



100 Cases, 12 countries: Symptoms to Vaccine, Here's All You Need to Know About Monkeypox Virus



With around 100 confirmed cases in over 12 countries, monkeypox has triggered a fresh concern over a new health crisis even as the world is still grappling with the Covid-19 pandemic. As of May 21, 92 laboratory confirmed monkeypox cases and 28 suspected cases with investigations on have been reported to the World Health Organization (WHO) by 12 member states that are not endemic to the virus. No associated deaths have been reported. Cases have been reported from Australia, Belgium, Canada, France, Germany, Italy, Netherlands, Portugal, Spain, Sweden, United Kingdom and the United States of America. Belgium has become the first country to make monkeypox quarantine compulsory for all confirmed cases.

SYMPTOMS, SPREAD

Bumps, rashes, fever and swollen lymph nodes – while the clinical presentation of monkeypox resembles that of smallpox, monkeypox is known to be less contagious than smallpox and causes less severe illness, as per the WHO. The monkeypox outbreak has taken the community of scientists by surprise as such an outbreak is very rare outside Africa. Globally, the situation is evolving and the WHO expects there will be more cases of monkeypox identified as surveillance expands in non-endemic countries. No such cases have been reported so far from India. A research shows waning of immunity from smallpox vaccination could be one of the reasons behind the comeback of monkeypox virus. Globally, it is more than 40-50 years since mass vaccination drives were stopped. "The current available evidence suggests that those who have had close physical contact with someone with monkeypox while they are symptomatic are at highest risk," WHO said in its release on May 21. The UN health agency will provide more technical recommendations on the handling of the disease in the coming days.

WHAT IS MONKEYPOX?

According to the WHO, monkeypox is a viral zoonosis – a disease caused by a virus transmitted to humans from animals. It has symptoms similar to smallpox patients, but it is usually clinically less severe. The name 'monkeypox' originates from the initial discovery of the virus in monkeys in a Danish laboratory in 1958. The first human case was identified in a child in the Democratic Republic of the Congo in 1970. However, in 1980, it was declared as 'eradicated worldwide'. The virus is transmitted from one person to another by close contact through lesions, body fluids, respiratory droplets and contaminated materials such as bedding. The incubation period of monkeypox is usually 6 to 13 days, but can range from 5 to 21 days, WHO says.

STATUS IN INDIA

No such case has been reported in India. "The world is in the third year of the pandemic and the WHO has already predicted an outbreak of another virus in form of monkeypox. Good news is there has not been a single case reported of monkeypox virus in India as of now," said Dr Sandeep Bhatnagar, senior director and head of department, internal medicine, Paras JK Hospital. "There is no need to panic with the gradual rise and spread of the virus in other countries because the WHO is working with the affected countries to provide guidance on how to manage the infection. Till then, we need to keep a watch on our hygiene, immunity, sleep and maintaining hydration. Besides, we need to follow all precautions for Covid-19 such as social distancing, hand washing and masking." India, last week, stepped up surveillance at all international entry points for monkeypox infections. Officers have been asked to collect a 21-day travel history of passengers coming from nations with monkeypox cases and check their current health status. Union Health Minister Mansukh Mandaviya has directed the National Centre for Disease Control (NCDC) and the Indian Council of Medical Research (ICMR) to keep a close watch on the situation.

SMALLPOX VACCINES MAY WORK

Vaccines used during the smallpox eradication programme also provided protection against monkeypox. Otherwise, Denmark-based biotechnology company Bavarian Nordic has a vaccine called Jynneos approved for both the monkeypox virus and smallpox. In 2015, the Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA) approved the use of Jynneos as a vaccine for the rare virus. It is the only FDA-approved non-replicating smallpox and monkeypox vaccine. The company, according to the reports in global media, has secured a contract with an unnamed European country to supply its smallpox vaccine. However, America's top healthcare agency CDC has said that because monkeypox virus is closely related to the variola virus that causes smallpox, smallpox vaccines can also protect against monkeypox. Also, WHO said it is convening experts to discuss recommendations on vaccination. While India declared itself free of smallpox in 1979 after it undertook the extensive immunisation programmes, "the manufacturing can be re-started if the need arises", according to an industry official. (Source: NDTV)

Pfizer to Offer All Its Drugs Not-For-Profit To 45 Lower-Income Countries



Pfizer has announced it is to supply all its current and future patent-protected medicines and vaccines on a not-for-profit basis to 45 lower-income countries and is talking to other big drugmakers about similar steps. Announcing an “accord for a healthier world” at the World Economic Forum (WEF) annual meeting in Davos, the New York-based pharma firm pledged to provide all its products that are available in the US and Europe on a cost basis to 1.2 billion people in all 27 low-income countries such as Afghanistan and Ethiopia, plus 18 lower-middle-income countries including Ghana.

Pfizer has previously been accused of “pandemic profiteering” over the huge profits it has generated from coronavirus-related medicines over the past two years. It made almost \$15bn in sales in only three months from the Covid-19 vaccine it developed with Germany’s BioNTech and its new Covid pill for people who are at high risk of severe disease. “We are living in a time where science is increasingly demonstrating the ability to take on the world’s most devastating diseases,” Albert Bourla, Pfizer’s chief executive, said. “Unfortunately, there exists a tremendous health equity gap in our world that determines which of us can use these innovations and which of us cannot.” He told the WEF gathering in Switzerland: “I’m certain that the other pharmaceutical companies will follow. I’ve spoken to several of the CEOs and they want to be part of it. So medicines will be available I hope but it’s not going to be enough. We need to also work on the ground for diagnosis, treatments, and for that we need the help of WHO, Doctors without Borders and many other organisations.”

Jayasree Iyer, the chief executive of the Netherlands-based independent group Access to Medicine Foundation, said: “Based on our research, Pfizer’s commitment covers the right products by looking across the entire portfolio of patented products, the right countries by focusing on the poorest countries and the right partnerships by working with governments and international health organisations. “But we need to see how it pans out; the commitment needs to move us forward, from vaccine to vaccination, from medicine to treatment.” Elsewhere in Davos on Wednesday, a nurse from Liberia, George Poe Williams, staged a “clap for pharma profits” in protest at the profits made by drugmakers, some of which, including Pfizer, refuse to waive patents on Covid-19 vaccines. Williams said: “If I wanted to earn what Pfizer CEO Albert Bourla made last year, I would have to work every single day until 6100 AD. But what makes me really furious is that Bourla and many of his billionaire buddies here at WEF are doing all they can to block our demands for a patent waiver – just so they can make even more money.”

Bourla received \$24m in pay, perks and stock options for 2021 when the company’s full-year profit more than doubled, up 15% on 2020. Pfizer has said others would struggle to produce its mRNA vaccine – one of only two on the market – as it involves more than 280 materials from 86 suppliers in 19 countries. Moderna, which makes the other mRNA Covid jab, has promised not to enforce its coronavirus vaccine patents in some low- and middle-income countries. Under its new initiative, Pfizer is working closely with healthcare officials in Rwanda, Ghana, Malawi, Senegal and Uganda to provide expertise to support diagnosis, education and training of doctors and nurses and improvements to infrastructure to ensure all medicines and vaccines can reach those in need. Lessons learned from these five countries will then be applied to the rollout to the other 40 countries. Appearing alongside Bourla was Paul Kagame, the president of Rwanda, who said: “Rapid and affordable access to the most advanced medicines and vaccines is the cornerstone of global health equity. Pfizer’s commitment under the accord sets a new standard which we hope to see emulated by others.”

Lazarus Chakwera, the president of Malawi, called it a “historic and unprecedented accord” that brings together decision-makers from governments, the private sector and civil society. “It is not a handout but a real partnership,” he said. Pfizer is working with the Bill & Melinda Gates Foundation to develop new products such as vaccines to prevent the deadly Group B streptococcus, and for respiratory syncytial virus, which can be serious for children and older people. Also on the panel, Bill Gates said: “This type of accord is a very good model, it’s going to get medicines out ... Global health equity has made progress; we saw with Covid, we’re not there.”

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Government Hopes This City Will Break China's Grip On Pharma Industry



India "Pharma City" In Hyderabad: Some Indian companies have largely pulled away from making pharmaceutical ingredients in recent years as the Chinese API industry gained an inherent advantage. On the edge of Hyderabad in southern India, a vast patch of arid shrub-land the size of about 14,000 football fields is becoming a testing ground for a model that could help wean the world off its dependence on Chinese drug ingredients. This empty site of the Hyderabad Pharma City, marked out by scuffed sign posts and a rubble-strewn access road is expected to attract about \$8.4 billion and employ 560,000 people in hundreds of sprawling plants. Within two years once land is allotted, officials say, it will be rolling out vital raw ingredients for medicines like penicillin, ibuprofen and anti-malarials that make their way around the world. At the heart of the endeavor is

India's race to wrest control from China, which supplies almost 70% of the active pharmaceutical ingredients -- or the bread-and-butter chemicals -- that go into the medicines produced by the Indian pharmaceutical industry. It's a vast project that shows how governments are growing increasingly concerned about China's stranglehold over drug supplies -- as well as the challenges they face in loosening it. India's ability to secure not just its own drug supply but that of Africa, the Americas and Europe is at stake, since it supplies most of the generics sold in American pharmacies and hundreds of countries globally. India's reliance on China to keep raw material supply going is increasingly fraught, because the two countries often engage in skirmishes along the border and China has in recent years increasingly used its trade advantages against other countries during political disagreements. Prime Minister Narendra Modi has eagerly promoted his country as the "pharmacy of the world," but the glaring dependence of India's \$42 billion drug manufacturing industry -- much of which is headquartered in Hyderabad -- was exposed at the start of the Covid-19 pandemic. In early 2020, China locked down Hubei province, its own medicine manufacturing heartland, as the coronavirus spread outside of Wuhan. That caused missed shipments and shortages, with API prices surging as much as 100% in India and around the world.

"Supply chains got completely disrupted, China shut down," recalls Samina Hamied, the vice president of Cipla Ltd., one of India's largest drugmakers. "We had to deal with distorted supply chains on one end, and, obviously, on the ground craziness on the other." China accounted for 28% of the \$236.7 billion global API market in 2018, according to data compiled by Dongguan Securities Co. China hasn't ever halted drug supplies for political reasons, and kept them flowing even at the height of the trade war with the U.S. Yet, Western countries have grown increasingly uneasy over the fact that supply of their commonly used medications are reliant on a major geopolitical rival amid an ever-widening ideological rift.

U.S. lawmakers have recently introduced a batch of legislation to protect the country's pharmaceutical supply chains from China. "It's time to bolster onshore manufacturing of pharmaceuticals to ensure Americans never have to rely on China for lifesaving medicine," Senator Tom Cotton, an Arkansas Republican, said last week. Multiple Indian efforts to redress the South Asian country's reliance have sprouted, from the Hyderabad facility which is an effort of the state government, to a plan by PM Modi's administration for three parks. The state government's plan is the farthest along with 19,000 acres already acquired. Companies including Sun Pharmaceutical Industries Ltd., Dr. Reddy's Laboratories Ltd. and Zydus Lifesciences Ltd. have already said they will consider building plants there, and officials say about 450 Indian and international companies have expressed interest. Hyderabad is a sprawling metropolis spread across hills and picturesque lakes, and has been at the forefront of attempts to transform the country into a scientific research hub. The planned Pharma City, set about 22 miles south of Hyderabad's airport, will focus on bulk drugs and promises to ram through India's treacle-like web of red tape around environmental clearance and land-acquisition by providing drugmakers plots with ready-made approvals for the heavily polluting industry.

The man leading the initiative is Shakthi Nagappan, a slight, bespectacled 36-year-old government employee. Working out of an administrative office in central Hyderabad, Nagappan spouts the jargon of a start-up founder. The walls of his side office are decorated with inspirational quotes and canvas-print portraits of figures like Barack Obama and Elon Musk. Over cups of sugary tea, Shakthi Nagappan sketches out how he wants the massive project to emulate the success of Genome Valley, a research and development cluster set up two decades ago to the north of Hyderabad, which now houses labs for companies including Novartis AG. Shakthi Nagappan says the upcoming Pharma City to the south will compete with China's ability to drive down costs. The main idea is to help India pharma companies cut costs and become more competitive on price by providing them with land where environmental clearances are sorted, waste disposal facilities are already built and other infrastructure is ready. "When we started planning Pharma City, we started looking at various regions, including China. What makes China more attractive?" he says, citing various advantages from cheaper capital and infrastructure, along with the ability to stream-line approvals. "Within Pharma City we've brought in elements that can bring down capital and operating costs for the industries in a range of anywhere between 25% and 30%." Missed Deadlines Some Indian companies have largely pulled away from making pharmaceutical ingredients in recent years as the Chinese API industry gained an inherent advantage because of economies of scale and support from its government in the form of financial incentives.

But after the Hubei shutdown of 2020, the PM Modi government drew up plans to allot land for three major bulk drug parks. It also sought to provide more than \$1 billion in funding to encourage companies to manufacture ingredients domestically, part of PM Modi's nationalistic "Make in India" campaign that now looks to capitalize on firms searching for an alternative to China. Still, progress has been slow on both the state and national fronts, mired in tender processes and missed deadlines. The Pharma City plan was announced in 2015, and it will supply finished products only some years down the line. There's also a shortage of applicants wanting to make a number of "critical" active pharma ingredients, the kind that China churns out. "The chemical industry cannot be conquered in a year, you need decades of investment to do that," says Satyanarayana Chava, the head of Laurus Labs Ltd., one of India's biggest makers of API. "The entire world's dependence on China will continue." Some delays are indicative of the wider challenges around getting infrastructure projects done at speed in India. It will likely take the country a number of decades to reach PM Modi's goal of self-reliance, says one Western diplomat. Right now it's easier for Indian pharma firms exporting to Western markets to buy ingredients from China that have already been approved by foreign regulators, rather than spend millions of dollars running clinical trials, they added. (Source: NDTV)

Developing World Should Reap Benefits of New Monkeypox Research, Experts Urge



As cases of monkeypox in wealthier Western nations spark a flurry of scientific research to combat the outbreak, scientists are urging the world to make sure lower-income nations benefit from the fruits of that labor as well.

More than 550 confirmed cases of monkeypox have been reported by at least 30 countries outside of Africa, where the virus is typically found, according to the World Health Organization (WHO).

Scientists are flummoxed as to what is driving the current crop of cases - mostly identified in Europe so far - given they are predominantly not linked to travel to Africa. Countries in Africa have experienced sporadic monkeypox outbreaks since the virus was first discovered in humans in 1970.

In Nigeria, there has been an ongoing outbreak since 2017, which so far has resulted in 600 suspected and nearly 250 confirmed cases, Ifedayo Adetifa, the director general of the Nigeria Centre for Disease Control said at a monkeypox briefing convened by the WHO on Thursday.

The biopharmaceutical industry has in recent weeks made commitments deliver vaccines, treatments and develop more diagnostics to address monkeypox as the viral disease spreads in many parts of the developed world. "We do have to recognize that this is not a new disease.

This is not something that we just learned existed in the world," said Daniel Bausch, senior director, emerging threats and global health security at FIND, the global alliance for diagnostics.

We have all this biotech interest now because this is happening in high income countries. But how do we make sure that...those scientific gains really get down to the populations that need this more consistently in sub Saharan Africa?" he asked.

The commentary comes as concern grows about pathogens that typically circulate in animals spilling into humans. Animals and humans are changing their behaviour, including food-seeking habits to adjust to rapidly changing weather conditions linked to climate change, the WHO warned on Wednesday.

This suggests that pathogens that were once generally limited to certain geographies are more likely to spread further, and potentially jump back and forth between humans and susceptible animal species. On Thursday, some health experts raised concerns monkeypox and other infectious diseases could be transmitted to animals via human medical waste.

They cautioned that constant vigilance and global cooperation was imperative to thwarting the current monkeypox outbreak. It is important to limit the number of spillover events, said William Karesh, president of the World Organization for Animal Health working group on wildlife. "If we only focus on treatments," he said, "we will probably be meeting again in two years time about a new disease." (Source: Reuters)

Japan Study Shows Women More Likely to Get Skin Rash From Moderna Shot



TOKYO, A study in Japan found that women were significantly more likely than men to develop rash-like side effects after a first dose of Moderna Inc's [\(MRNA.O\)](#) COVID-19 vaccine. The study of 5,893 participants between May and November last year showed that 22.4% of women developed delayed skin reaction.

the first shot, compared to 5.1% of men. The symptoms were mild and not considered a contraindication of the mRNA-based vaccine, according to the June 1 report in the Journal of the American Medical Association.

Delayed skin reactions, happening on or after six days from the shot, have been also reported as a rare adverse event in the United States and Europe, according to the authors from Tokyo's Self-Defense Forces Central Hospital.

But the incidences appear to be higher in Japan, they wrote, perhaps because of a higher awareness of such symptoms in the country. The greater likelihood among women may be due to differences in weight as well as hormonal and environmental factors, they said. Moderna representatives in the United States and Japan did not immediately respond to a request for comment.(Source: Reuters)