



## PETS AS POTENTIAL RESERVOIRS for antibiotic-resistant bacteria

A global congress presented new research suggesting that pet dogs and cats can carry antibiotic-resistant bacteria, potentially spreading them to their owners. The study found evidence of resistant bacteria passing between sick pets and their healthy owners in Portugal and the UK, raising concerns about pets as reservoirs for antibiotic resistance.

The study focused on bacteria resistant to common antibiotics, including those used to treat serious infections. Testing samples from pets and their owners, researchers found instances where both pets and humans carried the same antibiotic-resistant bacteria strains, indicating transmission between them.

In Portugal, over half of the pets and about a third of the owners harboured resistant bacteria. The UK found similar results, with some dogs carrying strains resistant to multiple antibiotics.

While the direction of transmission was not always clear, there were instances suggesting pets passed resistant bacteria to humans. The researchers emphasise the importance of including pet-owning households in monitoring antibiotic resistance and recommend practicing good hygiene, such as handwashing after handling pets or their waste, to prevent transmission.

The study emphasises the need for awareness and precautions to protect both animal and human health, even though all pets received successful treatment for their infections.



## GUT BACTERIA AND OBESITY:

# How your gut microbes might influence weight gain

STAR HEALTH REPORT

At the European Congress on Obesity, researchers presented new evidence suggesting that the bacteria in the gut could be a significant contributor to obesity, especially in men and women. This study focused on understanding how changes in the types of bacteria in our gut can affect our metabolism and possibly lead to obesity.

Tiny organisms such as bacteria, viruses, and fungi, collectively known as the gut microbiota, reside in our gut. When there is a disturbance in this community, it can affect our health and increase the risk of diseases like obesity. However, we are still figuring out which bacteria are more likely to cause obesity and how they affect our health.

To learn more, scientists looked at data from a group of adults in Spain. They examined 361 volunteers' stool, looking at both the types of bacteria and the small molecules produced by these bacteria as they digest food. By entering our bloodstream, these molecules can influence our health.

They analysed the bacteria in their stool to see if there were any differences between people with low and high obesity levels.

They discovered that a bacterium known as *Christensenella minuta*, often associated with leanness and health, was present at lower levels in people with higher obesity levels. In men, higher levels of certain bacteria were associated with

higher BMI, fat mass, and waist circumference. Different bacteria were associated with higher BMI and other measures of obesity in women.

Additionally, when they looked at the small molecules produced by these bacteria, they found that people with higher obesity levels had higher levels of certain molecules, particularly ones known to be involved in metabolic diseases like diabetes.

The lead researcher, Dr Paula Aranaz, explained that having more *Christensenella minuta* in the gut seemed to protect against obesity. However, the bacteria associated with obesity risk were different between men and women. This implies that we may need to tailor obesity prevention interventions differently for men and women.

Dr Aranaz emphasised the importance of using both genetics and metabolomics (the study of small molecules in the body) to understand how obesity develops. She hopes that by better understanding these mechanisms, we can develop more precise strategies to help people lose weight by targeting specific bacteria or molecules in the gut.

In summary, this research highlights the complex relationship between our gut bacteria, the molecules they produce, and obesity risk. By better understanding these relationships, we may be able to develop more effective strategies for weight loss and the prevention of metabolic diseases like obesity and diabetes.

## 50 YEARS OF THE EPI

# Celebrating progress and addressing challenges in global vaccine equity

STAR HEALTH DESK

The World Immunisation Week 2024 is being observed during April 24 to 30. The global vaccine drives of the second half of the 20<sup>th</sup> century are one of humanity's greatest achievements. Immunisation campaigns have enabled us to eradicate smallpox, nearly defeat polio, and ensure more children survive and thrive than ever before.

This year, World Immunisation Week will celebrate 50 years of the Expanded Programme on Immunisation (EPI), recognising our collective efforts to save and improve countless lives from vaccine-preventable diseases and calling on countries to ramp up investments in immunisation programmes to protect the next generation.

In just five decades, the world went from one where the death of a child was something many parents feared to one where every child, if vaccinated, has a chance to survive and thrive.

At its inception in 1974, the Expanded Programme on Immunisation (EPI) focused on protecting all children against six childhood illnesses, but today, this number has grown to 13 universally recommended vaccines across the lifecycle and 17 additional vaccines with context-dependent recommendations. With the expansion of the vaccination programme across the life course, we now call it the Essential Programme on Immunisation.

In the last few years of the pandemic, progress on immunisation has slipped. Despite a global vaccination increase of over 4 million children in 2022 compared to 2021, 20 million children still missed out on one or more vaccines. Growing conflicts, economic downturns, and a



rise in vaccine hesitancy are some of the threats to efforts to reach these children.

As a result, the world is experiencing sudden diphtheria and measles outbreaks. While global vaccine coverage is good, with 4 out of 5 kids fully covered, we have more to do.

We can make it possible for everyone to benefit from the life-saving power of vaccines.

Let us make this possible by ensuring vaccines are high on the priority list for governments in all countries.

Advocating for vaccines is an integral part of health care planning and investment throughout life. It is crucial to ensure that all countries have appropriate funding and resources for vaccination programmes.

Accelerating research and innovation to enhance vaccine access and support is also important. We have to speak out on the impact of vaccinations locally, nationally, and

globally. In conclusion, the journey of immunisation over the past 50 years has been a testament to human resilience and dedication. Despite remarkable achievements, significant challenges remain in ensuring universal access to vaccines.

Moving forward, it is crucial to prioritise vaccines on governmental agendas, integrate them into comprehensive healthcare planning, secure adequate funding, accelerate research and innovation, and amplify the voices of those impacted by vaccinations.

The vision of immunisation for all is not merely an aspiration but a fundamental necessity for global health equity. It requires sustained commitment and action from all stakeholders to ensure that every individual, regardless of circumstance, has the opportunity to benefit from the life-saving power of vaccines.

Source: World Health Organisation

## CHANGING TRENDS

# Vaping as a tool for smoking cessation

A new paper in *Nicotine and Tobacco Research*, published by Oxford University Press, reveals a significant shift in smoking cessation patterns among the US adults who use electronic cigarettes (e-cigarettes), commonly known as vaping. Unlike previous years where e-cigarette use was not associated with quitting smoking, recent data from 2018 to 2021 show that e-cigarette users are now more likely to quit smoking combustible cigarettes compared to non-users.

Lead author Karin Kasza notes the changing landscape and suggests investigating design changes in e-cigarettes that deliver nicotine more effectively. This emphasises the need to use up-to-date data to inform public health decisions.

Similarly, in Bangladesh, there is a growing trend of smokers turning to vaping as a tool for quitting traditional cigarette smoking. Schumann Zaman, president of the Bangladesh Electronic Nicotine Delivery System Traders Association (BENDSTA), observes an increase in smokers seeking advice on transitioning to vaping. Credible scientific findings support this shift in awareness of vaping's potential harm reduction.

While specific data on vaping's role in smoking cessation in Bangladesh is lacking, Zaman underscores the substantial and rapidly increasing trend. He calls for policymakers, healthcare providers, and community leaders to recognise vaping as part of the broader tobacco harm reduction strategy. This entails adopting appropriate regulatory frameworks to ensure user safety and implementing public health campaigns that accurately assess the risks and benefits of vaping.

Overall, these findings highlight the evolving landscape of smoking cessation strategies, with vaping emerging as a promising tool for those looking to quit smoking.



## Prostate cancer cases expected to double worldwide between 2020 and 2040, new analysis suggests

The Lancet Commission on prostate cancer warns of a looming crisis, projecting a doubling of cases to 2.9 million annually by 2040, with low- and middle-income countries (LMICs) facing the highest increases. Globally, we expect an 85% rise in deaths, primarily in LMICs due to underdiagnosis and missed data collection opportunities. Ageing populations and unavoidable risk factors contribute to the surge, demanding immediate action.

Lead author Professor Nick James emphasises evidence-based interventions, advocating for improved early detection and education programs. In high-income countries (HICs), the current approach to prostate cancer diagnosis may lead to over-testing, highlighting the need for MRI scans alongside PSA testing. However, we urgently need early detection programmes in LMICs, where most men present with advanced disease.

The Man Van trial in the UK demonstrates the efficacy of outreach programmes in detecting prostate cancer early. Similar initiatives could benefit LMICs, necessitating a global focus on men's health.

Raising awareness of advanced prostate cancer and available therapies is crucial, especially in LMICs where public awareness is low. Digital technologies and community engagement can aid education efforts, as seen in initiatives like Project Pink Blue in Nigeria.

Professor James N'Dow underscores the economic and social impacts of rising prostate cancer cases in LMICs and calls for investments in early diagnosis programmes to mitigate these harms.

Capacity building for diagnosis and treatment in LMICs is essential, requiring investment in specialist staff and infrastructure. Regional hubs could support specialist training and improve patient access to treatment.

Lastly, to ensure equitable outcomes for all populations, more research on ethnic disparities in prostate cancer care is necessary. Mandatory ethnicity recording in clinical trials and trials reflective of population diversity are essential steps in this direction.

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