Covid probe

WHO must provide definitive answers (The Tribune: 202102012)


Even more than a year after the outbreak of the Covid-19 pandemic, which has claimed over 23 lakh lives so far across the globe, we are none the wiser about the origins of the novel coronavirus. Wrapping up its nearly four-week-long visit to Wuhan, a team of experts from the World Health Organisation (WHO) has dismissed as ‘unlikely’ the theory that the virus leaked from a lab in the Chinese city where the first cases were detected. According to the team members, the virus was ‘most likely’ to have been transmitted from an animal to humans. The findings, though tentative, seem to buttress the Chinese government’s protestations of innocence. Repeatedly accused by the US and other countries of covering up and not sharing information about the virus with the world, China has not only been denying any wrongdoing but also claiming that the virus may have originated in Europe or the US.

It was only last month that the WHO team, assisted by Chinese scientists, managed to land in Wuhan after several months of negotiations. The inordinate delay in initiating the probe rightly drew flak from the international community. America, the country worst affected by the pandemic, has announced to scrutinise the WHO report, while avoiding any conclusive comment on whether the experts received ‘full cooperation’ from China or not.

Transparency is a prerequisite for this investigation as the entire world is looking to the WHO to provide definitive answers. China’s role has apparently been dubious in more ways than one. India, which has lost more than 1.55 lakh of its citizens to Covid-19, is also upset about Beijing’s recent efforts to belittle New Delhi’s vaccine diplomacy, besides the supply of allegedly faulty rapid testing kits and substandard PPE (personal protective equipment) last year. With the pandemic far from over, China’s culpability or otherwise must be established beyond any doubt, and that too at the earliest. Getting to the bottom of the matter is also critical to help humankind prepare itself better for — or even prevent — such biological catastrophes.
Britain’s coronavirus variant

Britain’s coronavirus variant a concern, ‘likely to sweep the world’, says scientist (The Tribune: 202102012)

The UK genetic chief says the UK variant mutation is a worry; some mutations may undermine vaccines

Britain’s coronavirus variant a concern, ‘likely to sweep the world’, says scientist

People queue to receive the COVID-19 vaccine outside a closed down Debenhams store that is being used as a vaccination centre in Folkestone, Kent, Britain. REUTERS file

The coronavirus variant first found in the British region of Kent is a concern because it could undermine the protection given by vaccines against developing COVID-19, the head of the UK’s genetic surveillance programme said.

She also said the variant was dominant in the country and was likely “to sweep the world, in all probabiity”.

The coronavirus has killed 2.35 million people and turned normal life upside down for billions but a few new worrying variants out of thousands have raised fears that vaccines will need to be tweaked and people may require booster shots.

Sharon Peacock, director of the COVID-19 Genomics UK consortium, said vaccines were so far effective against the variants in the United Kingdom but that mutations could potentially undermine the shots.

“What’s concerning about this is that the 1.1.7. variant that we have had circulating for some weeks and months, is beginning to mutate again and get new mutations which could affect the way that we handle the virus in terms of immunity and effectiveness of vaccines,” Peacock told the BBC.

“It’s concerning that the 1.1.7., which is more transmissible, which has swept the country, is now mutating to have this new mutation that could threaten vaccination,” she added.

That new mutation, first identified in Bristol in southwest England, has been designated a “Variant of Concern”, by the New and Emerging Respiratory Virus Threats Advisory Group.

There are so far 21 cases of that variant which has E484K mutation, which occurs on the spike protein of the virus, the same change as has been seen in the South African and Brazilian variants.
“One has to be a realist that this particular mutation has arisen in our kind of communal garden lineage now, at least five times — five separate times. And so this is going to keep popping up,” Peacock said.

There are three major known variants that are worrying scientists: The South African variant, known by scientists as 20I/501Y.V2 or B.1.351; the so-called UK or Kent variant, known as 20I/501Y.V1 or B.1.1.7; and the Brazilian variant known as P.1.

The British variant, which is more infectious but not necessarily more deadly than others, was likely “to sweep the world”, Peacock said.

“Once we get on top of (the virus) or it mutates itself out of being virulent — causing disease — then we can stop worrying about it. But I think, looking in the future, we’re going to be doing this for years. We’re still going to be doing this 10 years down the line, in my view,” Peacock added.

The two COVID-19 vaccines developed by Pfizer/BioNTech and AstraZeneca protect against the main British variant. Reuters

**SARS-CoV-2**

**Origin and spread: On the source of SARS-CoV-2 (The Hindu: 2021020212)**


Identifying the source of SARS-CoV-2 is important for containing fresh outbreaks

By concluding that a virus leak from a laboratory in China’s Wuhan, where the SARS-CoV-2 virus first emerged, is “extremely unlikely” and did not require further study, a 17-member WHO team and its Chinese counterparts have put to rest conspiracy theories that emerged early during the pandemic. While many scientists had dismissed the lab-origin theory, in mid-February 2020, a group of 27 prominent scientists from outside China “strongly condemned conspiracy theories” in a letter published in The Lancet. The group said scientists who had analysed virus genome sequence data shared by China and multiple countries could “overwhelmingly conclude” that SARS-CoV-2, like emerging pathogens, had originated in wildlife. Even a year since the letter and after nearly half-a-million genome submissions to a public database, scientists have not found any sign of direct human influence. The WHO team’s investigation now strongly suggests virus origin to a natural reservoir in bats, but unlikely to have been in Wuhan, which is miles from any natural bat habitat. The virus jumping directly from bats to humans is highly unlikely and initial investigation too suggests the role of an intermediary host species. The team has not been able to confirm the intermediary host.
While early data suggest that the virus could have been circulating in Wuhan for weeks before it was identified in the Chinese city, it asserts that there is no evidence of large outbreaks in Wuhan prior to December 2019. Chinese media reported in early 2020 based on unpublished government data of a Hubei resident infected with the novel virus in mid-November. Also, in a report in The New England Journal of Medicine, scientists from the China CDC found evidence of human-to-human transmission as early as mid-December 2019, which again suggests virus circulation weeks before it was identified in Wuhan. China officially confirmed human-to-human transmission only in mid-January. While the possibility of transmission via frozen food, a theory embraced by Chinese officials, has not been ruled out, the possibility of such a route appears unlikely as instances of live viruses on packaging have been “rare and isolated”. The WHO visit is just the beginning of a long endeavour to uncover the origin of the virus. It will succeed only when scientific investigation is allowed to follow its course without being politicised. As in the case of the SARS outbreak in the 2000s, China again failed to be truly transparent during the SARS-CoV-2 outbreak. It can partially undo the damage done by now being more open and cooperative so that future outbreaks of related coronaviruses can be identified and contained early, if not prevented.

Food and Nutritionn

Cutting Trans fat: On healthier food (The Hindu: 202102012)

https://www.thehindu.com/opinion/editorial/cutting-trans-fat-the-hindu-editorial-on-healthier-food/article33795606.ece

Healthier substitutes without any change in the taste or cost of food are now available

Come January 1, 2022, India will join a select group of countries limiting industrial trans fat to 2% by mass of the total oils/fats present in the product. India would thus be achieving the WHO target a year in advance. In mid-2016, the trans fat content limit was halved from 10% to 5%, and in December 2020, the Food Safety and Standards Authority of India (FSSAI) capped it to 3% by 2021. While trans fat is naturally present in red meat and dairy products, the focus is on restricting the industrially produced trans fat used solely to prolong the shelf life of products at less cost. While the government’s notification specifically mentions edible oils and fats that are used as ingredients, it also applies to emulsions such as margarines. Targeting these ingredients would in effect result in reducing the trans fat content to 2% in all food items as these two are the major sources of industrial trans fat. Also, even when the fat/oil contains less than 2% trans fat, repeated use at high temperature can increase the trans fat content. The focus on cutting down trans fat content in food arises from its proclivity to negatively alter the lipoprotein cholesterol profile by increasing the level of bad cholesterol (LDL) while decreasing the level of HDL or good cholesterol. These changes in the lipoprotein cholesterol profile increase the risk of cardiovascular diseases.
In 2004, when Denmark became the first country to limit industrially produced trans fat content in all foods to 2% of fats and oils, it faced resistance from much of Europe, including the European Commission. However, many countries have since adopted similar restrictions themselves. In fact, in April 2019, the European Union (EU) adopted a new regulation — from April 2021 — to limit the amount of industrially produced trans fat to 2% in all foods sold within the EU. According to a 2020 report of WHO, 32 countries already have some form of mandatory limits on trans fat. The benefits of reducing trans fat can become quickly apparent, as seen in Denmark; three years after the cap came into effect, it saw a reduction of about 14 deaths attributable to cardiovascular diseases per 1,00,000 population. It is now well known that trans fat can be completely eliminated and replaced with healthier substitutes without any change in the food taste or cost. According to WHO, a dozen large multinational food companies have already committed to eliminate industrially produced trans fat from all their products by 2023. With a year’s notice, it should be possible for the multinational food companies to redouble their efforts to meet the FSSAI standard, while Indian companies that have earlier been able to cut the level of trans fat as in the FSSAI limit, should have no excuse not to meet the current capping.

Vaccines (The Asiann Age: 202102012)

SC junks plea on preventing sale of fake Covid vaccines

AGE CORRESPONDENT
NEW DELHI, FEB. 11

The Supreme Court, on Thursday, threw out a petition seeking a direction to the Centre to prevent the sale of fake coronavirus vaccines in the country by framing “strict” guidelines on their distribution to the public.

A bench comprising Chief Justice Sharad A. Bobde, Justice A.S. Bopanna, and Justice V. Ramasubramanian, told the PIL petitioner, lawyer Vishal Tiwari, that it cannot pass general directions though it understood the “motivation” behind the PIL. “We understand your motivation, but you file a concrete case. We cannot pass general directions. We are not a legislature,” Chief Justice Bobde told Mr Tiwari while rejecting his plea.

The PIL petitioner lawyer referred to a global alert by the Interpol to the law enforcement agencies of 192 member countries to be prepared for the organised crime networks targeting Covid vaccines, both physically and online. Mr Tiwari had sought issuance of strict guidelines by the Centre “to prevent the chances of fake and counterfeit corona vaccine selling, circulating, and advertising by any organisation, company, or online apps.”

His petition had also sought directions to the government agencies to run an awareness programme for the safety of the citizens against the dangers of the fake corona vaccine.
COVID-19 vaccine and immunity

COVID-19 vaccine and immunity: A doctor explains the connection (The Indian Express: 202102012)


Certain concerns about vaccine safety relate to how they interact with the immune system, or even how the immune system functions in different situations


Everyone wants to strengthen their immune system so that they can ward off diseases, or fight them, effectively. In the ongoing pandemic, the one question that many people have asked is about the efficacy of the COVID-19 vaccine, and if one actually needs it. Dr Sandeep Patil, chief intensivist at Fortis Hospital Kalyan, explains the process of vaccine-induced immunity and says that vaccination has become a “critical addition” to our defenses against COVID-19.

“This much is certain. But our ability to achieve vaccination-induced herd immunity is still unknown. That shouldn’t stop us from trying. It also shouldn’t stop us from practising and promoting safety guidelines that can actually curb the spread of the disease,” he tells indianexpress.com.

“If COVID-19 is a raging forest fire, then vaccines are the firefighters trying to quell it. We have to continue with the preventive measures — social distancing, mask wearing, hand hygiene, and rapid testing.”

Knee-replacement surgery (The Indian Express: 202102012)


When must a person undergo knee-replacement surgery? A doctor answers

Total Knee Replacement or TKR is an operation for the end stage severe arthritis of the knees, says the doctor
knee health, knee surgery, knee-replacement surgery, when should one undergo knee-replacement surgery, what is knee-replacement surgery, health, indian express news

The surgery must be done earlier in patients with one good knee, so that it does not get affected because of the bad one. (Photo: Getty/Thinkstock)

When it comes to the body, most people take it for granted and deliberately push their doctor appointments, while knowing fully well they need the check-up. When this happens, an already-existing health issue may aggravate, causing them more inconvenience. Among other things, bone health becomes extremely vital after a certain age, and doctors advise their patients to get themselves checked.

According to a study published in the Journal of Bone and Joint Surgery, a vast majority of patients — who would benefit from knee replacement — are taking too long to have a surgery, to the detriment of their mobility and overall health, points out Dr Kaushal Malhan, director orthopedic surgery, Fortis Hospital, Mulund. “The study also showed delayed knee surgery has negative effects on post-operative recovery. During the COVID-19 pandemic, many patients delayed addressing their joint and bone problems; this proved to be even more detrimental,” he tells indianexpress.com.

Total Knee Replacement

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Total Knee Replacement or TKR is an operation for the end stage severe arthritis of the knees. “It has the ability to correct not only the worn out surfaces, but also the mechanics, and hence providing a stable well-aligned joint. In spite of advancements in the procedure, some people hold on to outdated notions of its risks and outcomes, and delay it for as long as they can, which can potentially impact the post-operation function.

“The correct timing of surgery is essential to optimise results of the operation. So, the question that should be asked is: ‘Is it safe to delay knee replacement surgery, and for how long should one wait before committing to it?’”

ALSO READ | Five essential asanas for people recovering from breast cancer
What is knee arthritis?

Dr Malhan explains that it is a progressive disorder. The surface of the joint keeps getting abraded and bone loss occurs. This results in deformity. There is abnormal stress on the ligaments, too, which will gradually stretch out and lead to instability of the joint.

“A good primary TKR with healthy bone stock, stable ligaments and satisfactory joint alignment promises long-term success. Excessive delay may compromise the procedure affecting longevity of implants. There also may be risks in getting the surgery done too early,” he warns.

Vaccination (Hindustan: 202102012)

https://epaper.livehindustan.com/imageview_632472_84388044_4_1_12-02-2021_6_i_1_sf.html
15 हजार से ज्यादा कर्मियों को लगा कोरोना का टीका

टीकाकरण का 19वां दिन

कोविड के 142 नए मामले, दो की मौत

दिल्ली में गुरुवार शाम तक दिल्ली में केवल 1051 ही कोरोना संक्रमण मरीज रह गए हैं। दिल्ली के स्वास्थ्य विभाग के अनुसार गुरुवार को दिल्ली में 142 नए मामले सामने आए। वहीं, 135 मरीजों को छुट्टी दी गईं, जबकि 2 मरीजों ने कोरोना से दम तोड़ दिया।

हुआ। 184 केंद्रों पर कोविशील्ड और 69 पर कोवाक्सिन की खुराक दी गई।

इस दौरान 25,300 लोगों में से 15807 ने टीका लगवाया। लक्ष्य के हिसाब से 63 फीसदी कर्मचारियों ने खुराक ली।

नई दिल्ली | वरिष्ठ संवाददाता

राजधानी में गुरुवार को टीकाकरण अभियान का 19वां दिन था। इस दौरान रिकॉर्ड 15807 कर्मचारियों को टीका लगाया गया। इनमें से 12 को टीका लगाने के बाद हल्के बुखार और दर्द की शिकायत हुई।

स्वास्थ्य विभाग के मुताबिक, गुरुवार को 253 केंद्रों पर टीकाकरण
Addison's disease

Study suggests gene variants increase risk of Addison's disease (New Kerala: 202102012)


According to the largest genetic study to date on patients with Addison's disease --variants of nine genes increase the risk of developing Addison's disease, a rare disease in which the immune system attacks the adrenal glands.

The findings help increase knowledge about what causes the disease. The study was conducted by researchers at Karolinska Institutet, Sweden, and Bergen University, Norway, and is published in the journal Nature Communications.

"By studying the single largest collection of samples from patients with Addison's disease, we've been able to carry out the first genetic study of the disease that spans the entire human genome," said Daniel Eriksson, doctor and researcher in the experimental endocrinology group at the Department of Medicine, Solna, Karolinska Institutet, who has led the study with doctoral student Maribel Aranda and docent Sophie Bensing at the Swedish Addison Registry.

"It shows that variants of nine genes, many of which are central to our immune system, induce a higher risk of developing the disease," added Eriksson.

In Sweden, roughly one in 100,000 people develop Addison's disease every year. The disease is autoimmune, meaning the immune system attacks organs and tissues, in this case, the cortex of the adrenal glands, which secretes essential hormones such as cortisol and aldosterone. Given that disrupted production of these hormones can be fatal, a swift diagnosis is life-saving.

Why some people develop Addison's disease is unknown, and since the disease is rare, it has been difficult to conduct large-scale genetic studies.

For the current study, the researchers recruited a large number of patients from the Swedish and Norwegian Addison registries. DNA was isolated from more than 1,200 people with autoimmune Addison's disease and more than 4,000 healthy geographically matched individuals as the control group. They then analysed almost 7 million gene variants and found several that were significantly more common in people with Addison's disease.

Several of these variants have previously been associated with autoimmune diseases, but in one gene, the so-called AIRE gene, these variants could be specifically linked to Addison's disease. The AIRE gene is essential to the ability of T cells, an important type of blood cell in the immune system, to learn to tolerate endogenous proteins.

Compared with healthy controls, the AIRE gene, in people with Addison's disease, more often produces an AIRE protein with an additional cysteine, an amino acid that can affect the protein's function, structure, and ability to bind zinc ions.
"Many autoimmune diseases have several features in common when it comes to genetic predispositions that govern the function of the immune system, but in this study we also identified distinctive genetic associations that are unique to Addison's disease," Eriksson said.

"This is a step forward in our understanding of its pathogenesis," concluded Eriksson. (ANI/5 hours ago/14O139O63O245)

**Adolescent mental health**

**Study reveals early behavioural problems predict adolescent mental health difficulties (New Kerala: 202102012)**


A substantial proportion of adolescent mental health and behavioural difficulties can be predicted years before they arise, a new study indicates.

The research, by academics at the University of Cambridge and Royal Holloway, University of London, shows that children who experience certain behavioural challenges, like hyperactivity and anxiety, are more likely to go on to develop poor mental health in adolescence, such as emotional difficulties.

It also finds that children with behavioural difficulties are more likely to experience problems as adolescents if they come from less affluent, or disadvantaged backgrounds.

Levels of adolescent behavioural and mental health difficulties are rising. As healthcare systems worldwide struggle to cope with increasing demand, there is an urgent need to predict which adolescents are most likely to need additional support as early as possible.

The researchers used historical data from more than 6,700 people, collected both when they were 10 and 16 years old. For the first time, this allowed them to plot previously-undocumented connections between a wide range of childhood problems, such as hyperactivity and anxiety, and related but different behavioural difficulties that arise in adolescence.

They combined this information with details about the participants' social and economic backgrounds. Children from wealthier or better-resourced settings were more likely to overcome behavioural problems by the age of 16. Conversely, those from poorer backgrounds were more likely to transition into different difficulties during their teens.

Dr Duncan Astle, from the MRC Cognition and Brain Sciences Unit, University of Cambridge, said "At present, adolescent behaviour and mental health difficulties are only treated once they become problematic, which is one of the main reasons why mental health services are overwhelmed. Our work shows how we might begin to develop a way to predict the difficulties of some - perhaps many - young people and intervene sooner."
Professor Anna Vignoles, who co-authored the research while based at the Faculty of Education, University of Cambridge, said "This type of information is essential if we want a more proactive, preventative model of handling behavioural and mental health problems in young people. The more significant predictors we have, the better we can target support."

The historical data came from the British Cohort Study - an ongoing project which is following the lives of the same group of people born during one week in April 1970. It contains details about behavioural difficulties the participants displayed both at 10 and 16 years old, as well as information about their socio-economic circumstances, such as family income, and their parents' level of education. Few other sources offer such rich data on that scale, which is essential to making a robust assessment of how behavioural problems may change during a person's lifetime.

The researchers described each participant in the study at both 10 and 16 using six broad categories of potential behavioural problems: conduct problems, hyperactivity and impulsivity, inattention, emotional control problems, anxiety, and motor problems.

Next, they used a technique called hybrid hierarchical clustering which gathered together groups of similar profiles in a manner designed to offer the most meaningful interpretation of the data possible. In many cases, children fell into the 'no problems' group; some displayed one specific problem; while others presented combined patterns of difficulties (for example, one group of children exhibited a similar pattern of motor, hyperactivity and emotional problems combined).

The profile groups which emerged were very different across the two developmental stages. Hyperactivity, motor control and conduct issues were prominent in childhood; while adolescents were more likely to display problems related to emotional control, anxiety and inattention.

Dr Joe Bathelt, Lecturer at Royal Holloway, University of London, said "We often assume that behavioural problems stay the same across development; however, our results show that the presentation can change substantially between childhood and adolescence."

The researchers then looked for cases where a larger-than-expected number of children had transitioned from one specific sub-group at age 10 to another aged 16.

Of those who experienced behavioural problems as children, 55% exhibited no difficulties in adolescence. There were, however, several cases of a clear relationship between specific clusters of childhood and adolescent problems. The main patterns that emerged were:

- An unexpectedly high percentage of children with anxiety problems (22%) developed emotional problems during adolescence.
- Around a quarter (24%) of children with conduct problems displayed 'a constellation of problems' with anxiety, emotion and inattention in adolescence.
- Around 17% of children with combined emotion, motor and hyperactivity problems developed inattention problems in adolescence.
When this data was combined with the participants' demographic context the researchers also found that the 55% of children with behavioural problems who had no problems by their mid-teens typically came from wealthier families, with more educated parents who tended to have higher-prestige jobs. They also tended to have higher cognitive ability, pointing to better educational attainment.

In addition, the data showed clearly that children who developed emotional control problems during adolescence were significantly more likely to come from poorer backgrounds, typically had more siblings, and had parents with lower-prestige jobs. (ANI/17 hours ago/14O139O63O245)

**Smoking**

**England, Scotland may have observed more deaths due to obesity, excess body fat than smoking (New Kerala: 202102012)**


Obesity and excess body fat may have contributed to more deaths in England and Scotland than smoking since 2014, according to research.

The new research was published in the open access journal BMC Public Health.

Between 2003 and 2017 the percentage of deaths attributable to smoking is calculated to have decreased from 23.1% to 19.4% while deaths attributable to obesity and excess body fat are calculated to have increased from 17.9% to 23.1%. The authors estimate that deaths attributable to obesity and excess body fat overtook those attributable to smoking in 2014.

Jill Pell, at the University of Glasgow, United Kingdom, the corresponding author said "For several decades smoking has been a major target of public health interventions as it is a leading cause of avoidable deaths. As a result, the prevalence of smoking has fallen in the United Kingdom. At the same time the prevalence of obesity has increased. Our research indicates that, since 2014, obesity and excess body fat may have contributed to more deaths in England and Scotland than smoking."

To examine changes in the prevalence of smoking, obesity and excess body fat in adults, the authors analysed data collected between 2003 and 2017 as part of the Health Surveys for England, and Scottish Health Surveys, on 192,239 adults across England and Scotland, who were 50 years old on average.

Participants reported whether they had ever regularly smoked and their height and weight were measured by trained interviewers or nurses. The researchers combined their data with estimates of the risk of dying from smoking (17 studies) or obesity and excess body fat (198 studies), to
calculate the number of deaths that could be attributed to smoking and obesity and excess body fat.

The authors found that while obesity and excess body fat likely accounted for more deaths than smoking since 2006 among older adults, smoking is still likely to contribute to more deaths than obesity and excess body fat among younger adults. The authors suggest that among those aged 65 and over and 45-64, respectively, obesity and excess body fat contributed to 3.5% and 3.4% more estimated deaths than smoking in 2017, while smoking accounted for 2.4% more estimated deaths than obesity and excess body fat among those aged 16-44.

The analysis also suggests that gender influenced the contributions of smoking, obesity, and excess body fat to estimated deaths. Obesity and excess body fat may have accounted for 5.2% more deaths in 2017 than smoking in men, compared to 2.2% more deaths in women. Estimated deaths due to obesity and excess body fat are thought to have increased by 25.9% for women and 31% for men between 2003 and 2017, while deaths to due smoking are thought to have decreased by 18.1% for women and 14.9% for men.

Jill Pell said "The increase in estimated deaths due to obesity and excess body fat is likely to be due to their contributions to cancer and cardiovascular disease. Our findings suggest that the public health and policy interventions aimed at reducing the prevalence of smoking have been successful and that national strategies to address obesity and excess body fat, particularly focusing on middle-aged and older age groups and men, should be a public health priority."

The authors caution that the number of deaths attributed to smoking, obesity, and excess body fat in this study are estimates only and that factors influencing these deaths require further investigation. Future research could investigate the possible contributions of vaping, e-cigarette use, and passive smoking and whether the proportion of deaths due to obesity and excess body fat differs by ethnicity. (ANI/18 hours ago/14O139O63O245)