

# MedTech sector key pillar of health transformation in India: JP Nadda

The MedTech sector is a key pillar of health transformation in India, said Union Minister for Health and Family Welfare Jagat Prakash Nadda on Tuesday.

Addressing the inaugural session of the 11th Asia Pacific MedTech Forum (APACMed) 2025 via a video message, he highlighted the importance of the MedTech sector for accessible, affordable healthcare and innovation. "The MedTech sector is a key pillar of health transformation in India. The sector's broad scope encompasses diagnostics, advanced devices, digital health, and AI-driven solutions -- all contributing to making healthcare more accessible, efficient, and affordable for every citizen," Nadda said. He stated that the sector

has become a trusted provider of high-quality healthcare, supported by the government's focus on access, innovation, and infrastructure development.

Union Minister of State for Health and Family Welfare Anupriya Patel highlighted several major government initiatives undertaken to strengthen India's MedTech and medical devices sector. These include a new scheme for supporting component manufacturing, development of common infrastructure, branding, and conducting critical market and clinical studies.

"India is emerging as not only a high-volume manufacturer but also a high-value player in the global MedTech market. The next leap will come from



collaborations, and I invite all stakeholders to join India in co-creating solutions that will serve both our 1.4 billion citizens and the broader healthcare needs of emerging markets," said Patel.

"The medical technology sector is being recognised as a sunrise sector," she added. She also emphasised the government's investor-

friendly policies, including 100 per cent FDI in medical devices, the establishment of an Export Promotion Council, and the formation of a National Medical Devices Promotion Council to improve ease of doing business and broaden export opportunities.

Further, Dr. Vinod K Paul, Member (Health), NITI Aayog, outlined the series of transformative meas-

ures undertaken by the government in recent years to boost innovation, R&D, affordability, and domestic manufacturing in the medical devices sector.

He highlighted the National Medical Devices Policy, 2023, as a landmark step that sets out a comprehensive framework for holistic sectoral growth. This is complemented by the Policy on R&D and Innovation in

the Pharma-MedTech sector, the development of Medical Devices Parks modeled on the Andhra MedTech Zone, a Productivity Linked Incentive (PLI) Scheme, and the launch of the Promotion of Research and Innovation in the Pharma-MedTech Sector (PRIP) -- popularly known as the BRICS scheme.

The two-day forum, being held from 16-17 September, brought together senior policymakers, global industry leaders, regulators, and healthcare experts from more than 10 countries across the Asia Pacific region to align strategies for shaping India's MedTech roadmap in line with the Prime Minister's Healthcare Vision 2030 and Viksit Bharat 2047.

# NIT Rourkela study to boost bone regeneration technology

Researchers from the National Institute of Technology (NIT) Rourkela have uncovered how natural sugar-like molecules in the human body can alter the behaviour of a protein responsible for bone formation and repair.

The findings, published in the journal *Biochemistry*, can be used for advanced treatments in bone and cartilage regeneration, improved implants, and more effective protein-based medicines. From building tissues and supporting chemical reactions to acting as signals between cells, proteins carry out various functions in the human body. However, for the best productivity, they need to be folded or unfolded into precise three-dimensional shapes. Understanding why and how proteins unfold is a major goal in biology, with implications for medicine, biotechnology, and drug delivery.

In this context, Bone Morphogenetic Protein-2 (BMP-2) plays a crucial role in forming bones and



cartilage, healing injuries, and guiding stem cells to become bone-forming cells, said the team from NIT.

However, in the human body, this protein interacts with different Glycosaminoglycans (GAGs), special sugar-like molecules found in connective tissues and joint fluids.

The team investigated how these different GAGs affect BMP-2 when it is exposed to "stress" in the form of urea-induced chemical denaturation. The team observed that BMP-2 unfolded faster in the presence of Sulfated Hyaluronic Acid (SHA) -- a type of GAG -- compared to regular hyaluronic acid or without additives.

The researchers found that SHA binds directly to

BMP-2 protein, gently altering its structure and making it unfold in a more controlled manner.

"BMP-2 is a critical protein in humans that plays a fundamental role in osteogenesis and bone regeneration, residing within the glycosaminoglycan-rich extracellular matrix environment of bone tissue. Our study reveals how specific GAG-BMP-2 interactions influence unfolding dynamics and structural stability," said Prof. Harekrishna Sahoo.

"These insights allow scaffold designs to actively preserve BMP-2's functional conformation, prolong bioactivity, lower dosage needs, and reduce side effects. Furthermore, the work offers a mechanistic basis for tailoring GAG functional group modifications to modulate

protein structure and activity, guiding next-generation pharmaceutical formulation," Sahoo added.

BMP-2 naturally exists in vivo and predominantly as part of a proteoglycan complex; consequently, its interactions with GAG chains are integral to its conformational dynamics. These interactions critically influence the protein's osteoinductive potential.

Functional group modifications of GAGs, such as targeted sulfation, can profoundly modulate these interactions, imparting enhanced structural stability under physico-chemical stress while preserving bioactivity.

The research insights can help in developing improved biomaterials and drug delivery systems for the treatment of bone fractures, spinal injuries, and degenerative bone diseases. It can also aid in optimising drug delivery during treatment and reducing side effects for patients.

## Can Too Much Salt Increase Your Risk Of Stomach Cancer?

Salt is a vital seasoning, but excessive consumption can harm your health, especially your stomach. Studies have increasingly linked high salt intake to a heightened risk of stomach cancer, a condition often underdiagnosed in its early stages. Consuming too much salt damages the stomach lining, making it vulnerable to infection by *Helicobacter pylori* (H. pylori), a bacterium strongly associated with stomach cancer. The problem is particularly concerning in countries where salty foods, such as pickles, processed meats, and preserved fish, are dietary staples. Understanding the risks and taking proactive measures can help you maintain a balanced diet while protecting your stomach's health. How excessive salt intake increases the risk of stomach cancer

Excessive salt consumption directly impacts the stomach, creating conditions conducive to cancer development. Here are eight ways salt increases the risk.

1. Irritation of the stomach lining  
Salt can erode the protective mucus layer in the stomach, causing chronic inflammation and cellular damage over time, which increases cancer risk.

2. Promotes H. pylori infection  
High salt levels create an environment that encourages the growth of *Helicobacter*

pylori, a bacterium that can cause ulcers and lead to stomach cancer.

3. Enhances carcinogen formation  
Salted and preserved foods often contain nitrates and nitrites, which can transform into carcinogenic compounds when combined with stomach acid.

4. Weakens stomach defences  
Salt reduces the production of prostaglandins, compounds that protect the stomach lining from harmful substances, making it more vulnerable.

5. Increases oxidative stress  
Excess salt can generate free radicals in the stomach, leading to DNA damage and increased risk of cancerous mutations.

6. High sodium intake disrupts gut microbiota  
Consuming too much salt may alter the balance of gut bacteria, which can negatively affect overall stomach health and increase susceptibility to disease.

7. Long-term exposure to salty foods  
Regular consumption of salty snacks, pickles, or preserved fish may lead to cumulative damage over the years, elevating cancer risk significantly.

8. Amplifies risk factors in high-risk individuals  
For people with a family history of stomach cancer or existing gastrointestinal issues, excessive salt acts as a catalyst, accelerating disease progression.



Alabama at Birmingham. The study was conducted in individuals from the UK Biobank, comprising people of European ancestry, and future work will extend to more diverse populations. It leveraged this data to perform a comprehensive multi-trait genome-wide screen.

The team wanted to find new genes that affect body fat without being linked to cardiometabolic comorbidities by analyzing three

adiposity and eight cardiometabolic traits, including lipid, glycemic, and blood pressure traits.

"By revealing new biological pathways that separate obesity from related diseases, the findings may pave the way for more personalised care, better-targeted therapies, and earlier prevention strategies -- even from childhood," said Ruth Loos, Professor at the University of Copenhagen in Denmark.

# Here's why obesity affects people differently

Ever wondered why some people with obesity remain relatively healthy while others develop serious conditions like diabetes and heart disease? Genetic differences may be the reason, according to a study. An international team of researchers led by the Icahn School of Medicine at Mount Sinai and the University of Copenhagen in Denmark analysed genetic data from 452,768 people and discovered variants in 205 regions of the genome linked to higher body fat but better metabolic health.

Using these discoveries, they developed a genetic risk score that adds up the

impact of these variants. Individuals with higher scores were more likely to develop obesity -- but were less likely to suffer from complications such as high blood pressure, high cholesterol, diabetes, or heart disease. This is due, in part, to the way fat cells behave in different people.

Importantly, these protective genetic effects were already visible in children. Kids carrying the protective variants were more likely to develop obesity but did not show the expected warning signs of metabolic disease, revealed the study, published in the journal

Nature Medicine.

"Our study shows that obesity is not a single condition -- it is made up of different subtypes, each with its own risks," said Nathalie Chami, Instructor of Environmental Medicine and Artificial Intelligence and Human Health, at the Icahn School.

"By uncovering these genetic differences, we can start to understand why obesity leads to different health outcomes in different individuals. This could eventually change how we predict, prevent, and treat obesity and its complications," Chami added. The research also identi-

fied eight distinct obesity subtypes, each linked to unique health risks.

"These insights could eventually help doctors predict which patients are most vulnerable to complications and inform new treatments that mimic the protective genetic effects found in some people," said Dr. Chami.

The research team cautions that the findings do not mean obesity is harmless. "Most people with obesity still face health challenges, and lifestyle factors such as diet and exercise remain critical for overall health," said Zhe Wang, Assistant Professor at the University of

# After GST rate cut, govt waives mandatory re-labelling of medicines

In a major relief for the pharma sector, the government has dismissed the mandatory rule for drug manufacturers to recall, or re-label medicines already released in the market before September 22, the Department of Pharmaceuticals said. This follows the latest revision in Goods and Services Tax (GST) rates early this month by the GST Council, which reduced the GST on medical devices to 5 per cent from 12 per cent.

The National Pharmaceutical Pricing Authority (NPPA), in an Office Memorandum, clarified that companies can

instead comply by ensuring revised pricing is reflected at the retailer level.

"All manufacturers/ marketing companies selling drugs/ formulations shall revise the Maximum Retail Price (MRP) of drugs/ formulations (including medical devices). The manufacturers/ marketing companies shall issue a revised price list or supplementary price list to dealers and retailers for display to consumers, and to State Drug Controllers and the Government, reflecting the revised GST rates and revised MRP," the NPPA said.

"Recalling, re-labelling, or re-stickering on the label of a container or pack of stocks released in the market prior to September 22, 2025, is not mandatory, if manufacturer/ marketing companies are able to ensure price compliance at the retailer level," according to the FAQs issued by the Finance Ministry. The pharmaceutical industry had earlier expressed concerns over the practical challenges and costs of recalling and re-labelling medicines already in circulation.

The new decision to permit revised price lists instead is expected to reduce disruptions in the

supply chain, ensuring that patients do not face shortages of essential medicines due to technical labelling requirements.

Retailers will now be responsible for displaying the updated price lists, enabling consumers to access medicines at the revised rates without confusion. Meanwhile, the Association of Indian Medical Device Industry (AiMeD) has submitted recommendations to the Union Finance Minister and GST Council Chairperson Nirmala Sitharaman, seeking balance GST reforms. AiMeD emphasised that

additional reforms are critical to address persisting challenges such as working capital stress, inverted duty structures, and restricted refund eligibility. Key reforms proposed by AiMeD include simplification of the GST refund mechanism by extending refund eligibility to Input Tax Credit (ITC) on services and capital goods, which are currently excluded.

It also includes a uniform 5 per cent GST rate on inputs; amendment of Rule 89(5) to include ITC on services, capital goods; and automated, time-bound refunds to introduce provisional 90 per cent

refunds within strict timelines to ease liquidity for manufacturers.

"Global best practices in countries like Australia, New Zealand, Canada, and the EU allow full refund or carry-forward of unused GST/VAT paid on inputs -- including services -- so that exporters and businesses with inverted duty structures do not suffer cash flow blockages or tax cascading," said Rajiv Nath, Forum Coordinator, AiMeD.

"India must adopt similar reforms if we want to lower healthcare costs, strengthen Make in India, and improve global competitiveness," he added.

## EDUCATION PLUS

## Brighter opportunity in Career Options in Advertising



### Advertising & Marketing Communications

There is perhaps, no other business that so greatly influences our daily lives. Advertising dictates our choices regarding cars we drive, our drinking preferences, or our clothes, it is a great influence on our daily lives.

#### Work

Advertising offers a unique blend of opportunities as a career. Rare in other industries will you find a more eclectic group of individuals under one roof! The major areas of operation are client servicing, media planning, creative and research.

#### Client Servicing

The face of the agency, Client Servicing, represents the agency to the client and the client within the agency. On receipt of a detailed brief from the client, the Account Executive and Account Planner chalk out a strategy based on the brand's positioning, its USP and its communication peg.

While the more renowned agencies require an MBA, some others will be satisfied with a Degree/Diploma in marketing or mass communication.

#### Media Planning

They guide ad agencies select the best outlet or medium to reach the customer they want. Media planners plan, schedule, book and purchase space in the print media (newspapers, magazines) or outdoors (billboards, kiosks and bus panels) and time (TV & radio, internet). The media planning also involve conducting some targeted research to assess recall and viewership/readership of a campaign. Media planners should ideally have a background in Maths and Statistics, an MBA.

#### Accounts Planning

The servicing department which strategize and help evolve the budget, selecting the right media and drawing up the communication message after exchanging views with the client and with its own creative team, the media planning department and on occasions, the market research agency.

#### Copy Department

Copywriter's task is to send across the message in words -- headline, followed by the body copy in the case of a press ad, a dialogue or jingle for a radio spot, or a detailed story board in the case of a TV commercial.

A good copywriter's must come out with unique and out of the box ideas and co-relate mass-

es of data and research findings so as to present the conclusions in language that is lucid and convincing. He/She also needs patience to craft words into a definite and successful sales pitch. The paramount requirement is creativity and versatility.

#### Creative Department

The creative department's job is to identify the correct words, the most appropriate visuals -- to catch the attention. The creative team can be further divided into two sections: Copy and Creative.

#### The Art Department

The look of a campaign accommodating the different components i.e. headline, visual, picture, text, logo, etc. in a given space. Selecting the size and type of the font, the visual treatment and the overall treatment is the purview of the visualisers and art directors.

A high level of originality and creative talent form the pillar, a degree in applied art or graphic design with knowledge of computer graphics/multimedia is required.

#### Market Research

The Research department tries to measure the effectiveness of the ad campaign. It is research that provides the media planner and creatives a scientific and measurable basis to sharp-focus their strategy. These professionals are from a variety of disciplines, but share a common comfort level with mathematical or statistical modelling, sampling techniques and psychographics.

#### Remuneration

In this industry rewards are directly commensurate with the initiative you display, the effort you put in and the results you achieve. If you are ambitious and hard working, you can quickly move up the ladder. Starting with Rs.6000 or thereabouts as a fresh wet-behind-the-ears trainee, you can easily gross ten times as much five years down the line if you've got what it takes.

#### Institutes/Colleges

Though few colleges offer specialisation in advertising at the bachelor's level. But elements of advertising such as media planning and client servicing are covered in Mass Communication courses offered at both the undergraduate and post-graduate level

#### By-Vijay GarG

#### Ex.PES-1

#### Retired Principal

#### Government Girls

#### Senior Secondary

#### school MHR Malout