.

Minimally invasive procedures offer a middle ground. Endoscopic Sleeve Gastroplasty (ESG) reduces stomach volume by 60-70% without traditional surgery, offering faster recovery and fewer complications. Intra-gastric balloons provide temporary support, promoting controlled weight loss over 6-12 months. These options suit moderate obesity and those preferring non-surgical approaches.



### Practical Steps to Improve Sleep

Beyond medical interventions, improving sleep quality is essential. Stick to a regular sleep schedule, even on weekends. Avoid caffeine and alcohol before bed, as both disrupt sleep architecture. Create a relaxing bedtime routine to signal your body it's time to wind down. Ensure your bedroom is dark, quiet, and cool—ideally between 60-67°F.

Minimize blue light exposure from screens in the evening. Blue light suppresses melatonin production, worsening the cortisol spikes that drive fat storage. Consider using blue light filters or avoiding screens altogether two hours before bed.

Avoid large meals right before bed, as digestion can disrupt sleep and leave you feeling uncomfortable. Regular physical activity improves sleep quality significantly, but try not to exercise too close to bedtime, as it may make falling asleep more difficult.

Obesity treatment is not one-size-fits-all and depends on individual health conditions, metabolic profile, and underlying causes. All interventions—whether medications, minimally invasive procedures, or surgery—must be combined with lifestyle modifications addressing sleep, diet, and exercise. These treatments are only safe and effective when undertaken with medical supervision.

Recognizing obesity as a chronic disease rather than a personal failure or lack of willpower is a critical shift in medical and societal understanding. Understanding the profound connection between sleep and metabolism opens new pathways to effective treatment.

Obesity Level	Recommended Treatment
Mild Obesity	Lifestyle modifications + medical counseling
Moderate Obesity	Medications + endoscopic procedures
Severe Obesity	Bariatric surgery may be necessary

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BRACHY THERAPY



ROBOTIC



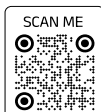
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