



## Reflecting on five decades of the Expanded Programme on Immunisation (EPI)

Vaccines have long been a cornerstone of public health, preventing the spread of deadly diseases and saving countless lives. In 1974, the World Health Organisation (WHO) launched the Expanded Programme on Immunisation (EPI), a global initiative to ensure equitable access to life-saving vaccines for every child, regardless of geographic location or socioeconomic status. Over the past five decades, EPI evolved and achieved remarkable milestones that reshaped global health.

The 50<sup>th</sup> anniversary of EPI in 2024 marked a pivotal moment to celebrate its achievements, reflect on its impact, and renew efforts to strengthen immunisation initiatives.

EPI, initiated during the momentum of the smallpox eradication effort, aimed to provide universal access to life-saving vaccines for children worldwide. By the 1980s, the program had established a robust vaccine supply chain and achieved unprecedented success, with global childhood immunisation levels reaching 80% by the early 1990s.

EPI's milestones included the eradication of smallpox in 1980 and reducing polio by over 99% through partnerships with WHO, UNICEF, Gavi, and others. The program expanded from six childhood vaccines to 13 universally recommended vaccines, including Hepatitis B, Hib, and HPV, alongside context-dependent vaccines like Yellow Fever and Cholera.

EPI innovations extended beyond immunisation, influencing injection safety, solar power integration, and health system strengthening, as demonstrated during the COVID-19 vaccine rollout.

The 50-year journey of EPI underscored immunisation's role as a cornerstone of public health, saving millions of lives and advancing global health equity.

Source: World Health Organisation

SNEEZING, COUGHING, OR SOMETHING ELSE?

# Unravel the mystery of your symptoms!

DR NUR-A-SAFRINA RAHMAN

When it comes to sneezing, coughing, and stuffy noses, many people often wonder whether they are dealing with a cold or allergies. While both conditions share some similar symptoms, they have different causes, and knowing the difference can help you find the right treatment and understand how long you might be feeling under the weather.

Colds and allergies are often confused because they both affect the respiratory system, but they stem from different causes. Colds are caused by viruses, which are contagious. These viruses spread when an infected person coughs, sneezes, or touches surfaces that others then come into contact with. Once a cold virus enters your body, your immune system reacts, leading to symptoms such as a sore throat, runny or stuffy nose, and fatigue. You typically start feeling the symptoms a few days after being exposed to the virus, and they last for about 3 to 10 days. After that, your body fights off the infection, and you start feeling better.

Allergies, on the other hand, are caused by an overactive immune system. When your body mistakes harmless substances—such as pollen, dust, or pet dander—for harmful invaders, it releases chemicals to protect itself. This immune response causes symptoms like sneezing, itchy eyes, and congestion. Unlike colds, allergies are not contagious. They happen when your body comes into contact with an allergen, and symptoms can last as long as you are exposed to that allergen. For example, if you are allergic to pollen, you might notice your symptoms worsen during certain seasons when pollen levels are high.

The key to distinguishing



between a cold and allergies is the duration of your symptoms. If your symptoms last more than a week or two, and especially if they persist for months, it is more likely you are dealing with allergies. Cold symptoms, on the other hand, generally clear up within a few days to a couple of weeks. Another major difference is that colds can cause fever and body aches, which are rare in allergy cases.

While both conditions can cause a stuffy or runny nose, allergies are more likely to cause itchy, watery eyes, which are not common in colds. Also, unlike colds, allergies do not usually cause a sore throat or fatigue, though they can make you feel worn out if your symptoms are persistent.

If you are experiencing cold-like symptoms that linger for a long time, or if you notice your symptoms are triggered by specific allergens like

pollen or pet dander, it is a beneficial idea to consider allergies. On the other hand, if your symptoms appear suddenly, often during the winter months, and you have a fever or body aches, it is probably a cold.

In terms of treatment, colds usually get better on their own with rest, fluids, and over-the-counter medications to relieve symptoms. If you have allergies, avoiding triggers is key. You can also use antihistamines, nasal sprays, or allergy shots to manage symptoms.

So, the next time you are sniffing and sneezing, take a moment to think about how long the symptoms have been around and what might be causing them. Knowing the difference between a cold and allergies can help you manage your symptoms and get back to feeling better faster.

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HMPV

## A silent threat to respiratory health

Human Metapneumovirus (HMPV) is a common but often underrecognised respiratory virus that primarily affects the respiratory tract. Discovered in 2001, HMPV belongs to the Pneumoviridae family and is closely related to respiratory syncytial virus (RSV). It is a leading cause of acute respiratory infections, particularly in young children, the elderly, and immunocompromised individuals.

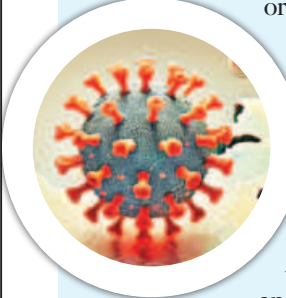
HMPV is transmitted through respiratory droplets, direct contact with infected individuals, or contaminated surfaces. Infections are most common during late winter and spring, and symptoms range from mild cold-like illness to severe respiratory conditions, such as bronchiolitis or pneumonia. High-risk groups, including children under five and adults over 65, often experience more severe complications.

There is currently no vaccine or specific antiviral treatment for HMPV. Management focuses on supportive care, including hydration, fever reduction, and, in severe cases, oxygen therapy or mechanical ventilation.

Early identification and appropriate clinical care can significantly improve outcomes.

Preventive measures, such as frequent hand washing, avoiding close contact with sick individuals, and maintaining good respiratory hygiene, can help limit the spread of HMPV. Health professionals emphasise the importance of monitoring high-risk populations during seasonal outbreaks.

HMPV's global burden underscores the need for continued research to develop effective vaccines and treatments. Greater awareness and diagnostic efforts are crucial in mitigating the impact of this often-overlooked pathogen and improving outcomes for affected populations.



# Updated vitamin D guidelines: what clinicians and patients need to know

In 2024, the Endocrine Society issued updated guidelines on the evaluation, treatment, and prevention of vitamin D deficiency in adults, reflecting recent research. The new recommendations, which replace a 2011 guideline, aim to simplify the approach to vitamin D testing and supplementation.

**Key changes in vitamin D guidelines**  
Previously, the Endocrine Society defined vitamin D levels in terms of "deficiency" and "insufficiency" based on serum 25-hydroxyvitamin D (25[OH]D) levels. However, the new guidelines no longer categorise vitamin D status in this way. Research has not confirmed a clear connection between specific vitamin D levels and clinical outcomes, leading to this shift.

For most adults aged 19 to 74, the guideline advises against routine vitamin D testing or supplementation. Instead, it recommends following the U.S. National Academy of Medicine's daily intake guidelines: 600 IU until age 70 and 800 IU daily for those over 70.

**Special recommendations for older adults and pregnant women**

While routine testing is not advised for people aged 75

and older, empirical vitamin D supplementation is recommended due to its potential to lower mortality, although the evidence is modest. Supplementation in older adults should focus on low daily doses (about 1,000 IU), either through fortified foods or supplements.

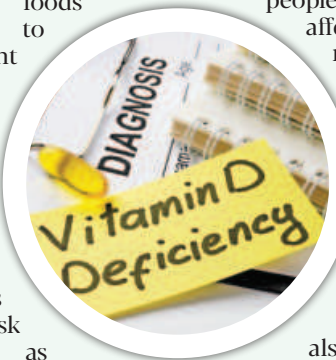
Pregnant women are also advised to take vitamin D, either from fortified foods or supplements, to ensure sufficient intake. **Other key considerations**  
The guideline also recommends vitamin D supplementation for adults with high-risk prediabetes, as research suggests it may help lower the risk of progressing to type 2 diabetes. However, there is no clear definition of "high-risk prediabetes" compared to regular prediabetes.

In contrast, the guideline advises against routine testing for vitamin D levels in individuals with obesity or darker skin tones, as no evidence supports the need for routine screening in these populations.

**Impact on clinical practice**

The new guideline could significantly change how clinicians approach vitamin D testing and supplementation. The practice of routinely testing vitamin D levels and prescribing supplements to raise levels to 30 ng/mL or higher is no longer recommended. However, this guideline does not apply to people with conditions affecting vitamin D metabolism, such as malabsorption, chronic kidney disease, or bone disorders like osteomalacia, for whom testing and treatment remain necessary. Clinicians should also be aware that while diet and sunlight contribute to vitamin D intake, it is challenging to accurately assess vitamin D status through routine history-taking during office visits. Despite these challenges, familiarity with these updated guidelines is essential for primary care providers to ensure effective care and avoid unnecessary testing and supplementation.

Source: The Journal of Clinical Endocrinology & Metabolism



## New insights into treating adult ADHD

Attention deficit hyperactivity disorder (ADHD) is not just a childhood condition—it affects millions of adults too. While the focus has often been on children, the increasing number of adults being diagnosed with ADHD has sparked interest in whether treatments that work for kids can also help grown-ups. A new large-scale study has provided some answers, confirming that certain medications are highly effective in the short term but raising questions about the usefulness of non-medication therapies.

Published in The Lancet Psychiatry, this study analysed data from over 100 previous studies, involving about 15,000 people. The researchers aimed to assess various treatments, including medications, psychological therapy, and newer approaches like neurostimulation and neurofeedback. The key takeaway? Stimulant medications and a non-stimulant option proved to be the most effective treatments for reducing core ADHD symptoms like inattention, restlessness, and difficulty completing tasks—at least for the first 12 weeks.

Interestingly, non-drug treatments like cognitive behavioural therapy, mindfulness, and transcranial direct



current stimulation (tDCS) showed mixed results. Patients did not report significant improvement compared to a placebo, although doctors noticed symptom improvements. This highlights the need for further research to explore the true benefits of these treatments.

Another finding was that while ADHD medications were effective at managing symptoms, they did not have a significant impact on broader aspects of life, like quality of life. This suggests that while medications can help manage symptoms, a more holistic approach is needed to address the overall well-being of adults with ADHD.

In conclusion, while medications are the most effective short-term treatments, more research is needed to fully understand the long-term impact of these treatments and the potential of non-medication therapies for adults with ADHD.

## The risk of developing cyst in the lungs

Avoid eating at roadside open food stalls

DR K K PANDEY

These days, quite often you would have heard people talking about a word, 'Cyst.' Somebody had had a problem of epilepsy, and the treating doctor had told him about a cyst in the brain. Quite often you would have heard your acquaintance complaining about pain in the right upper side of the abdomen and jaundice, and it was found later that a cyst in his liver was the cause of it. Also, you would have heard or seen your relative suffering from severe dry cough along with chest pain and coughing out blood. When on a doctor's advice a chest X-ray was done, a cyst was found in the lung. Sometimes you do not have any problem, and when you get a routine medical check-up for job placement or for going abroad, you will be surprised to see a large round white shadow of a cyst in the chest X-ray on one side or both sides.

**How does this cyst enter a human body?**

In our country, there is an abundance of filth, dirt, and a network of open drains. The stray dogs infested with cysts empty out their stools in these very spots, leading to pollution of not only ground soil but also air. In close proximity to these contaminated sites along the roads, you will find open stalls of Indian fast foods like "chaat," "bhelpuri," and fruit juice vendors. As soon as you eat this cyst-infested fast food, not only food alone but eggs too will enter your intestine, and you just cannot notice these cysts as they are too tiny to be seen with your naked eyes.

**How does this cyst reach the lung?**

After reaching the intestine, the worm inside the cyst breaks out of the covering and roams freely. It then punctures the wall of the intestine and enters the adjacent blood pipes and then blood circulation. It then, through these blood pipes, reaches various parts of the body, especially the liver and lung, where it makes its permanent abode. After settling down in any of these favourite places, it starts growing in size and constructs for itself an outer covering for safety and gives birth to a hydatid cyst, which gradually starts increasing in size.

**Who are the victims of the disease of cysts in the lung?**

If you or your children play with stray dogs or your pet dog, and he is neither vaccinated regularly nor his proper hygiene is maintained, or your pet spends most of the daytime outside the house near open dirty drains rather than inside the house, you and possibly your children can become victims of cysts. If you and your children do not wash hands with soap before eating or after touching the earth and soil and then, without washing their hands with soap straightaway, go for dinner/lunch, you and your children are most likely to be infested with lung or liver cysts.

**What will happen if no treatment is done?**

If you refuse to get treated for the lung cyst, sooner or later you will lose your life. Because of the enormous space available inside the chest, the lung cyst has an ample opportunity to enlarge rapidly and becomes gigantic in size in a very short time. If ever such a patient coughs severely or receives a strong blow on the chest or sustains a chest injury, the enlarged hydatid cyst of the lung gets ruptured.

**What is the correct treatment of the lung cyst?**

To decide the treatment of a lung cyst, you have to take into account some factors like the size of the cyst, the location of the cyst, and other associated medical conditions of the patient. Surgery is the ideal and the best treatment for a lung cyst. A person suffering from a cyst in the lung must get it removed surgically as early as possible.

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## Can AI in healthcare mimic human biases and improve clinical decisions?

AI models like GPT-4 and Gemini 1.0-Pro can make expert-level decisions in healthcare, but they also show human-like biases. Recent studies have shown that while these AI models can help doctors with diagnosing, they do not always improve the decision-making process. In one study, doctors who had access to GPT-4 did not perform better than those using just regular tools. This suggests doctors need training on how to use AI tools effectively.

Researchers also tested AI for biases using different medical cases. In one example, AI was more likely to recommend surgery for lung cancer



when survival rates were shown instead of death rates. This is known as the 'framing effect.' In another case, AI was more likely to think a person with a cough and blood in their

sputum had a pulmonary embolism when the symptom was mentioned first, which shows the 'primacy effect.' In a third case, when a woman with knee pain was shown two outcomes—one where she recovered and another where she died—AI judged her care as appropriate in the first case but not the second, showing a 'hindsight bias.'

These biases in AI were even stronger than those in human doctors. This means that while AI can help doctors, it is important for doctors to question the AI's suggestions and explore other possibilities to avoid making mistakes.