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 **The Indian EXPRESS**

WHO says Southeast Asia needs \$3 billion annually to fight tuberculosis

This World TB Day's theme is to invest to save lives, which is especially critical given the pandemic and the conflicts in Eastern Europe, African region and the Middle East that have put progress at risk.

By: [Express News Service](#) | Pune | March 23, 2022 6:04:20 pm



Getty/indianexpress.com

After Covid 19, tuberculosis is the second-most infectious killer in the world, claiming 4,100 lives daily (Source: Getty Images/Thinkstock, Representational)

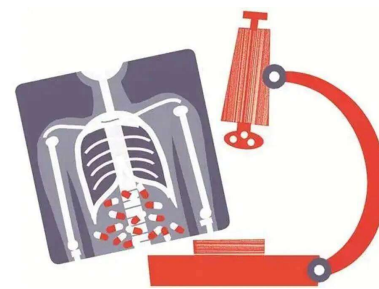
On the eve of World TB Day (March 24), the **World Health Organization** has highlighted the urgent need for national, international and global stakeholders to invest at least US\$ 3 billion annually in the Southeast Asia region to avert nearly 4.5 million new tuberculosis cases and prevent more than 1.5 million deaths from the disease by 2025.

 **The Indian EXPRESS**

'TB can now be diagnosed in two to 72 hours with the latest tests'

With an early diagnosis, he said, treatment can start immediately and TB is 100 per cent curable. The diagnosis of tuberculosis and its resistance, added Prof Sethi, have become easier due to the availability of many rapid tests.

By: [Express News Service](#) | Chandigarh | March 27, 2022 4:40:42 am



Educate yourself on the myths and facts about Tuberculosis. (Photo: Representational)

A two-day CME-cum-workshop on tuberculosis started on Saturday, as part of World TB week at the Department of Medical Microbiology, PGI Chandigarh. Dr Sunil Sethi,.....

Continued in page No.5

After Covid 19, tuberculosis is the second-most infectious killer in the world, claiming 4,100 lives daily. The theme this year is to invest to eradicate tuberculosis and save lives, which is especially critical in the context of the [Covid-19](#) pandemic and the conflicts in Eastern Europe, African region and the Middle East that have put progress at risk, the WHO said.

In 2020 tuberculosis caused an estimated 1.5 million deaths globally, up from 1.4 million in 2019. In the Southeast Asia region, estimated tuberculosis and TB-HIV mortality increased by nearly 10 per cent in 2020—over 700,000 lives lost—a trend that is likely to continue, if not worsen, unless urgent action is taken, according to Dr Poonam Khetrapal Singh, regional director, WHO Southeast Asia. In 2020 India launched a “Jan Andolan”, or people’s movement, against tuberculosis. “We need to intensify community engagement in planning, monitoring and implementing national tuberculosis programmes, ensuring that tuberculosis services are close to where people live and work and sensitive to their needs,” Singh said.

The Stop TB Partnership has also called for an urgent and substantial increase of funding to fight tuberculosis in order to meet the goal of eradicating the disease by 2030. The year 2022 is critical for the global fight against the disease. “All projections show that the world is not on course to meet the 2018 United Nations high-level meeting’s TB targets set for 2022,” said Dr Lucica Ditiu, executive director of the partnership, at a virtual press conference. “TB is an infectious and deadly airborne disease with drug-resistant variants. Each untreated TB infection can lead to 15 more infections per year,” Dr Ditiu added.

A report by HaystackAnalytics, a health startup initially funded by the Department of Science and Technology and the Centre’s Biotechnology Industry Research Assistance Council, indicates that the country continues

to bear the largest share of tuberculosis cases in the world, with 65 per cent of the cases being reported in the most economically productive population segment of 15-45 years of age. In 2020 a total of 18.12 lakh tuberculosis cases were notified, which was 25 per cent less than the total 24 lakh cases recorded in 2019.

Lack of access to tuberculosis services and limitations in resources affect reporting of infections. “There is a need to ensure accurate and timely diagnosis of TB,” Dr Anirvan Chatterjee, CEO of HaystackAnalytics, said. Genomics is changing the face of healthcare in therapy areas, and whole genome sequencing has given breakthrough solutions in identifying right pathogens and timely diagnosis of the disease, he added.



Fighting TB with lessons learnt during Covid pandemic

It’s time we acknowledge the magnitude of the disease, and work harder at offering individuals equitable healthcare access and resources that the disease warrants

Written by [Lancelot Pinto](#), [Chapal Mehra](#) | Updated: March 24, 2022 8:59:05 am

[Covid-19](#) and tuberculosis (TB) are remarkably similar. They are transmissible, airborne infections. Both are more likely to spread in crowded settings, and harm people with immuno-compromising conditions.



We need to aggressively scale up testing with innovative strategies such as active surveillance, bidirectional screening for respiratory tract infections using the most sensitive molecular diagnostics, and contact tracing.

In the first year of the Covid-19 pandemic, 1.8 million people were reported to have succumbed to the virus. In the decade between 2010-20, 1.5-2 million individuals died every year because of tuberculosis. Yet, we seldom see the word “pandemic” used in the context of TB. The amount of money spent by governments for research and development in the first 11 months of the Covid-19 pandemic was 162 times the corresponding amount spent on TB in 2020. The difference in responses to the two pandemics can only be explained by the differences in the profiles of those who get infected. TB disproportionately affects people in low-income nations, the poor and the vulnerable.

The increased burden on healthcare to manage Covid has led to a serious setback in TB control. Before the Covid pandemic, it was assumed that a third of all individuals with TB were undiagnosed, and were likely spreading the disease in their communities. In the past two years, case detection has dropped, suggesting that the proportion of such “missing cases” is likely to have increased. Lockdowns, the fear of healthcare establishments and the stigma associated with respiratory symptoms have possibly contributed to the increase in “missing cases”. For those diagnosed, access to medicines has not always been easy. The redirection of human resources within the health system during the three Covid

waves has left TB facilities understaffed leading to poorer quality and delayed care.

Studies have suggested that Covid may trigger pathways leading to reactivation of dormant TB bacilli. Historically, turmoil in society (such as wars), food insecurity, poverty and malnutrition have resulted in surges in the incidence of TB. We could, therefore, witness an increase in TB in the coming years.

On World TB day, we need to ask how best we can leverage the lessons learnt from Covid-19 to help gain a new momentum in TB control. We need to focus on the epidemiological triad: Agent, host and the environment.

Test, treat and track has been a strategy successfully employed for Covid. We need to aggressively scale up testing with innovative strategies such as active surveillance, bidirectional screening for respiratory tract infections using the most sensitive molecular diagnostics, and contact tracing. The biggest victory against Covid has been the speed with which vaccines were developed, scaled up and deployed. We need to replicate the same for tuberculosis, lobbying for funding from governments and industry to develop a successful vaccine for TB.

Malnutrition, poverty and immuno-compromising conditions such as diabetes are some of the factors strongly associated with TB. Over a hundred million Indians smoke tobacco — a strong risk factor for both developing TB, and dying from it. Social security programmes that work towards prevention of modifiable risk factors would possibly pay richer dividends than an exclusive focus on “medicalising” the disease.

Environmental factors which have been neglected include ventilation of indoor spaces, educating individuals to avoid crowds when possible, and to encourage voluntary masking, especially in ill-ventilated and closed spaces. We must not lose this opportunity to invest in these

measures, at a time when the sensitisation to their need is high.

Covid has been a stellar example of how investments and actions can be swift, and public education can transform behaviour. Similar aspirations for TB can help turn this crisis into an opportunity to re-imagine our overburdened and underfunded systems. We need to actively engage the private sector, build bridges and partnerships as we did in the case of Covid.

All this, however, is easier said than done. India needs to triple the funding not just for TB but for health, nutrition and preventive services. The country needs to invest in state-of-the-art technologies, build capacity, expand its health workforce and strengthen its primary care facilities. It also needs to consider telemedicine and remote support as important aspects of health services. Most importantly, before embarking on any of this, it needs to build an open and collaborative forum where all stakeholders, especially affected communities and independent experts, take a lead role.

We have ignored TB for too long. It's time we acknowledge the magnitude of the disease, and work harder at offering individuals equitable healthcare access and resources that the disease warrants.



World Tuberculosis Day: Diagnosis to improve courtesy Covid-driven expansion of molecular tests

Written by [Anonna Dutt](#) | New Delhi

March 24, 2022 10:41:45 am

The government is now in the process of making molecular diagnosis the first-line test for TB, ensuring more cases get diagnosed.

The [Covid-19](#) pandemic acted as a catalyst for the proliferation of battery-operated, portable TrueNat PCR machines that can better detect tuberculosis (TB), aiding the country's programme to eliminate the bacterial disease by 2025. These machines capable of testing for Covid-19 as well have already been deployed to 2,200 healthcare facilities across the country as the country observes World Tuberculosis Day today (March 24).

The government is now in the process of making molecular diagnosis the first-line test for TB, ensuring more cases get diagnosed.....

.....India reported 18.05 lakh TB cases in 2020, which was 24% less than the previous year owing to measures such as lockdown during the pandemic.

"There are a total of 5,000 machines across India right now, including those under the government programme and private sector. This is just a platform technology to bring PCR testing to the lowest level of healthcare. This is probably the most disruptive innovation that has happened in the TB programme over the last 20 years," said Sriram Natarajan, director, Molbio Diagnostics, which has developed the testing platform, that along with TB and Covid-19 is also capable of diagnosing conditions such as HIV, Hepatitis B and C, Human Papillomavirus (HPV) which is known to increase the risk of cervical [cancer](#), and H1N1.

The TrueNat technology, like any other PCR technology, amplifies the genetic material of a pathogen to identify. Microscopy for TB, on the other hand, just identifies the pathogen by seeing in through the microscope, making it less accurate. In fact, microscopy is known to detect only 40 per cent of the TB cases as compared to 98 per cent using TrueNat.

All the reagents used in TrueNat testing are available in a cartridge that goes in the machine, meaning highly-skilled lab technicians are not needed to do the test. It also does not require a proper laboratory and the test can be done on the field. It is battery operated and can use data from a SIM card to also upload the information of positive TB patients directly to the government portal, making it useful in low resource settings such as primary and community health centres.

“The government is in the process of making molecular diagnosis the first-line test for TB, so that cases do not get missed and the spread does not continue. TrueNat is extremely essential for that as it can give results on whether a person has TB and whether it is drug-resistant or not within two hours. Right now the samples have to be sent to district-level hospitals for molecular testing, which can take up to a week or more to put people on the right treatment. Additionally, the quick test can help in active case finding; right now only those who have symptoms come to the government system to get tested,” said Natarajan.

There are around 14,000 microscopy centres under the national TB programme, with the government planning to replace it with TrueNat testing in at least 7,000-8,000 centres.

In addition to the government programmes, Molbio Diagnostics has also developed a TB screening van that can screen people using a quick x-ray and then use the molecular testing to confirm the diagnosis in those who are found to be positive. “This is an end to end solution and it will be needed for active case finding as India moves towards elimination,” he said.

He said, the pandemic has set back the programmes by years and aggressive action is needed over the next three years if India hopes to achieve its target of TB elimination by 2025. “The programme will have to aggressively screen patients to find and treat as many cases as possible to ensure that it is not further spread in the

community. Plus the government will also have to look at not just diagnosing but also the treatment for latent TB — 40 per cent of cases have no symptoms — that acts as a pool for transmission,” said Natarajan.

Continued from page no.1

‘TB can now be diagnosed in two to 72 hours with the latest tests’

.... Professor and organising secretary of TBICON 2022, said that over 300 delegates from all over India will be attending this event

“The objective of CME and workshop on World TB Week is to educate and train doctors regarding the development in new diagnostics and treatment of TB. This is very important as all doctors and private practitioners need to update their knowledge regarding diagnosis and management to achieve the target of ending TB by 2025,” said Prof Sethi.

Latest diagnostic tools and tests, added Prof Sethi, help in detecting TB early.

“Truenat is one such new test, available here at the Institute. Earlier, diagnosis for TB used to take four weeks. Now, with Truenat, the diagnosis can be in two to 72 hours. The target of TB elimination in India is 2025, and the effort is to prevent, detect and treat,” said Prof Sethi.

With an early diagnosis, he said, treatment can start immediately and TB is 100 per cent curable. The diagnosis of tuberculosis and its resistance, added Prof Sethi, have become easier due to the availability of many rapid tests.

As part of the workshop on Saturday, different molecular techniques such as NAATs along with

conventional methods like smear microscopy and cultures were demonstrated.

“What is important is that the treatment is not left midway, for that causes drug-resistant TB, which is challenging to treat and cure. We now have new drugs for better treatment, and DOTS centres across the country are providing free treatment to patients. Low immunity is a cause of TB, with 60 per cent of patients infected because of low immunity. While the incidence of TB has come down, a healthy diet, better lifestyle and good hygiene standards are important for the prevention of TB,” added Prof Sethi.

The incidence of pulmonary TB, he added, is 80 to 90 per cent, with paediatric TB tough to diagnose. “Also, TB is now prevalent in the urban population, though the incidence of TB has come down from 192 per lakh population to 167. It was the number one killer before Covid. The development in TB diagnosis has been phenomenal since 2013 and new generation sequencing will also help detect new mutations.”

The Indian EXPRESS

Delhi: Covid spurred health infra but took toll elsewhere — TB to maternal mortality

While Delhi's healthcare infrastructure improved significantly in 2021, several healthcare indicators such as routine immunisation, maternal mortality, and detection of tuberculosis cases worsened during the year when the capital witnessed its worst Covid-19 wave, shows Delhi's outcome budget and economic survey released on Friday.

Written by [Anonna Dutt](#) | New Delhi |
Updated: March 26, 2022 8:43:11 am



The government was able to add 17 new mohalla clinics in 2021, taking the total number to 520. (File)

While Delhi's healthcare infrastructure improved significantly in 2021, several healthcare indicators such as routine immunisation, maternal mortality, and detection of tuberculosis cases worsened during the year when the capital witnessed its worst [Covid-19](#) wave, shows Delhi's outcome budget and economic survey released on Friday.

The total number of beds in Delhi government hospitals increased to 13,844 in 2021 from 12,464 the year before. The increase of 1,380 beds is largely owing to operationalisation of three of Delhi government's newly constructed hospitals in Burari, Ambedkar Nagar and Dwarka. The three hospitals will have a capacity of over 3,000 beds once fully operationalised.

However, the increase in the number of beds is marginal when compared to the increase in the number of ventilator, ICU, and oxygen-supported beds that was achieved in 2021. From just 447 ventilators available in Delhi government hospitals before the pandemic, the numbers increased to 733 in 2020 and 1,255 in 2021. Similarly, the number of ICU beds increased from just 534 across all Delhi government hospitals in 2019, to 1,229 in 2020, and 2,296 in 2021 — an over four-fold increase amidst the pandemic. The number of oxygen-supported beds went up from 3,865 in 2019 to 6,580 in 2020 and 9,243 in 2021, according to the outcome budget.

To augment the availability of oxygen, the government also set up 52 pressure swing

adsorption oxygen plants across 24 of its hospitals in 2021.

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To augment the availability of oxygen, the government also set up 52 pressure swing adsorption oxygen plants across 24 of its hospitals in 2021.

Despite the union health ministry advising healthcare institutions to cross-refer Covid-19 patients for TB testing, the number of tests in Delhi reduced to 84,451 in 2021 as compared to 1,58,489 in 2020, as per the outcome budget. The number of TB patients notified was 74,982 as compared to 88,127 in 2020.

With Delhi witnessing a dengue outbreak between two of the Covid-19 waves, the government's target of controlling vector borne diseases was also not met. There were 9,613 dengue cases and 23 deaths reported in 2021.



TB reporting went up in 2021, yet to reach pre-pandemic levels: India TB Report

The community and the government need to come together to fight TB and eliminate TB by the 2025 deadline set by our Prime Minister,” said Union Health Minister Mansukh Mandaviya on the occasion of World TB Day on Thursday.

Written by [Anonna Dutt](#) | New Delhi | March 25, 2022 3:10:45 pm



At the event organised on the occasion of World TB Day Union Minister of State for Department of Science and Biotechnology Dr Jitendra Singh also announced the launch of 'Dare2eraD TB' to eradicate the disease. (Source: [Twitter/@mansukhmandaviya](#))

India reported 19.33 lakh cases of Tuberculosis in 2021, according to the India TB Report 2022 released on Thursday. While this was not as high as pre-pandemic levels, TB cases increased in 2021 as compared to the previous year when 18.05 lakh cases were reported, a 25 per cent decline owing to the [Covid-19 pandemic](#)-related lockdown and restrictions.

There were 21 lakh cases detected last year, according to a senior health ministry official, with some cases being reported after the compilation of the India TB report.

This means, there was a 16.3 per cent increase in reporting as compared to the year before. In comparison, over 24.04 lakh cases were detected in 2019.

“There are estimated 20 to 25 lakh TB cases in the country every year. We have seen [Covid-19](#) kill nearly 5 lakh people, but more than 4 lakh people die of TB each year. And, these are mostly people

below the age of 60 years; the earning members of the family. The community and the government need to come together to fight TB and eliminate TB by the 2025 deadline set by our Prime Minister," said Union Health Minister Mansukh Mandaviya on the occasion of [World TB Day on Thursday](#).

At the event, Union Minister of State for Department of Science and Biotechnology Dr Jitendra Singh also announced the Dare2eraD TB umbrella TB programme, comprising of InTGS – Indian Tuberculosis Genomic Surveillance Consortium, InTBK Hub – Indian TB Knowledge Hub-Webinar Series, and host directed therapies against TB and developing an evidence-based regimen for treating extra-pulmonary Tuberculosis.

With India aiming to eliminate the bacterial disease by 2025, five years ahead of the global target, the programme has focused on better diagnostics, shorter courses of treatment, and active case finding among vulnerable populations.

Eighteen states, including Kerala, Madhya Pradesh, Tamil Nadu, Punjab, Uttar Pradesh and West Bengal, have already implemented state-specific strategic plans.

The government has also started sub-national certification for elimination with 201 district-level claims, and 10 state/Union Territory-level claims for reducing incidence have been made in 2021.

The national programme defines elimination as reporting no more than 44 new TB cases or 65 total cases per 100,000 population by 2025. The estimated TB incidence or new TB cases for 2020 stood at 188 as per the report.

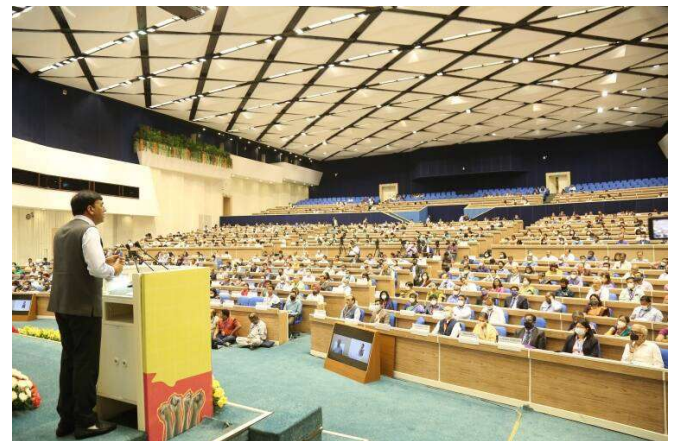
The programme also aims to reduce the mortality to 3 deaths per 100,000 population by 2025. There was a slight increase in the number of deaths in 2020 – the estimated toll of all types of TB was 4.93 lakhs in 2020, 13 per cent higher than of the 2019 estimate.

The third aim of the national plan to eliminate TB is to reduce catastrophic costs for the affected family to zero. However, the report states that 7 to 32 per cent of those with drug sensitive TB, and 68 per cent with drug-resistant TB experienced catastrophic costs.

But, all is not glum.

The report shows that 95 per cent of those who were diagnosed with TB were put on the therapy in 2021. Around 90 per cent of those with multi-drug resistant TB and 89 per cent with extremely drug resistant TB were put on treatment.

The government also introduced a shorter oral course Bedaquiline (Bdq) TB regimen to ensure people completed their treatment.



There is a need for the programme to push into tribal areas where the prevalence of TB is higher said NITI Aayog member Dr V K Paul. (Source: Twitter/@mansukhmandviya)

The government has worked on improving diagnosis of the infection, gearing towards less accurate smear tests being replaced by Neucleic Acid Amplification Test (where the genetic material of the bacteria is amplified just like the RT-PCR test for Covid-19). The number of NAAT testing centres increased to 3,164 in 2021 from 628 in 2017.

The number of microscopy centres increased to 21,717 in 2021 from 15,307 in 2017. The number of labs that tested for sensitivity to various antibiotics increased to 80 in 2021 from 50 in 2017. And, the

government also introduced 80 mobile TB testing vans in 2021.

NITI Aayog member Dr V K Paul, on the occasion, said, “We have seen in the wake of this pandemic that the diagnostic arm can be scaled up across the nation in a phenomenal way to reach those in the villages, those far from the centre of activities in the cities. During the pandemic, most of the states also set up mechanisms to support patients at home; Covid-19 kits were sent home. Even in TB, this support is needed. We need someone who can go home and talk to a patient, tell them they have to take the medicine, eat good food, and quit tobacco.”

He also said there was a need for the programme to push into tribal areas where the prevalence of TB is higher.

A campaign for active case finding – going to the community instead of people with symptoms coming to healthcare centres — conducted in 2021 screened 2.23 crore people and resulted in the detection of 73,772 additional cases. Not only that, the coverage for a preventive therapy was also extended to all household contacts of a TB patient irrespective of their age and other risk factors in 2021.



2 Bengal districts get Centre's pat for progress in TB fight

“The Government of India has recognised the success of Purba Medinipur and Nadia districts in achieving the goal of TB elimination by 2025,” said Director of Health Services Dr Ajay Chakraborty.

By: [Express News Service](#) | Kolkata |
March 25, 2022 4:58:41 am



According to officials, Bengal had sought bronze medals for two revenue districts Purba Medinipur (including Nandigram) and Nadia under the 'TB Free Certification' scheme after these districts registered a 20% reduction in TB cases.

Two West Bengal districts — East Midnapore and Nadia — have been nominated by the Centre in gold and bronze categories, respectively, for making remarkable progress in the elimination of tuberculosis (TB).

“The Government of India has recognised the success of Purba Medinipur and Nadia districts in achieving the goal of TB elimination by 2025,” said Director of Health Services Dr Ajay Chakraborty.

These districts will be felicitated at an event organised on the occasion of World TB Day on March 24 at Vigyan Bhawan in New Delhi.

According to officials, Bengal had sought bronze medals for two revenue districts Purba Medinipur (including Nandigram) and Nadia under the 'TB Free Certification' scheme after these districts registered a 20% reduction in TB cases.

The verification of the claims was carried out by the Indian Council of Medical Research (ICMR)-National Institute of Research in tuberculosis during February-March 2022 in collaboration with the ICMR-National Institute of Epidemiology, Chennai, Indian Association of Preventive and Social Medicine and WHO India, and surveys were conducted for estimating TB cases in randomly selected villages in the districts.

The current cases of TB in these districts have registered a decline from the 2015 baseline, says the results announced by the Ministry of Health and Family Welfare on Tuesday.

“Purba Medinipur, including Nandigram, has been selected for the award in the gold category with more than 60% reduction in TB incidences compared to the baseline of 145 in 2015, while Nadia has been selected for the bronze category with a 20% reduction in TB incidence compared to the baseline of 173 in 2015. This is the first achievement towards the ‘TB Mukto Bangla’, the dream project of our Chief Minister,” added Dr Chakraborty.

The Indian EXPRESS

‘Fourth Covid wave likely in August; caution must till WHO says pandemic is over’

Karnataka Health Minister K Sudhakar cites a mathematical model prepared by IIT Kanpur amid reports of Omicron’s BA.2 sub lineage fuelling a Covid surge in several East and Southeast Asian and European countries.

By: [Express News Service](#) | Bengaluru |
Updated: March 25, 2022 7:34:02 am

Amid reports of [Omicron’s BA.2 sub-lineage](#) fuelling a Covid surge in several East and Southeast Asian and European countries, Karnataka Health Minister K Sudhakar told the Legislative Council that India was likely to witness a fourth wave of the pandemic in August.

Later Sudhakar told reporters that a mathematical model prepared by the Indian

Institute of Technology, Kanpur, had predicted a fourth wave in August.



“Covid-appropriate behaviour should be maintained till the WHO announces that Covid is gone. We will hold a meeting with the technical advisory committee to understand the prevailing situation,” said Sudhakar. (File)

“We are geared up to face any kind of situation given we have the experience of the past three waves. Our health infrastructure is augmented and the vaccination programme is unprecedented. Even those above 12 years of age are getting vaccinated now. The variant BA.2 was first reported in the Philippines and now this has spread to 40 countries,” he said.

On whether the government would reimpose stringent measures, Sudhakar said, “Covid-appropriate behaviour should be maintained till the WHO announces that [Covid](#) is gone. We will hold a meeting with the technical advisory committee to understand the prevailing situation.”

Dr CN Manjunath, a member of the clinical expert committee, said the extent of the predicted wave in July-August was not known.

“We have to be vigilant and step up surveillance of international passengers at an appropriate time. We have learnt lessons during the first three waves and are better prepared to deal with the fourth wave. Though 90 per cent of the people have been vaccinated, one has to be vigilant. The expert committee recommendation is that surveillance and caution should be

maintained indoors. Genome sequencing for detecting new variants is a must," he said.

A special genome sequencing drive taken up last month revealed that 89.6 per cent of the samples were [Omicron](#) while 10 per cent were Delta and the sub-lineages. Of the Omicron variants detected, 99.1 per cent were BA.2 strains.



World Tuberculosis Day 2022: Common myths and facts about the disease

"There is treatment for tuberculosis. If diagnosed and initiated on time and if the patient is compliant to treatment, they do well with anti-TB medication," said Dr Jayalakshmi TK

By: [Lifestyle Desk](#) | New Delhi |
March 24, 2022 7:00:47 pm

[World Tuberculosis \(TB\) Day](#) is observed to raise awareness about tuberculosis, which is an infectious disease. According to WHO, the estimated incidence figure of people in India struggling with TB stood at 2.64 million cases, as in 2019. This is a rate of 193 per 100,000 population. Yet, the disease comes laced with many myths that often obstruct necessary and effective treatment.

Myth: Everyone with TB is infectious

One of the first myths that Dr Jayalakshmi TK, consultant, pulmonologist, Apollo Hospitals Navi Mumbai pointed out is that everyone with TB is [infectious](#). She clarified and said, "Tuberculosis can affect all organs of the body except hair, teeth and nails. But, only [pulmonary tuberculosis](#) is

infectious and can spread through droplets. Patients who are initiated on treatment for pulmonary tuberculosis become non-infectious in three weeks after starting the treatment for drug sensitive tuberculosis."

Myth: TB is genetic

Further, Dr Avi Kumar, senior consultant, pulmonology, Fortis Escorts Heart Institute, Okhla New Delhi, brought attention to the myth that TB is [genetic](#) whereas the truth, he said, is that "it's an infectious disease caused by mycobacterium tuberculosis and mainly spreads through droplets, through air." Adding to this, Dr TK said, "Since tuberculosis spreads through droplets, families who are in close contact get exposed, and the chances of developing tuberculosis increases. There are certain places where the number of tuberculosis patients are more, in such areas the exposure to patients is substantial, thereby, increasing the chances of people developing tuberculosis."

Myth: TB is fatal and non-curable

People also often believe that TB is a non-curable, [fatal disease](#). But Dr TK states that the opposite is true, saying: "There is treatment for tuberculosis, if diagnosed and initiated on time and if the patient is compliant to treatment, they do well with anti-TB medication. Treatment for drug sensitive tuberculosis is 6 to 9 months comprising of Rifampicin, Isoniazid, Ethambutol and Pyrazinamide. About 5% of patients can develop drug resistant tuberculosis. Now there are shorter duration regimen available which comprise of Bedaquiline or Delamanid."

Dr Kumar also added that TB can be cured "if the patient religiously take the regimen prescribed by the doctors and maintains the right dosage, timing and the form. Chances of relapse are also less if proper regimen is followed. However, TB relapses in a patient can sometimes be fatal if they are immunocompromised."

Myth: TB spreads from touch

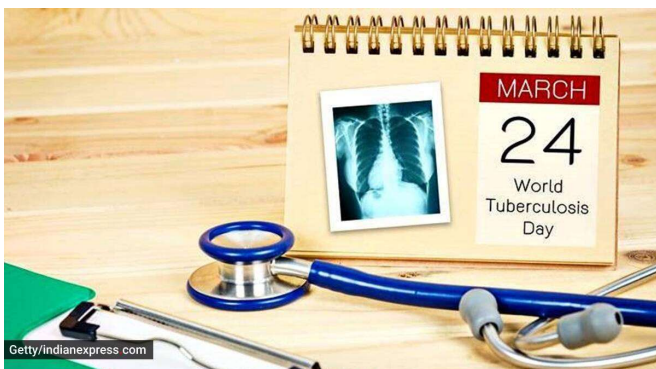
Both the experts also brought light to the myth that TB can spread by touching the patient. DR TK said that while it is rare for cutaneous tuberculosis or skin TB to spread through touch in untreated patients, "it's not likely to be spread through personal items, such as clothing, bedding, drinking glass, eating utensils, handshake, [toilet](#), or other items that a person with TB has touched."



World Tuberculosis Day 2022: Symptoms and preventive measures you must know about

"TB control efforts have been disrupted in the country due to the ongoing COVID-19 pandemic," LM Singh, India MD, Vital Strategies said

By: [Lifestyle Desk](#) | New Delhi |
March 24, 2022 3:50:11 pm



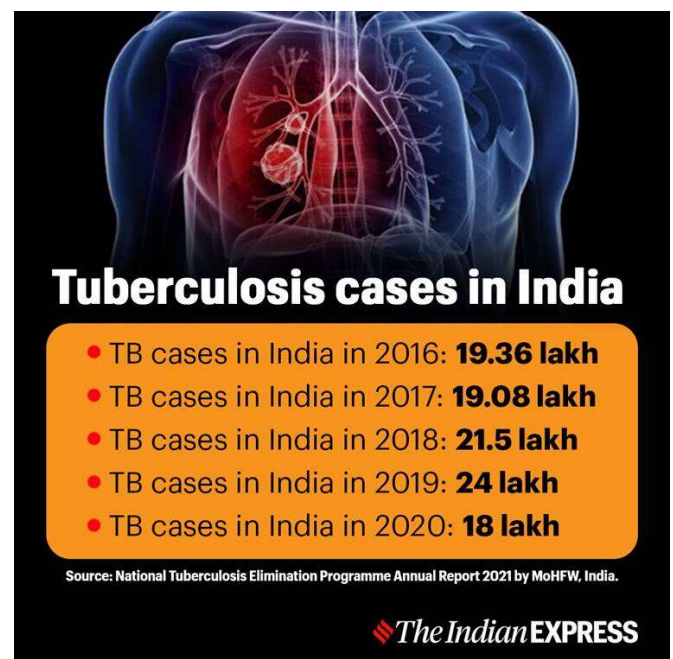
World Tuberculosis Day is observed on March 24 every year. (Source: Getty Images/Thinkstock)

[World Tuberculosis \(TB\) Day](#) is observed on March 24 every year to raise public awareness about this infectious disease. Also, it seeks to spread information about the "devastating health, social

and economic consequences of TB and to step up efforts to end the global [TB epidemic](#)".

According to the World Health Organisation (WHO), the theme of World TB Day 2022 is 'Invest to End TB. Save Lives' and "conveys the urgent need to invest resources to ramp up the fight against TB and achieve the commitments to end TB made by global leaders".

"[Tuberculosis](#) (TB) is among the oldest infectious diseases and is found in every country around the world. 10 million people get sick with TB each year and it accounts for more than 1.4 million deaths, even though it is preventable and curable. TB control efforts have been disrupted in the country due to the ongoing [COVID-19 pandemic](#). Efforts must begin now to ensure that the World Health Organizations 'End TB Strategy' remains a global and national priority," LM Singh, India MD, Vital Strategies said.



Symptoms

According to Dr Abhilasha Kochhar, Senior Microbiologist, Metropolis Healthcare Ltd, one should get alarmed and get in touch with their physicians on experiencing these symptoms.

For pulmonary TB

- *Cough for more than three weeks with or without sputum production
- *[Coughing](#) blood in sputum
- *Low-grade fever
- *Easily fatigued
- *Chest pain
- *Loss of [appetite](#)
- *Unexplained weight loss of more than 5 per cent of your body weight in six months

For extrapulmonary TB

In extrapulmonary TB, any of the above symptoms along with the following symptoms are system-specific.

- *Dull lower abdominal pain (for Gastrointestinal TB)
- *Severe [headache](#) and neck rigidity (TB meningitis)
- *Unhealing wound (soft tissue TB)
- *Severe back pain, Trouble moving or walking (Bone TB)
- *Swelling in neck nodes (Lymph node TB)
- *Urinary infection sterile for common causative agents of UTI, Abnormal menstrual cycle in females, [infertility](#) in both males and females (genitourinary TB)

Preventive measures

Dr Kochhar shared the actions required to prevent the disease.

- *Our primary immunization program offers BCG vaccination at birth or as early as possible till one year of age.
- *[Malnourishment](#) and stress are risk factors for TB, so eat well, sleep well.
- *Good coughing and sneezing etiquette. Cover your mouth and nose while sneezing
- *Do not spit outdoors. Use a basin to spit.
- *People living with TB infected patients should wear masks, ensure the patient also wears the mask.

According to Singh, we must also address [tobacco consumption](#) as the “burden of death and disease from tobacco consumption and TB present a significant public health problem in India. Together they are responsible for extraordinary loss of life, poor health, and dire economic burden.”



World TB Day: WHO recommends shortening treatment duration from six to four months in paediatric non-severe TB cases

The shorter treatment for minimal tuberculosis in children (SHINE) multi-centre trial was conducted at Pune's BJMC, Chennai's NIRT, and other sites in Africa.

Written by [Anuradha Mascarenhas](#) | Pune |
March 24, 2022 1:16:50 pm

Multi-centre research at Pune's B J Medical College (BJMC) and Sassoon General Hospital and Chennai's Indian Council of Medical Research-National Institute of Research in TB (NIRT) and other sites in Africa has prompted the World Health Organisation (WHO) to recommend shortening the treatment duration in non-severe paediatric TB cases from six to four months.

More than one million children worldwide become ill with TB annually and almost 20 per cent of them die. Children historically have been excluded from clinical efficacy trials of TB treatment. The treatment recommendations have generally been extrapolated from trials involving adults. Hence using the fixed-dose combination formulation of TB drugs researchers from India and

Africa evaluated the cost-effectiveness of a four-month treatment regimen.

The shorter treatment for minimal tuberculosis in children (SHINE) multi-centre trial was conducted in India and Africa. It was a phase-3 randomised open-label trial comparing the four-month and six-month treatments. Around 1,204 children under 16 years participated in the trial and the key finding was that the four-month treatment was non-inferior to the standard six-month treatment. Findings of the trial have been published in the March 10 edition of the New [England](#) Journal of Medicine.

Data from the randomised controlled trial on treatment shortening for children with non-severe TB were made available to the WHO in 2021, leading the public health agency to convene a Guideline Development Group (GDG) to review new evidence on the management of TB in children and adolescents. This led to eight new recommendations on the management of TB in children and adolescents.

Dr Aarti Kinikar, principal investigator of the B J Medical College's clinical trial unit that participated in the SHINE study told [The Indian Express](#) "The children were randomised to receive either six- or four-month treatment. They were followed up for 18 months. We did not find any statistically significant difference when comparing both groups in terms of unfavourable outcomes (treatment failure, TB recurrence, death of any cause and loss to follow up). Side effects related to treatment were also few."

Shortening treatment for drug-susceptible tuberculosis is a key goal for both adults and children. This trial showed the feasibility of identifying children with the non-severe disease. "The results suggest that a stratified medicine approach as an alternative to the one-size-fits-all strategy of treatment for presumptive drug-susceptible tuberculosis could be implemented in

children with nonsevere tuberculosis," researchers have said in their paper in the journal.

The 2014 WHO guidelines for national tuberculosis programmes on the management of tuberculosis in children (second edition) included 28 recommendations on the management of TB in children. The 2022 consolidated guidelines incorporate recommendations from the 2014 guidelines that remain valid (mainly topics that remain key components of high-quality TB care for which no new evidence was assessed), relevant recommendations that have since been published in other WHO guidelines, and new recommendations published in 2022.

This is the second time that WHO has made its recommendations based on multi-centre research. The first time was on the SWEN (six weeks extended dose- Nevirapine) to prevent HIV transmission from mother to child. Findings were then published in The Lancet which said extending the dose to six weeks significantly lowered HIV transmission rates. BJMC Pune was among the trial sites then also.



World Tuberculosis Day: Diagnosis to improve courtesy Covid-driven expansion of molecular tests

The government is now in the process of making molecular diagnosis the first-line test for TB, ensuring more cases get diagnosed.

Written by [Anonna Dutt](#) | New Delhi |
March 24, 2022 10:41:45 am

The [Covid-19](#) pandemic acted as a catalyst for the proliferation of battery-operated, portable

TrueNat PCR machines that can better detect tuberculosis (TB), aiding the country's programme to eliminate the bacterial disease by 2025. These machines capable of testing for Covid-19 as well have already been deployed to 2,200 healthcare facilities across the country as the country observes World Tuberculosis Day today (March 24).

The government is now in the process of making molecular diagnosis the first-line test for TB, ensuring more cases get diagnosed.

India reported 18.05 lakh TB cases in 2020, which was 24% less than the previous year owing to measures such as lockdown during the pandemic.

"There are a total of 5,000 machines across India right now, including those under the government programme and private sector. This is just a platform technology to bring PCR testing to the lowest level of healthcare. This is probably the most disruptive innovation that has happened in the TB programme over the last 20 years," said Sriram Natarajan, director, Molbio Diagnostics, which has developed the testing platform, that along with TB and Covid-19 is also capable of diagnosing conditions such as HIV, Hepatitis B and C, Human Papillomavirus (HPV) which is known to increase the risk of cervical [cancer](#), and H1N1.

The TrueNat technology, like any other PCR technology, amplifies the genetic material of a pathogen to identify. Microscopy for TB, on the other hand, just identifies the pathogen by seeing in through the microscope, making it less accurate. In fact, microscopy is known to detect only 40 per cent of the TB cases as compared to 98 per cent using TrueNat.

All the reagents used in TrueNat testing are available in a cartridge that goes in the machine, meaning highly-skilled lab technicians are not needed to do the test. It also does not require a proper laboratory and the test can be done on the field. It is battery operated and can use data from a SIM card to also upload the information of

positive TB patients directly to the government portal, making it useful in low resource settings such as primary and community health centres.

"The government is in the process of making molecular diagnosis the first-line test for TB, so that cases do not get missed and the spread does not continue. TrueNat is extremely essential for that as it can give results on whether a person has TB and whether it is drug-resistant or not within two hours. Right now the samples have to be sent to district-level hospitals for molecular testing, which can take up to a week or more to put people on the right treatment. Additionally, the quick test can help in active case finding; right now only those who have symptoms come to the government system to get tested," said Natarajan.

There are around 14,000 microscopy centres under the national TB programme, with the government planning to replace it with TrueNat testing in at least 7,000-8,000 centres.

In addition to the government programmes, Molbio Diagnostics has also developed a TB screening van that can screen people using a quick x-ray and then use the molecular testing to confirm the diagnosis in those who are found to be positive. "This is an end to end solution and it will be needed for active case finding as India moves towards elimination," he said.



காசநோய்க்கு எதிராக சென்னையின் போர்!

Published : 24 Mar 2022 07:04 am

காசநோய் என்ற தொற்றுநோய் 15 கோடி ஆண்டுகளாக உலகில் பரிணமித்துவந்திருந்தாலும் அதற்கான காரணி 140 ஆண்டுகளுக்கு முன்புதான் கண்டறியப்பட்டது. 1882, மார்ச் 24-ம் தேதி

ஜெர்மானிய மருத்துவர் ராபர்ட் கோச் தனது தொடர் ஆய்வுகளின் மூலம் [காசநோய்](#) என்பது மைக்கோபாக்டீரியம் டிப்யூபர்குலோசிஸ் எனும் பாக்டீரியாவால் ஏற்படுகிறது என்பதைத் தக்க சான்றுகளோடு நிறுவினார். காசநோய்க்கு எதிரான பல நூற்றாண்டு கால சமரில், சீரிய



முன்னேற்றத்துக்கு வழிவகுத்த ராபர்ட் கோச்சுக்கு மருத்துவத்துக்கான நோபல் பரிசு 1905-ல் வழங்கப்பட்டது. அது மட்டுமின்றி, காசநோயின் காரணியான டிப்யூபர்குலோசிஸ் பாக்டீரியாவைப் பிரித்தெடுக்கும் வழிமுறையை ராபர்ட் கோச் கண்டறிந்த தினமான மார்ச் 24-ஐ உலகக் [காசநோய்](#) தினமாக உலக சுகாதார நிறுவனம் அறிவித்தது.

காசநோய் ஏறத்தாழ 30 லட்சம் ஆண்டுகளுக்கு முன்பு மனிதர்களைப் பீடித்திருக்கக்கூடும் என்று ஆய்வாளர்களால் நம்பப்படுகிறது. விவிலியத்தின் பழைய ஏற்பாட்டில் 'உட்கொள்ளுதல்' எனும் பொருள்படும் 'ஸ்காலெபெத்' என்ற ஹீப்ரு சொல் காசநோயைக் குறிக்க இரு இடங்களில் பயன்படுத்தப்பட்டிருக்கிறது. பண்டைய கிரேக்கத்தில் 'தைசிஸ்' என்று அறியப்பட்ட காசநோயை நுரையீரலை அரிக்கும் ஒரு கொடிய உயிர்க்கொல்லி நோய் என்று ஹிப்போகிரட்டீஸ் துல்லியமாகத் தனது குறிப்புகளில் பதிவிட்டிருக்கிறார்.

இடைக்காலத்தில், நிணநீர்க் கழலைகளைத் தாக்கும் நோய் என்று வரையறுக்கப்பட்ட காசநோய், 'ஸ்க்ரோஃபுலா' என்றும் அறியப்பட்டிருக்கிறது. இங்கிலாந்து, பிரான்ஸ் ஆகிய நாடுகளில் 'அரச தீண்டுதல்' எனும் நடைமுறையின் மூலம் காசநோயைக் குணப்படுத்த முடியும் என்று நம்பி, நோயாளிகளை அரசர்கள் தங்கள் கரங்களால் தீண்டும் நடைமுறை பழக்கத்தில் இருந்துவந்திருக்கிறது. 18-ம் நூற்றாண்டில் மட்டும்

ஐரோப்பாவின் 9% இறப்புகளுக்குக் காரணமாகக் [காசநோய்](#) இருந்திருக்கிறது.

1950-களில் காசநோய்க் கிருமிகளுக்கு எதிராகச் செயல்படும் மருந்துகள் கண்டறியப்படும் வரையிலும் சுத்தமான காற்று, சத்துள்ள உணவு, குறைவான உடற்பயிற்சி, நல்ல ஓய்வு என்பவையே காசநோய்க்கான மருத்துவமாக இருந்துவந்தது. காசநோயாளிகளுக்கு இவற்றை வழங்கும் மருத்துவச் சாலைகளாக 1859 முதல் ஒரு நூற்றாண்டு காலம் வரையிலும் சானடோரியங்கள் விளங்கின. சானடோரியங்களால் நோய் குணமடைதல் என்பது பெருமளவில் இல்லையென்றாலும் நோய் பரவுதல் விகிதம் கட்டுக்குள் இருந்தது. இங்கிலாந்தில் மருத்துவம் பயின்று திரும்பிய மருத்துவர் டேவிட் ஜேக்கப் ஆரோன் சவரிமுத்துவால் தமிழகத்தின் முதல் சானடோரியம் 1928-ல் [சென்னை](#) தாம்பரத்தில் அமைக்கப்பட்டது.

விடுதலை அடைந்தபோது, இந்தியாவில் கிட்டத்தட்ட 20 லட்சம் காசநோயாளிகள் இருந்த நிலையில் 23,000 சானடோரியம் படுக்கைகள் மட்டுமே நாட்டில் இருந்தன. போதிய படுக்கைகளின்றி நோயாளிகள் வாடிய நிலையில், சானடோரியங்களுக்கு மாற்றாக வேதிச்சிகிச்சையை முன்னெடுக்கும் நோக்கில், இந்தியாவில் மருத்துவ ஆய்வுகளை மேற்கொள்ள ஏற்படுத்தப்பட்ட ஒன்றிய அரசின் சார்பு அமைப்பான இந்திய மருத்துவ ஆய்வுக் கழகம் (ஐ.சி.எம்.ஆர்.), தமிழக அரசு, உலக சுகாதார ஆய்வு நிறுவனம், பிரித்தானிய மருத்துவ ஆய்வுக் கழகம் ஆகியவற்றின் துணையுடன் பிரித்தானிய மருத்துவ ஆய்வுக் கழகத்தைச் சார்ந்த மருத்துவர் வாலஸ் ஃபாக்ஸின் தலைமையில் 1956-ல் [காசநோய்](#) வேதிச்சிகிச்சை மையத்தை சென்னையில் நிறுவியது.

சானடோரியங்களில் மட்டுமே காசநோய்க்கு மருத்துவம் பார்க்க இயலும் என்று உலகம் முழுவதும் நம்பப்பட்ட வேளையில், சென்னையில் அமைக்கப்பட்ட [காசநோய்](#) வேதிச்சிகிச்சை மையம் நடத்திய புகழ்பெற்ற மெட்ராஸ் ஆய்வானது, [காசநோய்](#) சிகிச்சை முறை குறித்தான உலகின் நம்பிக்கைகளை மாற்றியமைத்தது. மொத்தம் 193 காசநோயாளிகளைக் கொண்டு நடத்தப்பட்ட மெட்ராஸ் ஆய்வில், நோயாளிகள் அவரவர் இல்லங்களிலும் தாம்பரம் சானடோரியத்திலுமாக இரு குழுக்களாகப் பிரித்து, ஒரே வகையான வேதிச்சிகிச்சைக்கு உட்படுத்தப்பட்டனர்.

நல்ல காற்றோட்டம், போதுமான அளவு ஓய்வு, சத்துள்ள உணவு, தகுதிவாய்ந்த மருத்துவ ஊழியர்களைக் கொண்டு தொடர் கண்காணிப்பு என சானடோரியத்தில் கிடைக்கும் சிறப்பு வசதிகள் ஏதுமில்லாத நிலையிலும், இல்லங்களில் சிகிச்சை எடுத்துக்கொண்டு குணமடைந்தவர்களின் விகிதம் சானடோரியத்துக்கு நிகராக இருந்தது 12 மாத தொடர் சிகிச்சைக்குப் பிறகான ஒப்பீட்டில் தெரியவந்தது அனைவருக்கும் வியப்பளித்தது. மெட்ராஸ் ஆய்வின் முடிவுகள் உலகெங்கிலும் சானடோரியங்களில் இடமின்றி வாடிய பல நோயாளிகளுக்குப் புது நம்பிக்கைச் சூடரை ஏற்றியதோடல்லாமல், [காசநோய்](#) சிகிச்சை வழிமுறையில் ஒரு புதிய மாற்றத்தையும் ஏற்படுத்தின.

1964-ம் ஆண்டு இந்திய மருத்துவ ஆய்வுக் கழகத்தின் நிரந்தர உறுப்பு நிறுவனமாக மேம்படுத்தப்பட்ட [காசநோய்](#) வேதிச்சிகிச்சை மையம், காசநோய்க்கான வேதிச்சிகிச்சை குறித்த ஆய்வுகள் மட்டுமின்றிக் [காசநோய்](#) ஏற்படுத்தும் பொருளாதாரச் சிக்கல்கள், நோய்த்தொற்றியல், [காசநோய்](#) எதிர்ப்பு, மருந்தகவியல் என [காசநோய்](#) குறித்தான பல்வேறு ஆய்வுகளைத் தொடர்ந்து செய்துவந்தமையால், அதன் பன்னோக்குச் செயல்பாடுகளைக் கருத்தில் கொண்டு 1978-ல் 'காசநோய் ஆராய்ச்சி மையம்' எனவும் பின்னர் 2011-ல் 'தேசிய [காசநோய்](#) ஆராய்ச்சி நிறுவனம்' எனவும் பெயர் மாற்றம் செய்யப்பட்டது. மருத்துவ ஆய்வு வகைமைகளில் உயரிய மதிப்புமிக்க ஆய்வு முறையாகக் கருதப்படும் சார்பற்ற பகுப்புமுறை மருத்துவ ஆய்வுகள் நிகழ்த்தப்படுவது இந்நிறுவனத்தின் தனிச்சிறப்பாகும்.

காசநோய் குறித்தான முப்பத்தைந்துக்கும் மேற்பட்ட சார்பற்ற பகுப்புமுறை ஆய்வுகள் இதுவரையிலும் இந்நிறுவனத்தால் மேற்கொள்ளப்பட்டுள்ளன. உலகளவில் [காசநோய்](#) மருத்துவத்தின் அடிநாதமாக இன்று விளங்கும் குறுகிய கால நேரடிக் கண்காணிப்புச் சிகிச்சை முறையான டாட்ஸ் சிகிச்சை இந்நிறுவனத்தின் தொடர் ஆய்வுகளால் கண்டறியப்பட்டு, மேம்படுத்தப்பட்ட சிகிச்சை முறை என்பது குறிப்பிடத்தக்கது. காசநோய்க்கும் மனிதர்களுக்கும் பல நூற்றாண்டுகளாக முடிவின்றி நடந்துவரும் சமரில் பன்மருந்து எதிர்ப்புக் காசநோய், முற்றியநிலை பன்மருந்து எதிர்ப்புக் காசநோய், எச்.ஐ.வி.யுடன் அணிசேர்க்கை எனக் காசநோய்க் கிருமி தனது இருப்பை உறுதிசெய்துகொள்வதற்காக

வெவ்வேறு வகைகளில் பரிணாம வளர்ச்சியடைந்து மனிதர்களை நோக்கிக் கணைகளை வீசிவரும் சூழலில், மானுடம் காப்பதற்காக 'தேசிய [காசநோய்](#) ஆராய்ச்சி நிறுவனம்' மும் தனது களத்தை விரிவாக்கி, தொடர்ந்து வெவ்வேறு ஆய்வுகளைச் சமரசமின்றிச் செய்துவருகிறது.

கரோனா பெருந்தொற்றைவிடவும் அதிக உயிர்களைப் பலிகொண்டிருக்கும் காசநோய், இம்மண்ணிலிருந்து அழித்தொழிக்கப்படும் நாள்வரையில் 'உலகக் [காசநோய்](#) நாள்' என்பது கொண்டாட்டத்துக்குரிய தினமாக அல்லாமல், [காசநோய்](#) இதுவரை ஏற்படுத்தியுள்ள பாதிப்புகள் குறித்தும், அதனைத் தடுத்து நிறுத்தும் முறைகள் குறித்தும் மக்களிடம் புரிதலையும் விழிப்புணர்வையும் ஏற்படுத்தக் கிடைத்திருக்கும் அரிய வாய்ப்பாகவே அமையும்.

- திருமாறன் செங்குட்டுவன், மருத்துவர், மருத்துவ அலுவலர், தேசிய [காசநோய்](#) ஆராய்ச்சி நிறுவனம், சேத்துப்பட்டு. தொடர்புக்கு: dr.thirutamizh@gmail.com
இன்று உலக [காசநோய்](#) தினம்



காசநோய் ஒழிப்பு: களப் பணியாளர்கள் கணிக்கும் பாதையை அரசுகள் பின்பற்றலாமா? - ஒரு தெளிவுப் பார்வை

இந்த ஆண்டுக்கான சர்வதேச காசநோய் ஒழிப்பு தின கருத்துரு 'Invest to End TB. Save Lives' காசநோய் ஒழிப்பில் முதலீடு செய்வோம். உயிர்களைக் காப்போம்



கரோனாவுக்குப் பின்னர் இந்த உலகம் முழுவதும் ஒற்றை நோய்க்கு எதிராக மட்டுமே போராடிக் கொண்டிருக்கின்றது. அத்தனை ஆராய்ச்சிகளும், அத்தனை தடுப்பூசிகளும் ஒரே நோய்க்கு எதிரான பாதையில் முடங்கிக் கொண்டிருக்கின்றன என்று சொல்லும் அளவுக்கு அதீத கவனம் பெற்றுள்ளது கரோனா. தீவிர ஆராய்ச்சிகள், துரித தடுப்பூசிகளால் தான் கரோனாவிலிருந்து உலகம் மீண்டு கொண்டிருக்கிறது என்பது எப்படி மறுப்பதற்கில்லையோ அதேபோல், பேசப்படாத பாகுபாடுகளால் இன்னும் சில நோய்கள் ஒழிக்கப்படாமல் அதற்கான இலக்குகள் மட்டும் நீட்டிக்கப்பட்டுக் கொண்டே செல்லப்படுகின்றன என்பதும் நிதர்சனம். அதனால் தான் பில் கேட்ஸ் இனி தன் கவனத்தை [காசநோய்](#) ஒழிப்பில் செலுத்தப்போவதாகக் கூறியுள்ளார்.

இங்கே ஒழிக்கப்பட வேண்டியதற்கு நிறைய நோய்கள் இருக்கின்றன. மனித சமுதாயத்தை 1400 ஆண்டுகளாக அச்சுறுத்திக் கொண்டிருக்கும் [காசநோய்](#) அதில் முதலிடத்தில் இருக்கிறது.

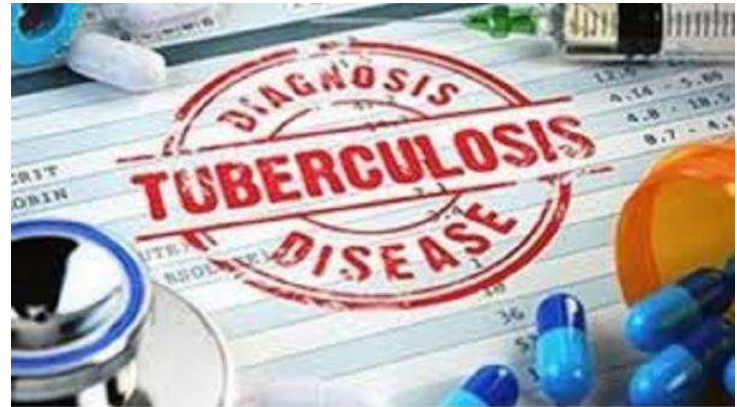
மார்ச் 24... உலக [காசநோய் ஒழிப்பு](#) தினம் கடைப்பிடிக்கப்படுகிறது. இந்த ஆண்டுக்கான கருத்துருவாக 'Invest to End TB. Save Lives' [காசநோய்](#) ஒழிப்பில் முதலீடு செய்வோம். உயிர்களைக் காப்போம் என்பது நிர்ணயம் செய்யப்பட்டுள்ளது. இந்த தினத்தையொட்டி அரசு நிகழ்ச்சிகளுக்கும் விழிப்புணர்வுப் பிரச்சாரங்களுக்கும் பஞ்சமிருக்காது. ஆனால் இது ஒருநாளில் முடியும் கதையல்ல. [காசநோய்](#) ஒழிப்பிற்கு இந்தியா நிர்ணயித்துள்ள இலக்கு 2025. ஆனால், அந்த இலக்கை எட்டுவதற்கு [காசநோய்](#) ஒழிப்பில் முதலீடு செய்வது அவசியம். முதலீடு என்றால் பெரிய அளவிலான நிதி என்று மட்டும் நினைக்க வேண்டாம். அதற்கு பன்முகத்தன்மை இருக்கிறது.

அடிமட்டில் என்ன சொல்கிறார்கள் தெரியுமா?

வளர்ச்சியோ, புரட்சியோ அது அடிமட்டத்தில் இருந்து தொடங்கப்பட்டால்தான் பலன் தருவதாக இருக்கும். அவ்வாறாக, [காசநோய்](#) ஒழிப்பில் ரீச் தன்னார்வ தொண்டு நிறுவனத்துடன் இணைந்து பணியாற்றிய களப்பணியாளர்கள் சிலரிடம் 'காசநோய் இல்லாத 2025 இலக்கு' குறித்து பேசினோம்.

விழுப்புரத்தைச் சேர்ந்த ஜெயந்தியிடமிருந்து அனுபவப் பகிர்வை ஆரம்பிப்போம். ஜெயந்தி எம்.எஸ்.சி., பிஎட் படித்துள்ளார். திருமணம், குழந்தை என இவரது வாழ்க்கை இயல்பாகத் தான் சென்றது. ஆனால், குழந்தைப் பேறுக்குப் பின்னால் திடீர் காய்ச்சல், கடுமையான இருமல் என இவரை [காசநோய்](#) பாடாய்ப்படுத்தியுள்ளது. அப்போது தான் கரோனா உச்சத்தில் இருந்த நேரம் என்பதால் கரோனா தான் வந்துவிட்டதோ என்றும் பரிசோதனை செய்துள்ளார் ஜெயந்தி. ஆனால், கரோனா நெகட்டிவ் என்றே முடிவுகள் வந்தன. பின்னர் மருத்துவர் வழிகாட்டுதலுடன் [காசநோய்](#) மருத்துவமனைக்குச் சென்று பரிசோதனைகள் செய்தார். கடைசியாக சிடி ஸ்கேன் செய்து பார்த்தபோது அவருக்கு [காசநோய்](#) இருப்பது உறுதியானது.

"காசநோய் ரிப்போர்ட்டுடன் நான், வெளியே குழந்தையுடன் கணவர். உலகமே இருண்டதுபோல் உணர்ந்தேன்" என்றார் ஜெயந்தி. அவரது அந்த அச்சம் உண்மைதானோ என நிரூபிப்பதுபோல் அவருடைய கணவரின் பிரிவு அமைந்தது. காசநோயாளியுடன் வாழ முடியாது என கணவர் விட்டுப்பிரிய, சமூகத்தில் இன்னமும் அந்நோய் மீதான பார்வையின் நிலை என்னவென்பதையும் அவருக்கு உணர்த்தியது. ஆனால் ஜெயந்தி ஒன்றை மட்டும் சரியாக செய்தார். 6 மாதங்களுக்கு எந்தச் சூழ்நிலையிலும் விடாமல் மாத்திரை எடுத்துக்



கொண்டார். விளைவு காசநோயிலிருந்து பூரண குணமடைந்தார்.

காசநோய் தனக்கு சாத்திய கதவுகள் தான் அவரை சமூகத்தின் இறுக்கமான மனக்கதவையும் தட்ட வைத்துள்ளது. ரீச் தன்னார்வ தொண்டு நிறுவனத்தின் மூலம் பயிற்சி பெற்று [காசநோய் ஒழிப்பு](#) களப் பணியாளர் ஆனார். காசநோயில் இருந்து மீண்டவரே களப் பணியாளர் ஆகும்போது சமூகத்தை அணுகுவது எளிது எனக் கூறுகிறார் ஜெயந்தி.

"மக்கள் முன் நான் போய் நிற்கும்போது, எனக்குக் [காசநோய்](#) இருந்தது. தொடர்ந்து மருந்து சாப்பிட்டேன். பூரண நலத்துடன் உள்ளேன். இதில் தயக்கமோ, வெட்கமோ தேவையில்லை. ஆரம்பநிலையில் சிகிச்சை, விரைவில் பூரண குணம் தரும் என்பேன். அனைவரும் கேட்டுக் கொள்வார்கள்" எனக் கூறினார். இப்போது [காசநோய்](#) களப்பணியாளராக குடும்பத்திற்கான வருமானத்தையும் ஈட்டுகிறார் ஜெயந்தி.

அவர் சொல்வதெல்லாம் ஒன்றுதான்... இன்னும் நம் சமூகத்தில் [காசநோய்](#) பற்றிய விழிப்புணர்வு பெரிய அளவில் தேவைப்படுகிறது. இப்படியாக கிராம அளவில், வட்ட அளவில், மாவட்ட அளவில் என களப் பணியாளர்கள் இணைந்து செயல்பட்டால் 2025 என்ன அதற்கும் முன்னதாகவே காசநோயை இந்தியாவில் இருந்து ஒழிக்கலாம் என்கிறார்.

நெல்லை மாவட்டத்தைச் சேர்ந்த சுகுணா காசநோயாளி அல்ல. ஆனால், வல்லியூர் அரசு மருத்துவமனையில் லேப் டெக்னீசியனாக இருந்தவர் கரோனா காலத்தில் காசநோயாளிகளுக்கான மாத்திரைகளை கொடுக்கும் பணியை கூடுதலாக செய்து வந்துள்ளார். அந்த வேளையில் அவரது ஒப்பந்த பணி முடிவடைய, எஸ்டிஎஸ் என அழைக்கப்படும் சீனியர் டிபி ஸ்டாஃப் உதவியுடன் டிபி ஒழிப்பு களப் பணியாளர் பணிக்கு விண்ணப்பித்து அந்தப் பணியை பெற்றுள்ளார்.

அவர் கூறியதாவது: "சேலம், விழுப்புரம், நெல்லை, வேலூர் ஆகிய 4 மாவட்டங்களில் ரீச் அமைப்பு சார்பில் என்னைப் போன்ற களப் பணியாளர்கள் டிபி லீடர்களாக பணியமர்த்தப்பட்டனர். நாங்கள் மொத்தம் 35 பேர். ஒன்றரை ஆண்டுகள் இந்தப் பணியில் இருந்தோம். கரோனா காலத்திலும் கூட நாங்கள் எங்கள் பணியை விடாது செய்தோம். எங்களுக்கான சேஃப்டி கிட் எல்லாமே

கொடுத்திருந்தனர். அத்துடன் வீடுவீடாகச் சென்று [காசநோய்](#) பற்றி விசாரிப்போம். அறிகுறிகள் உள்ளவர்களைக் கண்டறிந்து மருத்துவமனைக்கு அழைத்துச் செல்வோம். கரோனா உச்சத்தில் இருந்த காலம் என்பதால் பலரும் எங்களுடன் ஒத்துழைக்க மறுப்பார்கள். நாங்கள் அவர்களுக்கு நோய் முற்றினால் ஏற்படும் சிக்கலை விளக்கி அழைத்துச் செல்வோம். பொதுவாக மக்களுக்கு [காசநோய்](#) உறுதியானால் மருத்துவமனைக்கு அலைந்து திரிய வேண்டுமோ, கூலித் தொழில் என்னவாகும் என்ற அச்சம் தான் இருக்கும்.

நாங்கள் அவர்களுக்கு மாத்திரை பெறுவது எவ்வளவு எளிது. ஃபோனிலேயே ஆலோசனைகளைப் பெறுவது எப்படி, ஊக்கத்தொகையை எப்படிப் பெற்றுக் கொள்ளலாம் என்றெல்லாம் சொல்வோம். அதில் அவர்கள் சிகிச்சைக்கு உடன்பட்டுவிடுவார்கள். நான் மட்டும் கடந்த 1.5 ஆண்டில் 75 நோயாளிகளை நெல்லை சுற்று வட்டாரப் பகுதிகளில் அடையாளம் கண்டு தந்துள்ளேன். இவர்களில் 35 பேர் 6 மாத சிகிச்சை முடித்து இயல்புக்குத் திரும்பிவிட்டனர். இன்னும் சிலர் சிகிச்சையில் உள்ளனர். மேல்தட்டில் உள்ள மக்கள் ஓரளவுக்கு சுயமாக சிகிச்சையை மேற்கொள்கின்றன. ஆனால், கடைநிலையில் உள்ள சாமான்ய மக்களுக்கு விழிப்புணர்வுப் பிரச்சாரங்களும், வீடு தேடிச் சென்று சமரசம் செய்யும் பேச்சு தேவைப்படுகிறது. எங்களுக்கான ஊதியம் குறைவு தான். ஆனால் எங்களால் சமூக அளவில் உள்ள நோயாளிகள் கண்டறிதலும், சிகிச்சைக்கு சரியான நேரத்தில் உட்படுத்தப்படுவதும் அதிகமாக உள்ளதாக நாங்கள் சார்ந்த தொண்டு நிறுவன ஆய்வறிக்கைகளே குறிப்பிடுகின்றன. ஆகையால், [காசநோய்](#)



ஒழிப்பு இலக்கின் காலம் அருகில் இருக்கும்போது எங்களைப் போன்ற களப் பணியாளர்கள் ஊக்குவிக்கப்பட வேண்டும். ஊதியத்தையும் தாண்டியும் நாங்கள் சமூக சேவைக்காக காத்திருக்கிறோம் என்றார்.

பல்முனை ஒத்துழைப்பு தேவை: காசநோய் ஒழிப்பில் முதலீடு செய்வோம் என்ற கருத்துரு குறித்து விவரித்த மருத்துவர் ரம்யா, "நான் இதை வெறும் பண முதலீடு என்பதைத் தாண்டி பல்முனை ஒத்துழைப்பை முதலீடாக எதிர்பார்க்கிறேன். கரோனா ஒழிப்பில் சுகாதாரத் துறை மட்டுமல்ல ஐடி துறை தொடங்கி காவல்துறை வரை பலமுனை ஒத்துழைப்பு இருந்தது. அதனால் மருந்து கண்டுபிடிப்பு, சிகிச்சை முறையில் நாளுக்கு நாள் மேம்பாடு என எல்லாமே சாத்தியமானது. முதல் அலை, மூன்றாம் அலை, ஐந்தாம் அலை என எத்தனை வந்தாலும் எப்படி சமாளிப்பது என்பது மக்கள் தொடங்கி மருத்துவர் வரை அத்துப்படியாக உள்ளது. இது மாதிரியான Multi Sectoral Collaboration... பல்முனை ஒத்துழைப்பைத் தான் நாங்கள் **காசநோய்** ஒழிப்பில் எதிர்பார்க்கிறோம்.

காசநோயால் விமான சேவைகள் முடங்கவில்லை, வர்த்தகம் தடைபடவில்லை, சர்வதேச மாநாடுகள் முடங்கவில்லை என்பதால் அதனைக் கட்டுப்படுத்தும் வீச்சை நாம் மட்டுப்படுத்தினால் இலக்குகளை நீட்டித்துக் கொண்டேதான் செல்ல வேண்டியிருக்கும். ஒருமுறை ஒரேமுறை வார் ஃபூட்டிங் எனப்படும் போர்க்கால நடவடிக்கை அடிப்படையில் **காசநோய்** ஒழிப்பை தீவிரப்படுத்த வேண்டும். வெறும் சுகாதாரத் துறை, தன்னார்வ தொண்டு நிறுவனங்கள் தாண்டி பல்முனை ஒத்துழைப்பு கிடைக்க வேண்டும். இதுதான் நான் **காசநோய்** ஒழிப்பில் காண விரும்பும் முதலீடு.



மருத்துவர் ரம்யா அதேபோல் மனித ஆற்றல் இன்னொரு மகத்தான முதலீடு. காசநோயில் இருந்து மீண்டவர்களால்

தான் **காசநோய்** ஒழிப்பில் இன்னும் திறம்பட இயங்க முடியும். கிராஸ் ரூட்ஸ் அளவில் அத்தகைய டிபி லீடர்களை களப்பணியாளர்களாகினால் தொற்றை கண்டறிவதும், சிகிச்சையை துரிதப்படுத்துவதும் எளிதாகும். அவர்களை அவ்வாறு களப்பணியாளர்களாக்க வேண்டுமானால் முறையான பயிற்சியும் அதன் பின்னர் அவர்களது பணிகளைக் கண்காணித்தலும் தேவைப்படும். இதற்கு நிதி முதலீடு தேவைப்படும். இங்கு அரசு

தாராளமாக முதலீடு செய்ய வேண்டும் என்று கோருகிறோம்.

டெல்லியில்

நடைபெறவுள்ள **காசநோய்** விழிப்புணர்வு நிகழ்ச்சியில், நோயிலிருந்து மீண்ட பெண் ஒருவர் தான் குத்துவிளக்கேற்றி வைக்கவுள்ளார். அதுபோலவே சமூகத்தில் கடைநிலையில் உள்ள மக்கள் மத்தியில் விழிப்புணர்வை ஏற்படுத்தி வெளிச்சத்தைப் பாய்ச்சுதலை நோயில் இருந்து மீண்டவர்களை களப்பணியில் ஈடுபடுத்தும் போது மேற்கொள்ள முடியும்" என்றார்.

காசநோய் ஒழிப்பில் களப்பணியாளர்கள் கணிக்கும் பாதையை மத்திய, மாநில அரசுகளும் பின்பற்றலாமே.

தொடர்புக்கு: bharathi.p@hindutamil.co.in



ஒரு நோயும் இரு தலைவர்களும் மார்ச் 24 - உலக காசநோய் தினம் சிறப்புப் பகிர்வு

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1935-ஆம் ஆண்டு காசநோய்க்கான (டி.பி) மருந்துகள் ஏதும் கண்டுபிடிக்கப்படாத காலம். உத்தராகண்ட் மாநிலம் நைனித்தால் மாவட்டத்தில் அமைந்திருந்த கிங் ஜார்ஜ் எட்வர்ட் **காசநோய்** சானிடோரியத்தில் ஓர் இளம்பெண் அனுமதிக்கப்பட்டிருந்தார். அவருக்கு எல்.எஸ்.ஓயிட் என்ற ஆங்கில மருத்துவர்

சிகிச்சை அளித்து வந்தார். அப்போது சிகிச்சை என்பது பெரும்பாலும் தூய காற்றும் புரதச்சத்து மிக்க உணவுமே ஆகும்.

அல்மோர சிறையில் அடைக்கப்பட்டிருந்த அந்தப் பெண்ணின் கணவர், சிறை நிர்வாகத்திடம் அனுமதி பெற்று மனைவியைக் காண வருகிறார். அப்பெண்ணின் உடல்நிலையில் சிறிது முன்னேற்றம் ஏற்பட்டவுடன் அவரை மேல் சிகிச்சைக்காக சுவீட்சர்லாந்து அழைத்துச் செல்கிறார். ஆனால், சிகிச்சை பலனின்றி கணவர் கண் முன்பே அந்தப் பெண் இறந்து போகிறார். அந்தப் பெண் இறந்து சரியாக 11 ஆண்டுகள் கழித்து அவரது கணவர் இந்தியாவின் பிரதமர் ஆகிறார். ஆம், இறந்தது இந்தியாவில் முதல் பிரதமர் ஜவஹர்லால் நேருவின் மனைவி கமலா நேரு ஆவார். மருந்து, மாத்திரைகள் இன்றி இந்தியாவில் முதல் பிரதமரின் குடும்பத்தில் காசம் ஒருவரின் சுவாசத்தை நிறுத்திவிட்டிருந்தது.

ஏப்ரல் 1947 - மும்பையைச் சார்ந்த டாக்டர் ஜல் ரத்தன்ஜீ பட்டேல் என்ற மருத்துவர் தன்னுடைய தொழில்முறை தர்மத்தைக் காப்பாற்றக் காசநோயால் பாதிக்கப்பட்டு அவரால் சிகிச்சையளிக்கப்பட்டு வந்த நோயாளியின் மருத்துவக் கோப்புகளை மிக ரகசியமாகப் பாதுகாத்து வந்தார். சிகிச்சை பெற்று வந்த நபர் சாதாரண மனிதர் அல்ல. உலக வரைபடத்தில் மேலும் சில கோடுகளை வரையக் காரணமாய் இருந்தவர். இந்தியாவில் கவர்னர் ஜெனரலாக இருந்த மவுண்ட்பேட்டன் பிரபுவின் தன் கொள்கைப் பிடிப்பில் நின்று அதிகமாக விவாதம் செய்தவர்.

டாக்டர் பட்டேலால் பாதுகாக்கப்பட்ட அந்த மருத்துவ ரிப்போர்டை 1970-களில் மவுண்ட்பேட்டன் அறிந்தபோது அவர் அதிர்ச்சியில் உறைந்துவிட்டார். அவரால் நம்ப முடியவில்லை. எனக்கு மட்டும் இந்த உண்மை முன்னமே தெரிந்திருந்தால் இந்திய வரலாற்றின் பாதையே வேறுமாதிரி இருந்திருக்கும் என்று கூறியதாக 'நள்ளிரவில் சுதந்திரம்' என்கிற நூலை எழுதிய லாரி கோலின்ஸ், டாமினிக் ஆகியோர் இவ்வாறு குறிப்பிடுகின்றனர். மவுண்ட்பேட்டன் பிரபுவின் அதிர்ச்சிக்குக் காரணம், காசநோயால் பாதிக்கப்பட்டிருந்த அந்த நபர் பாகிஸ்தானின் முதல் அதிபர் முகமது அலி ஜின்னா. நோய் முற்றிய நிலையில் 1948-ஆம் ஆண்டின் கடைசியில் அப்போதுதான் காசநோய்க்காக கண்டுபிடிக்கப்பட்ட ஒரே மருந்து ஸ்டெப்டோமைசின் தனி விமானம் மூலம்

அமெரிக்காவிலிருந்து கொண்டு வரப்பட்டும் ஜின்னாவை காப்பாற்ற முடியவில்லை.

இப்படி இரு நாட்டு தலைவர்களின் வாழ்க்கையிலும் கோரதாண்டவம் ஆடிய [காசநோய்](#) இன்றளவும் தன் ஆட்டத்தை முடித்தபாடிலை. எல்லைகளை நாம் பிரித்தாலும் [காசநோய்](#) எல்லைகளைத் தாண்டி, மதங்களைத் தாண்டி மனிதனை மட்டும் குறி வைத்து பயங்கரவாதத்தை நிகழ்த்திக்கொண்டிருக்கிறது. இந்த இரு நாடுகளும் உலகின் அதிக எண்ணிக்கையிலான காசநோயாளிகளைக் கொண்டுள்ளது என்பது கசப்பான உண்மை.

அமெரிக்காவிலிருந்து வந்த மருந்து மட்டுமல்லாமல் காசநோயை முற்றிலுமாக குணப்படுத்தும் கூட்டு மருந்துகள் இன்று இந்தியாவில் கடைக்கோடி கிராமத்தின் அரசு மருத்துவமனைகளிலும் இலவசமாகக் கிடைக்கின்றன. ஆறு மாத சிகிச்சை நோயை முற்றிலும் குணப்படுத்திவிடுகிறது.

காசநோயை ஏற்படுத்தும் பாக்டீரியா, மற்ற நுண்கிருமிகளைப் போல உடனே நோய் ஏற்படுத்திவிடுவதில்லை. மனித உடலுக்குள் சென்று நோய் ஏற்படுத்துவதற்கான காலநிலை வரும் வரை காத்திருக்கும். மனித உடலில் நோய் எதிர்ப்பாற்றல் குறைந்துவிட்டால் தூங்கிக் கொண்டிருந்த பாக்டீரியா விழித்துக் கொண்டு நோயை ஏற்படுத்தும். எனவேதான் சர்க்கரை நோயாளிகள், எச்.ஐ.வி-யால் பாதிக்கப்பட்டவர்கள், சிறுநீரக கோளாறு உள்ளவர்கள் அதிகமாகக் காசநோயால் பாதிக்கப்படுகிறார்கள். மனஅழுத்தம் உள்ளவர்களையும் இந்நோய் எளிதாகத் தாக்குகிறது.

இரண்டு வாரத்திற்குமேல் இருமல், மாலைநேரக் காய்ச்சல், சளியில் ரத்தம், பசியின்மை, உடல் மெலிதல்

போன்ற [காசநோய்](#) அறிகுறியுள்ளவர்களுக்கு இலவசமாகச் சளி பரிசோதனையும், x-ray பரிசோதனையும் செய்துக்கொள்ள வேண்டும். காசநோயாளிகளுக்குச் சிகிச்சை காலத்தில் மாதம்தோறும் ரூ.500 அரசால் வழங்கப்பட்டு வருகிறது.

உடலின் எந்த பாகத்தையும் பாதிக்கும் இந்த நோயை தற்பொழுது ஓரளவு ஒழித்துவிட்டோம். 2025-ல் [காசநோய்](#) இல்லா இந்தியா என்கிற இலக்குடன் இந்திய அரசு பல்வேறு உத்திகளைக் கையாண்டு [காசநோய்](#) ஒழிப்பை தீவிரப்படுத்தியுள்ளது. தமிழகத்தைப்

பொறுத்தவரைக் [காசநோய்](#) ஒழிப்பில் முன்னோடி மாநிலமாகத் திகழ்கிறது. எந்த மாநிலத்திலும் இல்லாதவாறு இங்கே நுரையீரல் சிகிச்சை நிபுணர்கள் [காசநோய்](#) துறை துணை இயக்குநர்களாக நியமிக்கப்பட்டிருக்கிறார்கள்.

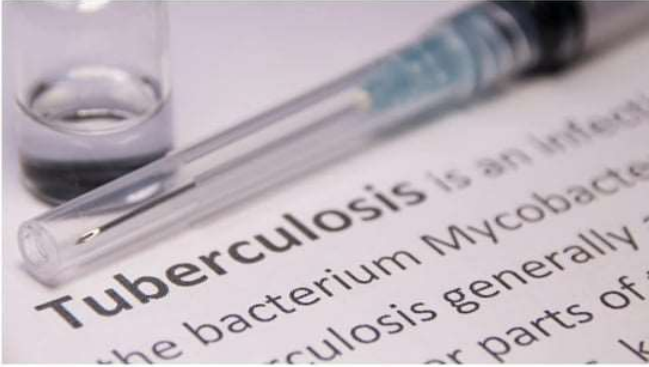
மார்ச்-24... உலக [காசநோய்](#) தினமான இன்று டெல்லியில் நடக்கும் உச்சி மாநாட்டில் கன்னியாகுமரி, நீலகிரி உள்ளிட்ட ஏழு தமிழக மாவட்டங்களுக்குக் [காசநோய்](#) ஒழிப்பிற்கான பதக்கங்கள் வழங்கப்படுகின்றன.

- கட்டுரையாளர், துணை இயக்குநர், மருத்துவ பணிகள், தொடர்புக்கு: drpdorai@gmail.com



Serum Institute seeks emergency use nod for its rBCG tuberculosis vaccine

India's TB immunisation programme currently offers BCG vaccination at birth or as early as possible till one year of age.



World Tuberculosis Day: Expert offers insights on causes and prevention of TB(Unsplash)

Published on Mar 27, 2022 10:28 PM IST | PTI | , New Delhi

The EUA application was submitted on March 22 by Prakash Kumar Singh, Director of Government and Regulatory Affairs at the Serum Institute of India (SII).

India's TB immunisation programme currently offers BCG vaccination at birth or as early as possible till one year of age.

SII already supplies life-saving vaccines to the government under the Universal Immunisation Programme, including Pneumococcal, IPV and Rotavirus, Singh mentioned in his letter.

The Pune-based firm is one of the companies which supply BCG vaccine to the government.

"Our government is committed to eliminate TB. The vision of TB-free India has been energised by the clarion call of the prime minister to end TB from our country by 2025 , five years ahead of the Sustainable Development Goal of ending TB," Singh mentioned in his letter.

"Under leadership of our CEO Adar C Poonawalla, our firm is committed to make available a safe, efficacious and high-quality world class TUBERVAC-rBCG vaccine for newborns, children, adolescents and adults at affordable price," an official source quoted Singh as having said in the application.

Recombinant BCG vaccines are manufactured through advanced technology that allows the insertion of foreign genes, or overexpression of native genes, into the BCG vaccine, an official explained.

The number of tuberculosis cases in India has seen a 19 per cent rise in 2021 over the previous year, and there has been an increase in the mortality rate due to all forms of TB between 2019 and 2020 by 11 per cent, according to the annual TB report released by Union Health Minister Mansukh Mandaviya on Thursday.

Female genital tuberculosis and infertility: Symptoms, diagnosis and treatment

In women, the most common site of extrapulmonary TB is genital TB. Female genital tuberculosis (FGTB) can affect the fallopian tubes, uterine lining, ovaries, cervix and vagina/vulva. A doctor spills the beans on its signs and symptoms, how does it lead to infertility and treatment



Female genital tuberculosis and infertility: Symptoms, diagnosis and treatment (Twitter/touchENDOCRINE)

Updated on Mar 27, 2022 10:48 AM IST | ByZarafshan Shiraz, Delhi

ByZarafshan Shiraz, Delhi

About one-quarter of the world's population has a [tuberculosis](#) infection, which means people have been infected by TB bacteria but are not (yet) [ill with the disease](#) and cannot transmit it but all age groups are at risk of TB while over 95% of cases and deaths due to tuberculosis are in developing countries. It is amongst the top 10 communicable diseases in the world as in spite of vaccine coverage and major improvements in antibiotic regimens, TB remains a major global health problem.

Most commonly, TB affects the lungs (pulmonary TB) but it can spread and cause secondary infection to the kidneys, gastrointestinal tract, brain and pelvic (genital) organs. In women, the most common site of extrapulmonary TB is genital TB and female genital tuberculosis (FGTB) can affect the fallopian tubes, uterine lining, ovaries, cervix and vagina/vulva.

Signs and symptoms and how does it leads to infertility:

In an interview with HT Lifestyle, Dr Sneha Sathe, Fertility Consultant at Nova IVF Fertility in Mumbai, revealed, "Female genital TB is of an insidious nature and most patients develop no symptoms at all, especially in the early stages. Often times, infertility is the only presenting symptom. If not treated in the initial stages, tuberculosis can severely and irreparably damage the fallopian tubes leading to infertility."

She added, "It can also damage the lining of the uterus and lead to the development of adhesions within the womb which can sometimes be severe (Asherman's syndrome). Patients are likely to also have problems with ovulation, poor ovarian reserve, poor oocyte (egg) quality, implantation failure, lower pregnancy rate, and a higher abortion rate."

According to Dr Sneha Sathe, some women with genital TB can have symptoms like irregular periods, blood stained vaginal discharge, pain during intercourse and chronic pelvic pain. Sometimes, the condition mimics other gynaecological conditions like ovarian cysts, ectopic pregnancy or even genital cancer.

How is genital TB diagnosed?

In spite of being known to be the third most common site for the infection (after the lungs and lymph nodes), Dr Sneha Sathe said that genital TB often goes undetected and diagnosis is still a challenge despite the various tests available. She highlighted, "Clinical suspicion based on medical

history, a complete physical examination, use of imaging modalities, surgical and histopathology findings and tests like PCR or Gene expert are required for diagnosis."

Explaining how the tubal blockage associated with FGTB can be diagnosed by a hysterosalpingogram (HSG) where a radio-opaque dye is introduced through the cervix into the uterus, Dr Sneha Sathe said, "Successive x-rays are then taken to track passage of the dye into the uterus and then through the fallopian tubes into the pelvic cavity. HSG may show obstruction of the tubes or uterine cavity constriction representing adhesions. Tubal blockage can occur anywhere along the course of the fallopian tube/s. In some cases the damaged tubes develop blockage at the distal end and become distended with tubal secretions and fluid (known as hydrosalpinx)."

Treatment:

Suggesting multi drug anti-tubercular medical therapy in consultation with a TB specialist, Dr Sneha Sathe elaborated, "This treatment is a four-drug regimen for 6 months as follows: initial 2-month treatment with daily rifampicin, isoniazid, pyrazinamide, and ethambutol; followed by 4-month treatment with daily isoniazid, rifampicin, and ethambutol. If this first-line treatment fails, (e.g., in patients with HIV co-infection or multidrug-resistant TB), a second-line treatment is adopted."

She informed that currently, role of surgery as a treatment modality is limited. It may be suggested in patients with pelvic mass, pyosalpinx (pus filled fallopian tubes/s), recurrent pelvic pain or excessive bleeding.

Treatment for infertility:

Dr Sneha Sathe advised, "The fallopian tubes are affected in almost all women with genital TB, while an impaired endometrium is found in half of the cases. For women with blocked or damaged tubes, In Vitro Fertilization and Embryo Transfer

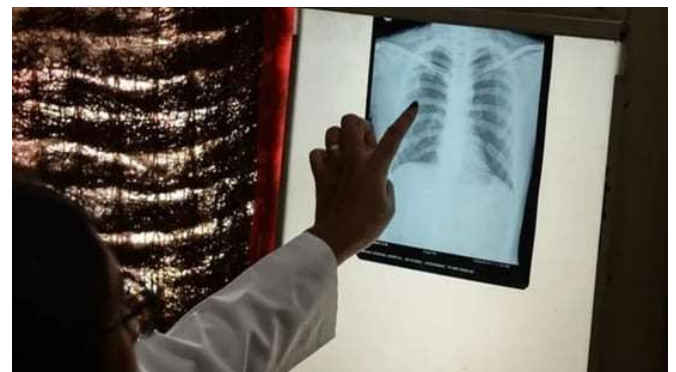
(IVF-ET) remains the treatment of choice. Women with thin uterine lining or Ashermans syndrome may need to undergo hysteroscopy before planning their IVF cycle."

She added, "In patients with hydrosalpinges (fluid filled damaged fallopian tubes) success rates with IVF reduce drastically if the IVF- ET is done in the presence of the hydrosalpinx. For such women, Hysterolaparoscopy with removal of the affected tube/s or (at the very least) clipping of the affected tubes/s as they emerge through the uterine wall is recommended prior to IVF. Pregnancy rates with IVF depend on several factors such as the severity of the disease, extent of damage to the endometrial lining, the woman's age, her ovarian reserve, any coexisting male factor infertility etc."



Study finds tuberculosis can induce premature cellular ageing

Even after successful therapy for tuberculosis, survivors of the disease have an increased risk of recurrent infection and death.



Study finds tuberculosis can induce premature cellular ageing(AFP)

Published on Mar 25, 2022 08:49 AM IST | ANI | , Washington

A new study by researchers at Baylor College of Medicine found that the cells of humans and animals who have recovered from [tuberculosis](#) had prematurely aged up to 12 to 14 years

Even after successful therapy for tuberculosis, [survivors](#) of the disease have an increased risk of recurrent infection and death.

"It's possible that this premature cellular ageing is one reason why survivors of tuberculosis have a high risk of mortality," said Dr Andrew DiNardo, assistant professor of infectious diseases at Baylor College of Medicine and senior author of the paper.

To measure the ageing of the cells, researchers looked at the epigenetic clock of the cells. Epigenetics looks at how the DNA inside every cell is coiled. As we age, how the DNA is coiled changes, and severe infection is changing it in such a way to increase premature ageing.

In this study, the researchers studied multiple cohorts and multiple tissue types and discovered that tuberculosis induced perturbations in epigenetic regulation, specifically in the regulation mediated by DNA methylation. These changes correlated with oxidative stress-induced senescence and was associated with premature cellular ageing. These processes were conserved across both guinea pigs and humans.

DiNardo, who also is with Texas Children's Hospital, says that this is an important area to look into after any severe infection, including sepsis or even SARS-CoV-2. The severity of the infection also could play a role in the ageing of the cells.

"A multi-omic epigenetic clock assay could become part of the standard of care for infectious diseases and further inform increased risk for comorbidities after chronic conditions or

environmental exposure," said Dr Cristian Coarfa, associate professor of molecular and cellular biology at Baylor and co-corresponding author of the paper.

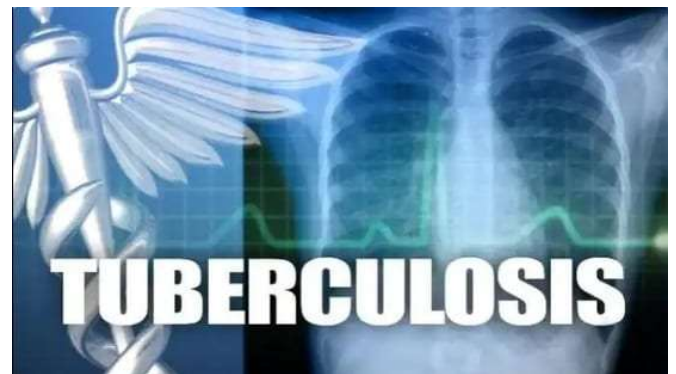
A multi-omic approach would integrate epigenomics and other 'omics,' such as proteomics (proteins produced), metabolomics (metabolites present) and microbiomics (microorganisms) data.

"Now that we know the mechanism, there are some ways that we can target it to slow down and decrease the premature epigenetic ageing that is happening in these cells," Coarfa concluded.



World TB Day: No symptoms in U-16s; difficult to detect disease early, say experts

World TB Day: Experts said that among adults the disease gives clear symptoms including cough for over two weeks, but in children below 16 years, there is no active symptom initially



For representation only (HT Photo)
Published on Mar 25, 2022 12:47 AM IST

Tuberculosis among adults gives clear symptoms including cough for over two weeks, but in children below 16 years, there is no active symptom initially, which makes it difficult to diagnose at an early stage, said doctors. "Population-wise three lakh new paediatric TB cases should be diagnosed in India every year but at present only one lakh are diagnosed annually, which means two lakh remain undiagnosed. The reason is children do not show symptoms like adult TB patients do," said Dr Surya Kant, HoD respiratory medicine at the King George's Medical University (KGMU).

The department of respiratory medicine conducted an awareness session for common people on TB, on Thursday. In all, 24 children were adopted for better treatment and care by the department.

He said, "Among children, the symptoms will be change in diet habits, disinterest in studies and outdoor games, hampered growth and irritability. All this without any illness, and even if tests are done, the reports will be normal. This indicates a child might be suffering from TB."

Similar is the situation with elderly who have poor immunity that their body does not show symptoms clearly. "For developing symptoms a certain level of immunity is required in the body. But elderly, or those above 60 years of age, with poor immunity, will show no or very late symptoms of TB," said Dr Abhishek Shukla, secretary-general, Association of International Doctors.



14 Karnataka districts bag medals for curing tuberculosis

Published on Mar 24, 2022 11:07 PM IST | ANI

World TB Day is observed every year on March 24 to commemorate the anniversary of Dr Robert Koch's discovery of the Tuberculosis (TB) bacteria.



Sand artist Sudarshan Pattnaik makes a sculpture on World Tuberculosis Day. (PTI Photo)

Though Karnataka has been hit by three waves of the COVID-19 pandemic, a total of 14 districts have received awards for curing tuberculosis, informed Health and Medical Education Minister Dr K Sudhakar on Thursday.

He said that as many as five districts have received Silver medals for curbing TB while nine received bronze medals in Karnataka.

Speaking at an event organized by the State Health Department on the occasion of the 'World TB Day,' he said, "A total of five districts in our state have received Silver medals for curbing TB. In these districts, if we compare the previous years' statistics, there has been a reduction of 40 per cent."

"Similarly, nine districts have received Bronze medals. It is commendable that a total of 14 districts have significantly curbed TB. In future years, more measures need to be taken to curb TB and we must receive a Gold medal. We must ensure TB-free Karnataka by 2025," the minister said.

For the first time in India, Tuberculosis screening has been conducted by the government for those who have recovered from COVID-19 in Karnataka, Sudhakar said.

"Among 25 lakh people who were tested, 144 people were found to have TB. These people have contracted TB after recovering COVID-19. So, the government has sought a detailed report on the incidence of TB in COVID recovered patients. The State government is committed to making Karnataka TB free by 2025," he said.

The minister said that Tuberculosis is a contagious disease like COVID-19 but it is caused by bacteria, unlike coronavirus. He said that the Central government led by PM Modi has aimed to make India TB free by 2025.

"This cannot be done just by doctors and the government. The entire society needs to join hands and work collectively to achieve this target," Sudhakar stated.

Speaking about the treatment of Tuberculosis, he said that it must be initiated at the initial stage as soon as the symptoms become apparent.

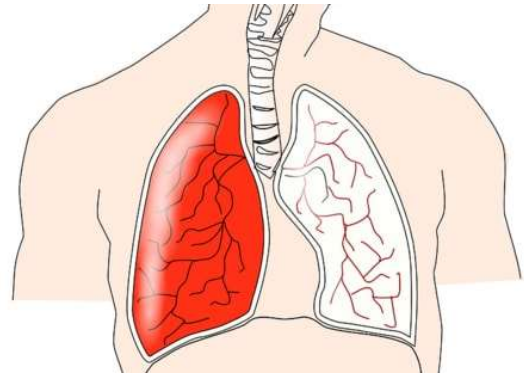
"People must undergo the test if any of these symptoms are seen - cough for more than two weeks, fevers in the evening, sudden weight loss etc. All government hospitals have facilities to conduct TB tests. If detected early, the treatment given will be more effective," he added.

In addition, the State government is also spending more than ₹5 crore every year to create awareness about diseases in rural areas, he said.

World TB Day is observed every year on March 24 to commemorate the anniversary of Dr Robert Koch's discovery of the Tuberculosis (TB) bacteria.

World Tuberculosis Day: Check out these 5 Yoga exercises to control TB symptoms

Tuberculosis or TB is a potentially serious infectious disease which mainly affects the lungs. As we mark World Tuberculosis Day this March 24, check out these 5 Yoga asanas that can help in controlling tuberculosis symptoms



World Tuberculosis Day: Check out these 5 Yoga exercises to control TB symptoms (Pixabay)

Updated on Mar 24, 2022 02:18 PM IST

According to the World [Health Organization](#), [Tuberculosis or TB](#) is the 13th leading cause of death and the second leading infectious killer after Covid-19 (above HIV/AIDS) and is caused by bacteria (*Mycobacterium tuberculosis*) that most often affect the lungs. About one-quarter of the world's population has a TB infection, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit it.

It spreads from person to person through the air when people with lung TB cough, sneeze or spit and propel the TB germs into the air which if inhaled, gets another person infected. The WHO

states, "People infected with TB bacteria have a 5–10% lifetime risk of falling ill with TB. Those with compromised immune systems, such as people living with HIV, malnutrition or diabetes, or people who use tobacco, have a higher risk of falling ill."

All age groups are at risk of TB while over 95% of cases and deaths due to Tuberculosis are in developing countries. In an interview with HT Lifestyle on World Tuberculosis Day this March 24, Yoga and Spiritual Guru Grand Master Akshar, spilled the beans on 5 Yoga asanas that can help in controlling tuberculosis symptoms.

1. Padahasthasana (a variant of Uttanasana or Standing Forward Bend)



Padahasthasana (a variant of Uttanasana or Standing Forward Bend) (Grand Master Akshar)

Method: Stand in Tadasana position. Exhale as you start to bend forward, bring your fingertips or palms on the floor.

Benefits: The Yoga pose Padahasthasana is known to massage the digestive organs, help with nasal and throat diseases, alleviate flatulence along with constipation and indigestion, improve concentration and metabolism, stimulate and tone spinal nerves and increase vitality.

2. Paschimottanasana or Seated Forward Bend

Paschimottanasana or seated forward-bend (Photo by Benn McGuinness on Unsplash)

Method: Begin with Dandasana and place a strap around the feet while grasping them by the hands if the back is stiff. Ensure that your knees are slightly bent and legs stretched out forward.

Then inhale and extend your arms straight out to the sides and up over your head, reaching toward the ceiling while keeping your spine erect. As you exhale and empty your stomach of air, begin to come forward by hinging at your hips and place your upper body on your lower body.

Lower your arms, grip your big toes with your fingers and try to touch your knees with your nose. Remember to lengthen your spine on each inhale and deepen into your forward bend on each exhale.

Benefits: Though seemingly easy, it offers loads of benefits especially for those suffering from high blood pressure and diabetes. One of the major health benefits is that it calms the body and relaxes the mind. It also helps circulate fresh blood to the head thereby relaxing the mind and reducing insomnia, depression and anxiety.

3. Chakrasana or Wheel Pose

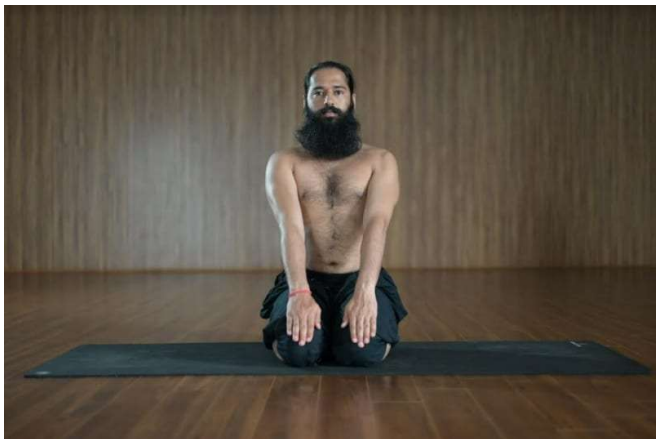


Chakrasana aka wheel pose (Instagram/@soulofariver)

Method: Lie on your back. Bend your legs at your knees and bring your feet closer to your pelvis. Feet and knees must remain parallel. Fold your arms and place your palms under your ears. Inhale and push up to lift your body up. Relax your neck. Let your head fall gently behind.

Benefits: Chakrasana gives great flexibility to the spine. Perform this only when your stomach and bowels are empty. It not only strengthens the buttocks, abdomen, vertebral column, human back, wrist, leg and arm but also sharpens the eyesight and reduces the stress and tension in the body. This exercise is especially beneficial for asthma patients since it expands the chest and the lungs get more oxygen.

4. Vajrasana or Thunderbolt Pose/Diamond Pose



Vajrasana or Thunderbolt Pose/Diamond Pose (Grand Master Akshar)

Method: Start by kneeling on the floor and rest your pelvis on your heels. Keep your heels close to each other by pulling your knees and ankles together and point your feet in line with your legs.

Place your palms on your knees or on your thighs and adjust your pelvis slightly backward and forward until you're comfortable. Exhale as you sit back on your legs.

Benefits: Vajrasana not only helps in keeping the mind calm and stable but also cures digestive acidity and gas formation, helps relieve knee pain, strengthens thigh muscles and helps to relieve back pain. The exercise aides in strengthening sexual organs and helping in treatment of urinary problems.

5. Ustrasana or camel pose

Method: Kneel on the Yoga mat and keep your knees and feet together. Lean in the backward direction by pushing your hips in the forward direction.



Ustrasana aka camel pose (Unsplash)

Bend your head and the spine as backward and farther as possible without straining. Rest your hands on your feet, relax your body and the muscles of your back, hold onto the position for a few seconds before releasing.

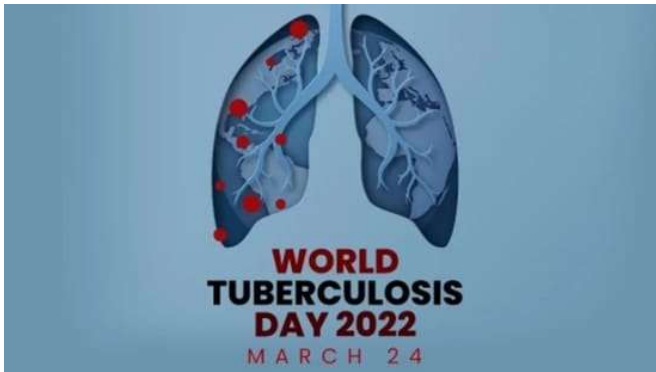
Benefits: From stretching and strengthening the shoulders and back to opening up the hips and stretching deep hip flexors, Ustrasana not only improves respiration by opening up the chest but also improves digestion and elimination by expanding the abdominal region. It loosens up the vertebrae, relieves lower back pain, improves posture and reduces fat on thighs.



World Tuberculosis Day 2022: Date, theme, history, significance of the day

World Tuberculosis Day is observed every year on March 24 to raise awareness about the infectious

disease. Know all about the date, theme, history and significance of the day.



World Tuberculosis Day 2022(Instagram)

Updated on Mar 24, 2022 08:33 AM IST
Edited by Parmita Uniyal

[Tuberculosis \(TB\)](#) a serious infection of the lungs is caused by a bacterium that spreads through tiny droplets released in the air when one coughs or sneezes. While the term tuberculosis was coined by Johann Schonlein in 1834, it is believed that the infection has been around for 3 million years, according to CDC. (Also read: [Is it Covid-19 or tuberculosis? How to differentiate between the symptoms](#))

In the 1700s, [TB](#) was called “the white plague” due to the pale appearance of the patients. It was on March 24, 1882 that the bacteria causing [TB](#) was discovered by Dr. Robert Koch. A century later, the World TB Day observance began on the same day. On World Tuberculosis Day, here’s a look at theme of the year and its history and significance.

Many people infected with the bacterium that causes TB do not show symptoms. Symptomatic people complain of cough that lasts for more two or three weeks, cough up blood or thick mucus, experience night sweats, feel fatigued or weak, lose weight and appetite, have fever among other symptoms.

Date and significance

World TB Day is observed every year on March 24 to raise awareness about the infectious disease and to step up efforts to end the global TB epidemic. On this day in 1882, Dr Robert Koch announced that he had discovered the bacterium that causes tuberculosis.

Theme

“The theme of World TB Day 2022 - ‘Invest to End TB. Save Lives.’ conveys the urgent need to invest resources to ramp up the fight against TB and achieve the commitments to end TB made by global leaders. This is especially critical in the context of the COVID-19 pandemic that has put End TB progress at risk, and to ensure equitable access to prevention and care in line with WHO’s drive towards achieving Universal Health Coverage,” according to WHO (World Health Organization).

History

According to CDC, tuberculosis is around 3 million years old and had different names in different civilizations. TB was called “phthisis” in ancient Greece, “tabes” in ancient Rome, and “schachepheheth” in ancient Hebrew. TB was also known as “consumption” in the 1800s. During the Middle Ages, TB of the neck and lymph nodes was called “scofula.” Scofula was believed to be a different disease from TB in the lungs.



Is it Covid-19 or tuberculosis? How to differentiate between the symptoms

Considering many symptoms of Covid and TB overlap, it is important to differentiate between the two diseases.

TB is caused by a bacterium that spreads through tiny droplets released in the air when one coughs and sneezes.(Shutterstock)



TB is caused by a bacterium that spreads through tiny droplets released in the air when one coughs and sneezes.(Shutterstock)

Updated on Jan 23, 2022 12:21 PM IST

[Parmita Uniyal](#)

Do you have [persistent cough](#) for more than two-three weeks even after your [Covid recovery](#)? As per the latest advisory by Union Health Ministry, people who suffer from prolonged cough post contracting the virus must get tested for [tuberculosis](#). The Union Health Ministry has advised the Covid-19 patients to [undergo tests for tuberculosis](#) and other conditions if cough persists for more than two-three weeks.

Some of the common symptoms of active TB, the infectious disease that mainly affects lungs, are coughing for three or more weeks, coughing up blood or mucus, chest pain, or pain with breathing or coughing, unintentional weight loss, fatigue, fever, night sweats, and chills. TB is caused by a bacterium that spreads through tiny droplets released in the air when one coughs and sneezes.

As per the guidelines revised issued by the Health Ministry - 'Clinical Guidance for Management of Adult Covid-19 Patients', active tuberculosis is a high-risk factor for severe disease or mortality.

Considering [many symptoms of Covid](#) and TB overlap, it is important to differentiate between

the two diseases and know when you must get tested for what.

"Fever, cough, fatigue, weakness, and breathlessness are the symptoms of both tuberculosis and Covid-19 illness. So naturally, one would think it would be a challenge to differentiate between these diseases, but in reality, it is the exact opposite. They differ right from the causative agent to duration of illness and the treatment protocol and duration," Dr Sonam Solanki, MBBS, DNB Pulmonary Medicine, PDDM, HERMES (European Diploma) Consultant Pulmonologist & Bronchoscopist, Masina Hospital, Mumbai

Are you coughing for a week or a month?

One needs to pay attention to the nature of coughing and from how long it has affected a person. Patients with tuberculosis present with a long history with symptoms for a long duration ranging from weeks to months, whereas Covid-19 patients have these symptoms of fever, cough, cold and fatigue of a shorter period - few days. The cough associated with Covid-19 is primarily dry, and there is not much expectoration, but in TB, cough is generally associated with sputum production. Sputum is a mix of saliva and mucus from the throat or lungs.

"In fact, the most crucial test to accurately diagnose TB is to check the sputum. Sputum test for TB helps accurately diagnose it and confirm drug-sensitive and resistant tuberculosis. This is very important to know to treat it correctly. Covid, as we all know, gets diagnosed with nasal and throat swabs," says Dr Solanki.

Weight loss in case of TB, breathlessness if Covid

If you have lost a lot of weight over few months and have reduced appetite, this could be a sign of tuberculosis while sudden breathlessness and low oxygen is a tell-tale sign of Covid-19.

"The breathlessness and reduced oxygen that occurs in Covid is sudden and progressive and occurs in a short duration. There are very few instances where a TB patient would present with breathlessness and reduced oxygen," says the expert.

The difference in X-rays and CT scans

Covid-19 and TB both impact lungs differently and X-rays and CT scans can reveal whether the damage has been done by Covid or tuberculosis.

"Regarding X-rays and CT scans, Covid-19 has typical grey patches scattered around the lung (ground-glass opacities). In contrast, TB has a different pattern of cavitation, lung infiltrates, water filling in lungs (pleural effusions) etc.," says Dr Solanki.

Can you have both TB and Covid-19 simultaneously?

The answer is yes.

"One can have tuberculosis and Covid-19 both, and we have come across cases where a CT scan of the chest is done for some reason in Covid-19 illness, and TB has been picked up in an early stage," says Dr Solanki.



Over 10k TB cases found in state after Centre's 2020 notification

As per the state TB department, 1,33,319 Covid patients were tested for TB in 2020 and 2,163 (1.62%) were positive

By Somita Pal



As per the MoHFW, there was an overall decline of 26% in TB notification from January to June 2020 due to the pandemic (Hindustan Times)

Mumbai 15 months after the Ministry of Health and Family Welfare (MoHFW) instructed states to conduct tuberculosis (TB) tests on Covid patients and vice versa, Maharashtra recorded 10,831 new TB infections. The number in Mumbai stands at 1,022.

As per the state TB department, 1,33,319 Covid patients were tested for TB in 2020 and 2,163 (1.62%) were positive. In 2021, 8,668 (0.68%) were diagnosed with TB after testing 12,74,206 Covid patients. In Mumbai, the percentage of TB among Covid patients stands at 0.87% in 2020 and 0.63% in 2021.

As per the MoHFW, there was an overall decline of 26% in TB notification from January to June 2020 due to the pandemic. According to a World Health Organisation (WHO) report released last year, India accounted for 41% of the global dip in reporting TB cases during the pandemic.

"Since both diseases affect the lungs and have overlapping symptoms, screening Covid patients for TB helped in new diagnosis," said Dr Ramji Adkekar, state TB officer.

According to the MoHFW guidelines, a Covid patient will be tested for TB if they have symptoms like cough for more than two weeks, persistent fever for more than two weeks, significant weight loss, night sweats. The guideline also mentions screening Covid patients who have been in contact with TB cases.

Dr Aniruddha Kadu, consultant, Tuberculosis (World Health Organisation) to the Revised National TB Control Programme (RNTCP) of the Central Government, said, "There was restriction of movement, fear among people to step out of their homes. TB services were affected as the focus was on Covid. Though the cases were prevalent, there were gaps in diagnosis. Therefore, screening Covid patients for TB helped."

Both TB and Covid primarily attack the lungs. While Covid is caused by SARS-CoV-2 virus, TB is caused by a bacterium called Mycobacterium tuberculosis.

Dr Lancelot Pinto, pulmonary medicine specialist, PD Hinduja Hospital said, "Bi-directional screening for tuberculosis among patients who present to healthcare with respiratory illnesses should be encouraged as it can help diagnose undetected cases of TB. It will improve TB case detection."

Low detection of Covid cases among TB patients

While health experts had initially predicted that Covid would be catastrophic for TB patients as their immune system and lung condition are compromised, data from Mumbai TB office says otherwise.

Data by the Brihanmumbai Municipal Corporation (BMC) shows that 560 or 1.50% of the 37,216 tuberculosis (TB) patients in the city who underwent RT-PCR tested positive for Covid and 37 of them died. In 2020, 298 (2.26%) of the 13,155 TB patients tested positive for Covid and 25 died while in 2021, 232 (1.11%) TB patients tested positive and 12 died. In 2022, till date, 30 (0.91%) TB patients have tested positive.

Medical experts said that the low numbers could be a consequence of underreporting.

Dr Rajendra Nanavare, pulmonologist and ex-medical superintendent of BMC's Sewri TB Hospital, said there have been under-reporting of TB cases. "TB already has a stigma attached to it

and so did Covid. With the lockdown and fear of contracting Covid, many potential TB patients avoided testing, which has likely led to low co-infection rates," he said.

An official from the TB department of the civic body attributed low infection rates to wearing masks and TB medication.

Dr Kadu said that while it is true that not many Covid cases were detected among TB patients, he said that there is no scientific reason behind it. He further said that it is difficult to say Covid caused the 37 deaths in TB patients. "Covid is an opportunistic diagnosis in a TB patient. It is difficult to label it as Covid death. It can be called TB death too," he explained.

Dr Pranita Tipre, Mumbai TB officer, said that one of the reasons behind less Covid cases in TB patients could be an outcome of following Covid-appropriate behaviour and the antibiotic regimen they are on.

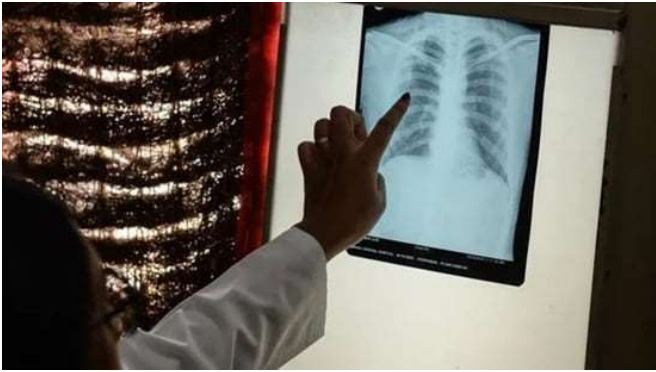
"Like Covid, pulmonary TB too is infectious and airborne diseases. Our TB patients are instructed to wear masks at home and follow hand hygiene. Their extra precaution and antibiotic regime could have played a role in this population seeing less number of Covid cases," she explained.



World Tuberculosis Day 2022: Do not ignore these common symptoms of TB

World Tuberculosis Day 2022: One of the most common symptoms associated with tuberculosis is long-lasting cough that persists for more than 2-

3 weeks. Here are other common symptoms you should watch out for.



On World Tuberculosis Day, we asked experts about common symptoms that indicate tuberculosis. (AFP)

Updated on Mar 24, 2022 08:34 AM IST

[Parmita Uniyal](#)

One of the most [common symptoms](#) associated with tuberculosis is long-lasting cough that persists for more than 2-3 weeks. In pandemic times, it's all the more important to pay close attention to other symptoms of [TB](#) that can be distinguished from Covid. First and foremost, unlike dry cough in Covid, tuberculosis is associated with sputum production which is a mix of saliva and mucus from the throat or lungs. On World Tuberculosis Day, we asked experts about other common symptoms that indicate tuberculosis. (Also read: [World Tuberculosis Day 2022: Date, theme, history, significance of the day](#))

What is tuberculosis and how does it affect you

When an infected individual coughs, sneezes, or laughs, the bacteria *Mycobacterium Tuberculosis* travels through the air from one person to another, causing TB.

"Despite the ease with which the bacterium can spread, contracting TB infection is difficult. It most usually affects the lungs, but it can also affect the lymph glands, belly, spine, joints, and other regions of the body," says Dr K S Satish, Senior Consultant - Pulmonology, Fortis Hospitals, Cunningham Road.

Types of tuberculosis

Tuberculosis bacteria are [transmitted](#) from one person to the other via tiny droplets discharged into the air by coughs and sneezes. Not all people infected by this bacterium would get sick, some of them would be asymptomatic.

"People with latent tuberculosis do not get sick, show no symptoms, therefore disease does not spread to others. However, if the person's immunity is compromised for some reason, the infection might flare up as active tuberculosis. So, it is very important to stay healthy and maintain your immunity, says Dr Harish Chafle, Senior Consultant - Pulmonology and Critical Care at Global Hospital, Parel, Mumbai.

Here are the different types of TB as explained by Dr K S Satish

In case of **active tuberculosis**, often known as tuberculosis, makes one unwell and, in most cases, can spread to others. The illness might manifest weeks or years after being infected with tuberculosis bacteria.

The most prevalent kind of tuberculosis is **pulmonary tuberculosis**, affecting the lungs, whereas **extrapulmonary tuberculosis** occurs when tuberculosis affects regions of the body other than the lungs and is more common in people with compromised immune systems making it hard to keep the illness contained in a single place.

Common symptoms of TB

The symptoms of tuberculosis vary depending on where the germs are developing in the body. The bacteria that causes tuberculosis usually grows in the lungs (pulmonary TB). Dr Harish Chafle explains TB symptoms.

The symptoms of tuberculosis in the lungs include:

- * A bad cough that lasts 3 weeks or longer
- * Pain in the chest

* Coughing up blood or sputum (phlegm from deep inside the lungs)

Other symptoms of TB disease are

- * Weakness or fatigue
- * Weight loss
- * No appetite
- * Chills
- * Fever
- * Sweating at night

Why TB needs to be treated immediately

"The longer people wait, the worse the condition becomes. Although the stigma associated with tuberculosis has decreased dramatically, people must remain vigilant, knowledgeable, and responsible when it comes to recognizing signs and seeking treatment early as it is a treatable disease. Drug-sensitive tuberculosis is treated with a six-month course of medicines, requiring a treatment regimen with at least 4 medications administered under expert supervision," says Dr Satish.

When should you see a doctor?

Symptoms such as fever, unexplained weight loss, drenching night sweats, or a persistent cough are frequently associated with tuberculosis; however, they can also be caused by other illnesses. If you suspect you've been exposed to tuberculosis, consult your doctor, concludes Dr Satish.



Diagnosing paediatric TB a major challenge

Although only 6% of tuberculosis (TB) cases reported to the Revised National Tuberculosis

Control Programme (RNTCP) are children, experts say that these numbers are highly underreported



Even today, diagnosing paediatric TB continues to be a major challenge as children struggle to produce sputum-the specimen which allows simple detection of the bacterial infection (Hindustan Times)

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Mumbai Although only 6% of tuberculosis (TB) cases reported to the Revised National Tuberculosis Control Programme (RNTCP) are children, experts say that these numbers are highly underreported.

Even today, diagnosing paediatric TB continues to be a major challenge as children struggle to produce sputum- the specimen which allows simple detection of the bacterial infection.

Paediatric specimens also carry a low bacterial load, thus increasing the chances of inconclusive reports. Medical experts are now calling for a wider rollout of ultra-sensitive tests to get conclusive results, as well as the use of newer specimens such as stool samples, which could be easier for children.

According to the World Health Organisation, almost 60% of paediatric TB cases remain undiagnosed. While pulmonary TB, which attacks the lungs, remains a problem, the incidence of extra-pulmonary TB, wherein the bacteria attacks other organs or systems, is also high among children.

"Since getting sputum samples is difficult in children with pulmonary TB, we have to rely on the gastric lavage procedure to extract the samples from their gastric aspirate," said Dr Vijay Chavan, a chest physician at the Médecins Sans Frontières (MSF) clinic in Govandi. "Since it is an invasive procedure, it is very uncomfortable for the children," he said.

The lavage procedure involves aspirating liquid from the oesophagus through a tube inserted from the nose or the mouth. When it comes to extrapulmonary TB, doctors have to perform biopsies, which are painful and often not well tolerated by children.

"But since the bacterial load in children is low, we often land up with inconclusive microbiology reports and thus struggle to decide if the case is drug-sensitive or drug-resistant. Very often, children are started on drug-sensitive TB regimens, only to find out later that they were drug-resistant. By then, a lot of crucial time is lost," said Chavan, adding that the highly sensitive GeneXpert Ultra test should be rolled out widely to tackle paediatric TB better. In Mumbai, the MSF Govandi clinic is among the few centres that use this test.

In its latest guidelines, the WHO has recommended testing stool samples for paediatric patients. While the same GeneXpert machine can be used for stool samples, the procedure of processing the samples is different. In India, some centres are trying out this method as a part of medical research.

"Testing of stool samples has not been endorsed under our TB programme as yet," said Dr Vikas Oswal, a chest physician at Shatabdi Hospital. "Sample collection is a big challenge among paediatric patients and newer, simpler methods will definitely help," he said.

Experts said that TB infection is often passed on to children from adults. Yet, there is a lack of awareness about the symptoms among children,

and the possibility of prophylaxis treatment, if one person in the family develops the infection.

"Not just adult patients, even doctors treating the adult need to push for screening of the family members including the children," said Dr Tanu Singhal, a paediatrician and infectious disease expert from Kokilaben Dhirubhai Ambani Hospital.



World TB Day 2022: Can TB spread by touching; is it genetic? Expert debunks top myths about tuberculosis

World TB Day 2022: Not everyone with tuberculosis is infectious and it doesn't necessarily spread by touching. An expert busts common myths about tuberculosis.



TB is the 13th leading cause of death and the second leading infectious killer after COVID-19(Pexels)

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[Parmita Uniyal](#)

[World TB Day 2022](#): There is no dearth of misconceptions around tuberculosis, one of the most common infectious diseases in India. It has been around for centuries, yet people believe in many myths that are far from the truth. It is

important to separate fact from fiction and spread public awareness in order to fight effectively against the deadly disease. TB is the 13th leading cause of death and the second leading infectious killer after [COVID-19](#), according to WHO.

Surprisingly, about one quarter of the world's population has a tuberculosis infection, which means people have been infected by TB bacteria but are not yet ill and cannot transmit it. According to WHO, people who have weak immune systems like those with HIV, malnutrition or diabetes, or people who use tobacco, are at risk of falling ill.

India has the highest Tuberculosis (TB) burden in the world, and unfortunately, COVID-19 pandemic has further worsened the situation by reversing years of progress made in the fight to end TB. For the first time in over a decade, TB deaths increased in 2020. There is an urgent need to invest resources to ramp up the fight against TB and achieve the commitments to end TB in India, says Pratibha Pandey, Sr. Health Specialist, ChildFund India.

HT Digital spoke to Dr. Jayalakshmi TK Consultant, Pulmonologist Apollo Hospitals Navi Mumbai to debunk top myths about tuberculosis.

Myth 1: Everyone with Tuberculosis is infectious

Fact: Tuberculosis can affect all organs of the body except hair, teeth and nails. Only pulmonary tuberculosis is infectious and can spread through droplets. Patients who are initiated on treatment for pulmonary tuberculosis become noninfectious in 3 weeks after starting the treatment

Myth 2: TB is genetic.

Fact: There is research going on to see if there is genetic predisposition to tuberculosis, however there haven't been any significant reports yet. Since tuberculosis spreads through droplets, families who are in close contact get exposed

and the chances of developing tuberculosis increases. There are certain places where the number of tuberculosis patients are more, in such areas the exposure to patients in substantial thereby increasing the chances of people developing tuberculosis.

Myth 3: There is no cure for tuberculosis.

Fact: There is a treatment for tuberculosis. If diagnosed on time and if the patient is compliant to treatment, patients do well with anti TB medication.

Treatment for drug sensitive tuberculosis is 6 to 9 months comprising of Rifampicin, Isoniazid, Ethambutol and Pyrazinamide. About 5% of patients can develop drug resistant tuberculosis.

Now there are shorter duration regimen (9 to 11 months) available which comprise of Bedaquiline or Delamanid. Other drugs used for treatment of MDR Tuberculosis are Levofloxacin, Clofazamine, Pyrazinamide, Ethambutol, High dose Isoniazid, Ethionamide, Moxifloxacin, Kanamycin Amikacin, Linezolid, Cycloserine. Success rate of treatment of drug resistant tuberculosis is 70 to 80% in good centers.

Myth 4: TB can spread by touching.

Fact: The TB bacteria is airborne and spreads when an infected person coughs, sneezes, speaks, sings, or laughs. It is not likely to be spread through personal items, such as clothing, bedding, drinking glass, eating utensils, handshake, toilet, or other items that a person with TB has touched. Very rarely cutaneous tuberculosis or skin TB can spread through touch in untreated patients.

Myth 5: TB always leads to death.

Fact: India has 30% of the world TB cases. In 2020 there were 2.64 million cases and 436000 deaths. Even though the death rate is high many deaths can be prevented by early diagnosis and treatment. India contributes to 27% of MDR TB

cases. The success rate of treatment in drug resistant tuberculosis has also increased with the newer regimen. TB is the second leading cause of death from a single infectious agent ranking second to Covid 19.



Consortium unveiled by govt to study TB cases across country

Genome sequencing has picked up after a network of 38 laboratories was created under INSACOG (Indian SARS-CoV -2 Genomics Consortium) for the purpose of studying variations in SARS-Cov-2

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India launched the Indian tuberculosis genomic surveillance consortium (InTGS) on Thursday -- on the occasion on World Tuberculosis Day -- to study variations in tuberculosis (TB) bacterium across the country for better disease management.

Genome sequencing has picked up after a network of 38 laboratories was created under INSACOG (Indian SARS-CoV -2 Genomics Consortium) for the purpose of studying variations in SARS-Cov-2, the virus that causes the coronavirus disease (Covid-19). The government intends to make use of the same model to pick up early warning signs to manage TB, according to people familiar with the matter.

Even though there was a 19% increase in TB notifications in 2021 compared to 2020, highlighting that the pandemic-hit TB elimination programme was probably back on track, the TB prevalence survey results between 2019-2021 released by the government show a 31.7%

prevalence among those aged 15 years and above.

"The prevalence of microbiologically confirmed PTB in ≥ 15 years age was 316 per lakh population (95% Confidence Interval: 290-342) in the country and varied from 151 per lakh (Kerala) to 534 per lakh (Delhi). The prevalence of all forms of TB for all ages in India was 312 per lakh population (286 - 337) for the year 2021. The highest prevalence for all forms of TB was 747 per lakh (510 - 984) in Delhi and the lowest was 137 (76 - 198) in Gujarat. The prevalence of TB infection among population ≥ 15 years age is 31.4% (95% Confidence Interval: 27.2 - 33.5). Higher prevalence of PTB was observed in older age group, males, malnourished, smokers, alcoholics and known diabetics," read excerpts from the study.

The majority (64%) of symptomatic population did not seek health care services. The reasons were ignoring the symptoms (68%), not recognising the symptoms as TB (18%), self-treatment (12%) and couldn't afford to seek care (2%). Among the 36% of survey participants who sought care for their symptoms, there was equal preference for government and private facilities.

"For more than two years, we have been facing the global pandemic apart from TB prevalence. Both the diseases are highly contagious, air-borne and severely impact families and communities. As we move forward, let us through Jan Andolan and Jan Bhagidari involve various stakeholders and partners in our collative fight against TB, the same way we have collaborated in our fight against Covid-19," said Union health minister Mansukh Mandaviya.

India has set 2025 as the target year for TB elimination, five years ahead of the sustainable development goal of 2030.

"Government policy is on the right track for getting rid of the disease; however, with a highly infectious disease like Tb we can't be really sure of zero cases, but at least the government is talking

about TB elimination, which is a positive step," said Dr Sushil Kumar Munjal, chest physician, National institute of tuberculosis and respiratory diseases.

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