



DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY
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गर्भधारण

अब माता-पिता की स्वेब जांच से चल सकेगा पता बच्चा प्रीमैच्योर होगा या नहीं (Dainik Jagran: 20220303)

<https://www.livehindustan.com/lifestyle/story-now-the-swab-test-of-the-parents-can-reveal-whether-the-child-will-be-born-premature-or-not-5943022.html>

वैज्ञानिकों ने दावा किया है कि शिशुओं के जन्म के पूर्व ही माता-पिता की स्वेब (लार) से यह पता लगाया जा सकता है कि उनका बच्चा समय से पहले पैदा होगा या नहीं।

वॉशिंगटन स्टेट यूनिवर्सिटी के शोध में यह जानकारी सामने आई है। शोधकर्ताओं का कहना है परीक्षण के जरिए ऐसे गर्भधारण का पता लगाया जा सकता है, जिसमें बच्चे के समय से पहले जन्म लेने की संभावना अधिक होती।

इस परीक्षण के जरिए डॉक्टरों के लिए गर्भवती महिलाओं का इलाज समय पर करना संभव हो सकेगा। अध्ययन में वैज्ञानिकों ने बच्चे के पैदा होने के नौ दिन बाद लगभग 40 अभिभावकों के स्वेब की जांच की।

शिशुओं की मौत का एक बड़ा कारण-

गौरतलब है कि ब्रिटेन और अमेरिका में लगभग हर साल 10 हजार बच्चे समय से पहले जन्म लेते हैं यानि प्रीमेच्योर होते हैं। समय से पहले जन्म लेना नवजात शिशुओं में मृत्यु का एक प्रमुख कारण भी है।

ऐसे बच्चों में भविष्य में स्वास्थ्य संबंधी समस्याएं होने का खतरा भी अधिक होता है, जैसे कि विकलांग होना और दौरे पड़ना। लैब में नमूनों के विश्लेषण से पता चलता है कि समय से पहले बच्चों को जन्म देने वाली माताओं में 100 अनूठे बायोमार्कर थे, जिससे बच्चों के प्रीमेच्योर होने का पता चला।

पिता के स्वाब से भी विशिष्ट आणविक प्रक्रियाओं के बारे में जानकारी मिली, जो यह निर्धारित करती हैं कि बच्चों के जीन कैसे व्यवहार करते हैं।

लड़कियों में ज्यादा, लड़कों में ऐसी समस्या कम-

वहीं, अध्ययन के लेखक प्रोफेसर माइकल स्किनर ने बताया कि बायोमार्कर उन सभी माता-पिता में मौजूद थे, जिनके बच्चे जल्दी पैदा हुए थे। परिणामों से पता चलता है कि बायोमार्कर उन बच्चियों में भी देखे गए, जो समय से पहले पैदा हुई थीं, लेकिन लड़कों में ऐसा कम पाया गया।

शोधकर्ताओं ने कहा कि समय से पहले जन्म लेने वाले बच्चों के बारे में जानकारी मिलने से मानव स्वास्थ्य पर प्रतिकूल प्रभाव पड़ेगा। इससे अभिभावकों को समय रहते जानकारी मिलने से जल्द इलाज करना संभव हो सकेगा।

बायोमार्कर को लेकर अभी और शोध की जरूरत-

प्रोफेसर स्किनर ने कहा कि हालांकि हम बच्चों के जन्म लेने के समय को निर्धारित नहीं कर सकते, लेकिन हम समय रहते दवाओं के जरिए इसका इलाज कर सकते हैं, जिससे जन्म लेने वाले बच्चों में किसी तरह की समस्या न आए। शोधकर्ताओं ने कहा कि बायोमार्कर के संबंध में अभी और शोध करने की जरूरत होगी।

अध्ययन में कहा गया कि गर्भधारण के 37 सप्ताह से कम समय में जन्म लेने वाले बच्चे समय पूर्व (प्रीमेच्योर) कहे जाते हैं और ऐसा हर 10 में से एक बच्चे के साथ होता है। जो महिलाएं धूम्रपान करती हैं, मधुमेह से पीड़ित हैं या उनके गर्भ में जुड़वां बच्चे हैं तो ऐसे में समय से पहले जन्म की संभावनाएं बढ़ जाती हैं।

कोलेस्ट्रॉल लेवल

कोलेस्ट्रॉल लेवल कम होने पर बढ़ जाता है हैमरेजिक डेंगू और शॉक सिंड्रोम का खतरा ज्यादा (Hindustan: 20220303)

<https://www.livehindustan.com/lifestyle/story-the-risk-of-hemorrhagic-dengue-and-shock-syndrome-is-higher-if-the-cholesterol-level-is-low-in-body-5943108.html>

सामान्य से कम कोलेस्ट्रॉल वाले लोगों के लिए डेंगू ज्यादा खतरनाक है। ऐसे मरीजों को हैमरेजिक डेंगू और शॉक सिंड्रोम का खतरा ज्यादा होता है। डेंगू से मौत के ज्यादा मामले इन्हीं मरीजों के होते हैं।

कोलेस्ट्रॉल के सामान्य स्तर वाले मरीज इस खतरे की चपेट में कम आते हैं। कानपुर के जीएसवीएम मेडिकल कॉलेज की रिसर्च में यह तथ्य सामने आए हैं। रिसर्च पेपर इसी साल इंटरनेशनल जर्नल ऑफ एडवांस मेडिसिन में प्रकाशित हुआ है।

रिसर्च में खून में बायोकेमिकल मार्कर को आधार बनाया गया। रिसर्च में पाया गया कि जिन डेंगू मरीजों में एलडीएल और ट्राई ग्लिसराइड सामान्य स्तर से कम था, उनका सीपीके स्तर बढ़ा मिला। यह मार्कर हार्ट पर डेंगू संक्रमण के तगड़े असर को बताता है। रिसर्च टीम के सदस्य प्रो. विशाल गुप्ता का कहना है कि कोलेस्ट्रॉल की कमी से खून बनने की प्रक्रिया बाधित हुई।

ब्लड सेल टूटने लगे। मरीजों को बाहर से प्लेटलेट देने की जरूरत पड़ी। खून की 17 बायोकेमिकल मार्कर जांचें कराई गईं तो कोलेस्ट्रॉल की कमी प्रमुख रूप से सामने आई।

हैमरेजिक और शॉक सिंड्रोम वाले सभी मरीजों में समान रूप से यह कमी सामने आई। जिन्हें सामान्य डेंगू बुखार रहा, उन मरीजों में कोलेस्ट्रॉल का स्तर सामान्य पाया गया।

यह है कोलेस्ट्रॉल की भूमिका-

एलडीएल और ट्राई ग्लिसराइड बैड कोलेस्ट्रॉल हैं पर यह एक निश्चित मात्रा में शरीर के लिए जरूरी भी हैं। ट्राई ग्लिसराइड का सामान्य स्तर 100 से 150 के बीच है। जिन मरीजों में यह 25-30 मिला, वे रिस्क में आ गए।

इसी तरह एलडीएल का सामान्य स्तर 70 से 100 है। खतरे में आए ज्यादातर मरीजों में यह 50 से कम मिला। सामान्य स्तर पर दोनों कोलेस्ट्रॉल का काम शरीर में कोशिकाओं पर एक सुरक्षा कवच बनाना

है। इसकी कमी से खून की कोशिकाओं में कवच नहीं बन पाता। वह टूटने लगती हैं। इसीलिए प्लेटलेट की जरूरत पड़ती है।

यही कोलेस्ट्रॉल सामान्य स्तर से ज्यादा हो जाए तो यह दिल की धमनियों में जमा होने लगता है। यह स्थिति मरीज को हार्ट अटैक की ओर ले जाती है।

दो साल में मिले निष्कर्ष-

रिसर्च 2019 में शुरू हुई और 2021 में पूरी हुई। मेडिसिन विभाग के प्रो. विशाल गुप्ता मुख्य शोधकर्ता हैं। उनके साथ विभागाध्यक्ष प्रो. रिचा गिरि और प्रो. सौरभ अग्रवाल भी शामिल थे। शोधकर्ताओं का दावा है कि देश में डेंगू मरीजों पर पहली बार इन मार्कर के आधार पर रिसर्च हुई है।

प्रो. विशाल गुप्ता, प्रमुख शोधकर्ता के अनुसार, बायोकमिकल मार्कर के आधार पर रिसर्च से डेंगू इलाज को नई दिशा मिलेगी। डेंगू के गम्भीर मरीजों की अगर कोलेस्ट्रॉल, लिवर, किडनी प्रोफाइल जांचें पहले करा ली जाएं तो उनकी गम्भीरता का अंदाजा लग सकता है। विशेषज्ञ अलर्ट हो सकते हैं।

सुनने की क्षमता

ये आदतें कर सकती हैं आपके सुनने की क्षमता को प्रभावित (Dainik Jagran: 20220303)

<https://www.jagran.com/lifestyle/health-hearing-loss-these-habits-can-weaken-your-hearing-22513158.html>

आंख नाक जीभ त्वचा के साथ कान हमारी पांच जरूरी ज्ञानेन्द्रियों में से एक है। किसी भी एक ज्ञानेन्द्रियों के खराब या कमजोर होने से हमारी लाइफ काफी हद तक प्रभावित हो सकती है। विश्व श्रवण दिवस के अवसर पर जानेंगे क्या चीजें कान को पहुंचाती हैं नुकसान।

नई दिल्ली, लाइफस्टाइल डेस्क। सुनने की शक्ति एक ऐसी शक्ति है जिसके माध्यम से दुनिया से हमारा संपर्क बनता है। तो इसका कमजोर होना या न होना काफी हद तक हमारी जिंदगी को प्रभावित

कर सकता है। तो आज विश्व श्रवण दिवस (World Hearing Day) के मौके पर जानेंगे कुछ ऐसी बातों और आदतों के बारे में जो हमारी इस जरूरी ज्ञानेंद्रिय को बहुत ज्यादा हद तक प्रभावित कर सकती हैं।

ईयरबड्स का बहुत ज्यादा इस्तेमाल

कानों को साफ रखना अच्छी बात है लेकिन इसके लिए बहुत ज्यादा ईयरबड्स का इस्तेमाल उतना ही खतरनाक। कभी नहाने के बाद कान में चले गए पानी को निकालने के लिए तो कभी अंदर जमे वैक्स को निकालने के लिए, किसी भी मकसद से हर वक्त इसे यूज करना कानों की सेहत के लिए सही नहीं है। दो या तीन महीने में ईएनटी हॉस्पिटल जाकर कानों की सफाई करवाना ज्यादा अच्छा रहेगा।

बहुत तेज म्यूज़िक सुनना

बहुत तेज म्यूज़िक सुनने और ऑडियो डिवाइसेज़ के ज्यादा इस्तेमाल से कान के काम करने की क्षमता पर असर पड़ता है। तो इस बात का ध्यान रखें। कभी-कभार सुनने में कोई हर्ज नहीं लेकिन आप अक्सर ही लाउड म्यूज़िक सुनते हैं तो कुछ ही समय बाद आसपास की ध्वनियां धीमी लगने लगती हैं ऐसा महसूस किया होगा आपने। तो लगातार ऐसा करने से कब सुनने की क्षमता खत्म हो जाती है आपको पता भी नहीं चलेगा।

कानों को सूखा न रखना

वातावरण में मौजूद नमी के साथ ही अगर आप भी कानों को अक्सर गीला रखते हैं तो इससे कान में फंगल इन्फेक्शन (ऑटोमाइकोसिस) हो सकता है। वैसे ये समस्या ज्यादातर तैराकी करने वालों में देखने को मिलती है। इस रोग में कान की नलिका के बाहरी भाग में संक्रमण हो जाता है। संक्रमण की वजह एस्पेर्गिलस व कैंडिडा नामक जीवाणु होते हैं जो नमी की वजह से तेजी से फैलने लगते हैं।

ज्यादा स्ट्रेस और एक्सरसाइज की कमी

एक्सरसाइज करने से बॉडी का हर एक हिस्सा फिट एंड फाइन रहता है। जिसमें आपके कान भी शामिल हैं। एक्सरसाइज करने से कान में भी ब्लड का सर्कुलेशन सही तरह से होता है। जो कान के फंक्शन को दुरुस्त रखने के लिए जरूरी है।

क्यों मनाया जाता है वर्ल्ड हियरिंग डे? जानें क्या है इस साल की थीम (Dainik Jagran: 20220303)

<https://www.jagran.com/lifestyle/health-world-hearing-day-2022-why-it-is-celebrated-know-history-and-theme-22511372.html>

WHO ने 3 मार्च 2007 को पहली बार विश्व श्रवण दिवस मनाया। 2016 में उन्होंने इस दिन को वर्ल्ड हियरिंग डे के रूप में घोषित करने का निर्णय लिया। तो आइए जानें क्या है इस साल की थीम और इसका इतिहास।

नई दिल्ली, लाइफस्टाइल डेस्क। World Hearing Day 2022: हर साल 3 मार्च को विश्व श्रवण दिवस के रूप में मनाया जाता है ताकि लोगों में बहरेपन और सुनने की हानि को रोकने को लेकर जागरूकता बढ़ाई जा सके। यह दुनिया भर में कान और सुनने से जुड़ी देखभाल को बढ़ावा देने के लिए भी मनाया जाता है।

विश्व स्वास्थ्य संगठन (WHO) एक थीम निर्धारित करता है और लोगों को दिन के बारे में शिक्षित करने के लिए ब्रोशर, फ़्लायर्स, पोस्टर, बैनर और प्रस्तुतियां जैसी सामग्री तैयार करता है।

WHO ने 3 मार्च 2007 को पहली बार विश्व श्रवण दिवस मनाया। 2016 में, उन्होंने इस दिन को वर्ल्ड हियरिंग डे के रूप में घोषित करने का निर्णय लिया।

इससे पहले इसे अंतरराष्ट्रीय ईयर केयर डे के नाम से जाना जाता था। संचार एक मौलिक मानव अधिकार है और जो लोग इस विकार और कठिनाइयों से गुज़रते हैं उनके लिए जुड़ना मुश्किल हो जाता है। पूरी दुनिया में 360 मिलियन लोग बहरेपन की अक्षमता से पीड़ित हैं। लोगों को शिक्षित करने और उन्हें उनके अधिकारों के बारे में सिखाने से उन्हें मदद मिलेगी।

वर्ल्ड हियरिंग डे: थीम

इस साल, WHO ने विश्व श्रवण दिवस के लिए थीम के रूप में "जीवन भर सुनने, ध्यान से सुनने" को निर्धारित किया है। जीवन भर आपके कान सही तरीके से काम करें, इसके लिए सुरक्षित तरीके से सुनने के माध्यम से सुनने की हानि की रोकथाम के महत्व और साधनों पर ध्यान केंद्रित करेंगे।

2021 में, WHO ने सुनने पर एक विश्व रिपोर्ट जारी की जिसमें इस बात पर प्रकाश डाला कि ऐसे लोगों की संख्या बढ़ रही है जिनमें सुनने की शक्ति के खोने का जाखिम बढ़ा है। पूरा दिन, कान और सुनने

की शक्ति की देखभाल के माध्यम से संगठन जीवन भर कानों को कैसे हेल्दी रखा जा सकता है इस पर जोर देंगे। सुनने की शक्ति का कमज़ोर या ख़त्म होने के पीछे सबसे बड़ा कारण है तेज़ आवाज़ में सुनना।

इसके अलावा, हर साल रिपोर्ट्स बनाई जाती हैं, जिससे सरकार को विकलांग लोगों के बारे में जानने में मदद मिलती है और वे उन लोगों की मदद करते हैं जिन्हें इसकी ज़रूरत है। सुनने की मशीन महंगी आती हैं और इन रिपोर्ट्स का एक उद्देश्य आर्थिक रूप से मदद करना और लोगों को सुनने की मशीन प्रदान करना है, जिससे वे सामान्य जीवन जी सकें।

COVID-19

Next COVID-19 wave can't be predicted: experts (The Hindu: 20220303)

<https://www.thehindu.com/news/national/experts-denounce-study-that-forecasts-fourth-covid-wave-in-june/article65184027.ece?homepage=true>

Rapid antigen Test of covid 19 virus in progress at Azadpur Chowk, in New Delhi.

There is absolutely no way to forecast the timing, says Professor behind SUTRA model

Independent experts have criticised a recent modelling study from a group of researchers at the Indian Institute of Technology, Kanpur that predicts a fourth COVID wave in India around June.

The study, uploaded on the preprint server, Medrxiv, which hosts scientific work that is yet to be published in a peer-reviewed journal forecasts the wave to begin precisely on June 22, 2022, reaching its peak on August 23, 2022 and ending on October 24, 2022. For its analysis, it takes the trajectory of the coronavirus epidemic in Zimbabwe, because its history most resembles the case trend in India, and concludes that because Zimbabwe has seen a fourth wave, India is a fait accompli.

The authors, Sabara Parshad Rajeshbhai, Subhra Sankar Dhar and Shalabh, of the Department of Statistics and Mathematics, IIT-K, add caveats that the future wave could be affected by the nature of the existing variant that would emerge as well as vaccination coverage.

The Hindu could not immediately reach out to the authors for comment.

“The findings from this study are aimed to help and sensitise the people. For example, a few countries including the Government of India have started to provide booster dose to a section of people, which may reduce the impact of the fourth wave in a long run,” their paper notes.

A group at IIT Kanpur, led by Manindra Agrawal, a professor of mathematics and computer science, is behind the SUTRA model, whose forecasts on the pandemic are widely followed. While this model failed to forecast the deadly second wave and was critiqued by epidemiologists and biologists for its approach, it was accurate at gauging the trajectory of the third wave. The latest study is however independent of the SUTRA model.

Mr. Agrawal told The Hindu that he disagreed with the underlying assumptions of the latest study. The timing of a hypothetical fourth wave, he said, could not be predicted because it was heavily dependent on the nature of a future variant. “There is absolutely no way to predict the timing. If at all we see one, it will be very short and would have to be caused by a highly infectious variant because you have to account for the fact that nearly 90% of India has been exposed to the virus,” he said. The SUTRA model does not yet see a fourth wave, he added.

Gautam Menon, of the Ashoka University and who has been closely involved with efforts to mathematically model the pandemic argued in an explanatory Twitter thread that the forecast of a fourth wave “shouldn’t be taken seriously” because epidemiology wasn’t an exact science like physics or chemistry. The pandemic waves were being driven by variants, none of which could be predicted in advance, and modelling could at best be useful for “broad policy rather than a highly specific prediction of numbers.”

Zimbabwe’s median age was 19 as opposed to India’s 30 and had a vaccination coverage of 40% of the population to India’s 75%. These meant different degrees of “hybrid immunity” (that is protection from future infections due to a combination of vaccines and previous exposure) and the current study did not account for this rendering their predictions unusable, he opined. “Should one trust this model at all? The answer, simply, is no.”

COVID-19 vaccine

Pfizer vaccine less effective against COVID-19 in kids aged 5-11: Study (The Indian Express: 20220303)

<https://indianexpress.com/article/parenting/health-fitness/pfizer-vaccine-less-effective-against-covid-19-kids-aged-5-11-study-7796296/>

The study also found that while vaccine effectiveness fell for older children and teens, it fell more slowly than it did for smaller children.

The effectiveness of the Pfizer COVID-19 vaccine for children waned quickly during the Omicron surge in the US, especially among those aged 5 to 11 years, but the preventive was still protective against severe disease, according to a study. Researchers from the New York State Department of Health and the University at Albany School of Public Health, US, estimated the effectiveness of Pfizer vaccine against COVID cases and hospitalisations.

They used data from 852,384 fully-vaccinated children of 12-17 years of age and 365,502 children aged 5-11 years during December, 2021 and January, 2022.

The yet-to-be peer-reviewed study, posted on the preprint repository MedRxiv on Monday, found that the effectiveness of the Pfizer shots against infection caused by the Omicron variant fell from 68 per cent to just 12 per cent in children 5 to 11 years old within one month of being fully vaccinated.

Effectiveness against hospitalisation in the same age group was higher but also dropped substantially, falling from 100 per cent in early December to just 48 per cent by the end of January.

The study also found that while vaccine effectiveness fell for older children and teens, it fell more slowly than it did for smaller children.

The vaccine effectiveness waned from 66 per cent in early December to 51 per cent by the end of January for children in the age group of 12 to 17, the researchers said.

For hospitalisations, vaccine effectiveness fell from 85 per cent to 73 per cent over the same time frame, they said.

“In the Omicron era, the effectiveness against cases of BNT162b2 (Pfizer) declined rapidly for children, particularly those 5-11 years,” the authors of the study said.

“However, vaccination of children 5-11 years was protective against severe disease and is recommended,” they added.

The researchers said these results highlight the potential need to study alternative vaccine dosing for children and the continued importance layered protections, including mask wearing, to prevent infection and transmission.

Anti-microbial resistance

The growing scourge of anti-microbial resistance needs urgent attention (The Indian Express: 20220303)

<https://indianexpress.com/article/opinion/columns/growing-scurge-anti-microbial-resistance-urgent-attention-7798079/>

With no new drugs in the pipeline for drug-resistant infections, time is running out for patients.

Ever since the pandemic struck, concerns have been raised about the improper use of antimicrobials amongst Covid-19 patients. The worry is that unnecessary prescription of antimicrobials will lead to a further increase in the already high levels of drug resistance in most parts of the world. In the past few years, alarmingly high resistance rates in pathogens of public health importance have been reported from Indian hospitals. Unfortunately, the resistance rates reported by the hospitals and laboratories do not automatically translate to disease burden unless each resistant isolate is correlated with the clinical outcomes in the patients from whom they were isolated. This has to do with inadequate hospital information systems in most public sector funded healthcare facilities in India and many low-middle income countries.

In 2014, economist Jim O' Neill estimated that 10 million annual deaths from AMR could occur by 2050. Studies such as the ones conducted by him paved the way for the consolidation of the Global Action Plan in 2015 and the UN Resolution on AMR in 2016. However, nothing changed on the ground. National Action Plans against AMR, including the one in India, have not been translated into coherent action. The major impediment to AMR containment is that the most affected countries have the least data on the burden posed by this malaise.

The "Global burden of bacterial antimicrobial resistance in 204 countries and territories in 2019 (GRAM)" report, released last month, provides the most comprehensive estimate of the global impact of antibiotic resistance to date. According to the report, 4.95 million people died from drug-resistant bacterial infections in 2019, with 3,89,000 deaths in South Asia

alone. AMR directly caused at least 1.27 million of those deaths. Lower respiratory infections accounted for more than 1.5 million deaths associated with resistance in 2019, making it the most burdensome infectious syndrome. Amongst pathogens, E coli was responsible for the most deaths in 2019, followed by K pneumoniae, S aureus, A baumannii, S pneumoniae, and M tuberculosis. As per the yearly trends reported by the Indian Council of Medical Research since 2015, India reports a high level of resistance in all these pathogens, especially E coli and K pneumoniae.

However, only a fraction of the Indian data, available through the WHO-GLASS portal, has been included in the GRAM report. India has been reporting high levels of resistance to fluoroquinolones, cephalosporins and carbapenems across the Gram-negative pathogens that cause almost 70 per cent of infections in communities and hospitals. Therefore, the Indian data on the AMR burden may not look very different from the estimates published in the report. Now that we know that AMR's burden surpasses that of TB and HIV, a sense of urgency in containing such resistance is called for. With no new drugs in the pipeline for drug-resistant infections, time is running out for patients.

Addressing AMR requires a multipronged and multisectoral approach. The urgency to develop new drugs should not discourage us from instituting measures to use the existing antimicrobials judiciously. Improved infection control in communities and hospitals, availability and utilisation of quality diagnostics and laboratories and educating people about antimicrobials have proved effective in reducing antimicrobial pressure — a precursor to resistance. All this requires a comprehensive plan, driven by a designated coordinating agency backed with suitable funding.

The National Action Plan for AMR, approved in 2017, completes its official duration this year. The progress under the plan has been far from satisfactory. Too many players, missing governance mechanisms and absence of funding have been recognised as key impediments to the effective rollout of action plans in other countries as well. However, there are also examples of countries launching effective AMR containment plans by fixing responsibility and monitoring progress at the highest levels.

There is enough evidence that interventions like infection control, improved diagnosis and antimicrobial stewardship are effective in the containment of AMR. The GRAM report has underlined that postponing action could prove costly.

Cancer

Is eating less meat linked to a lower risk of cancer? (Medical News Today: 20220303)

<https://www.medicalnewstoday.com/articles/is-eating-less-meat-linked-to-a-lower-risk-of-cancer>

A recent investigation identifies an association between eating less meat and a reduced risk of cancer.

Researchers are exploring diet as a possible factor in the development of cancer.

Previous research has indicated that eating meat is associated with a higher risk of some types of cancer.

A new study has found that people who eat less meat have a lower risk of getting all types of cancer.

The study, however, cannot prove cause, and the association between meat consumption and cancer risk may be due to other variables.

Researchers from the University of Oxford in the United Kingdom recently released the results of a large study that investigated the effect of varying levels of meat consumption on the likelihood of developing cancer.

The study found that vegetarians, pescatarians, and people who eat little meat have a significantly reduced risk of developing cancer.

The authors of the study analyzed statistics regarding cancer cases in general and also took a close look at the effect of meat eating on three of the most common cancers: postmenopausal breast cancer, prostate cancer, and colorectal cancer.

The study's lead author is Cody Watling, a DPhil student at the Cancer Epidemiology Unit at the University of Oxford's Nuffield Department of Population Health. He told Medical News Today:

“Our findings add further evidence that following a vegetarian, pescatarian, or low meat eating diet may be associated with a lower risk of being diagnosed with cancer. These findings also suggest that cancer risk for different diet groups may be different by cancer types.”

The study appears in BMC Medicine Trusted Source.

A large study group

The researchers followed 472,377 individuals in the UK Biobank database over an average period of 11.4 years.

None of the participants, who were aged 40–70 years when the team recruited them between 2006 and 2010, had a cancer diagnosis at the beginning of the study period. Over the course of the study, individuals reported their meat intake to the researchers.

The researchers divided the study cohort into four groups:

Meat eaters reported eating processed meat, poultry, or red meat — including beef, pork, and lamb — more than five times each week. There were 247,571 individuals in this group, representing 52.4% of the total study population.

Low meat eaters ate the same foods but a maximum of five times each week. Of the study population, 43.5%, or 205,385 people, were in this group.

Fish eaters, who ate fish but not meat, accounted for 10,696 individuals, or 2.3% of the study population.

Vegetarians and vegans, who ate neither meat nor fish, constituted 1.8% of the entire cohort, or 8,685 people.

Watling said, “Due to the large number of cancer cases in the UK Biobank, we were able to look at common cancer types in relation to diet groups, despite the low number of vegetarians and pescatarians, and explore this association further.”

At the end of the study period, 54,961 people had developed cancer of some type. The researchers noted 5,882 cases of colorectal cancer, 9,501 cases of prostate cancer, and 7,537 cases of postmenopausal breast cancer.

Lowering the risk of cancer

With the meat eating group serving as a baseline, the researchers calculated the risk of developing cancer for the other three groups.

The data showed that the vegetarian and vegan group was 14% less likely to develop cancer than the other groups.

The fish eaters were 10% less likely to get cancer, and the low meat eaters reduced their risk by 2%.

Postmenopausal women who were vegetarian had an 18% lower risk of breast cancer, while pescatarian and vegetarian men had a 20% and 31% lower risk, respectively, of prostate cancer. When the study authors looked at colorectal cancer, they found that low meat eaters had a 9% lower risk of developing the disease, which, they note, is consistent with prior research.

Behind the data

The authors write: “It is not clear whether the other differences observed for all cancers and for prostate cancer reflect any causal relationships or are due to other factors, such as residual confounding or differences in cancer detection.”

Among these potential confounders is body mass index (BMI). When the researchers factored in BMI, the reduction in the risk of breast cancer for vegetarian women became insignificant.

Watling explained to MNT, “BMI would be a potential confounder if differences in BMI by diet groups are not due to dietary differences.”

“For example,” said Watling, “maybe vegetarians exercise more than meat eaters and maintain a healthy BMI as a result.”

Watling pointed out that “there are differences in BMI by diet group, and higher BMI is associated with higher cancer risk.”

“However,” he added, “BMI may also be a mediator if differences in BMI by diet groups are, in fact, due to dietary differences. This is hard to disentangle, as you may suspect. As such, we considered BMI as both a potential confounder and a potential mediator in our analyses.”

For now, Watling suggested:

“My recommendations would be for individuals to limit the intake of processed and red meat in their diet and consume a diet rich in whole grains, fruits, vegetables, and beans while maintaining a healthy body weight.”

The study authors found that vegetarians and pescatarians were more likely to be younger and well-educated and less likely to smoke and drink. This suggests that it is possible that the findings might be due to confounding factors.

Also, the UK BioBank volunteers were all aged 40–70 years at recruitment, which means that the findings may not be generalizable to all age groups.

Omicron subvariants

Omicron subvariants BA.1 vs. BA.2: What the latest data say (Medical News Today: 20220303)

<https://www.medicalnewstoday.com/articles/omicron-subvariants-ba-1-vs-ba-2-what-the-latest-data-says#BA.2-does-not-seem-to-be-more-severe>

Healthcare workers wearing personal protective equipment at a temporary holding area for patients displaying COVID-19 symptoms wait outside the Accident and Emergency Department at Prince of Wales Hospital in Hong Kong, China, on February 16, 2022. Bertha Wang/Bloomberg via Getty Images

The BA.2 subvariant of Omicron, or the “stealth” variant, has been outcompeting the previously dominant BA.1 subvariant in several countries.

Recent studies suggest that BA.2 has a competitive advantage over BA.1, mostly due to its increased transmissibility.

The BA.2 variant may also be slightly better at evading immunity than BA.1, which could be contributing to its rapid spread.

Although BA.2 is more contagious than BA.1, clinical data do not suggest a significant difference in disease severity.

The Omicron variant, which researchers first sequenced in South Africa and Botswana in November 2021, was found to be more transmissible but cause less severe disease than its predecessor — the Delta variant.

Owing to being more contagious, Omicron rapidly supplanted Delta as the dominant variant worldwide. Currently, it accounts for 99% Trusted Source of all sequenced cases.

Moreover, since it emerged, scientists have categorized Omicron’s subvariants or lineages into three groups: BA.1, BA.2, and BA.3.

Although the BA.1 subvariant started as the dominant Omicron lineage across the globe, since December 2021, the proportion of COVID-19 cases linked to the BA.2 variant has been rapidly increasing.

This has raised concerns about the severity and transmissibility of BA.2. Here’s what researchers have found so far:

Omicron subvariant BA.2 overtakes BA.1

BA.2 has been especially prominent in countries in Southeast Asia, Africa, and Europe. Recent analyses have indicated that it has displaced BA.1 as the dominant Omicron

sublineage in Denmark, Singapore, India, South Africa, and Austria. The rapid ascent of BA.2 is illustrated by the increase Trusted Source in its prevalence from 20% in the last week of December 2021 to 66% by the third week of January 2022 in Denmark.

The proportion of BA.2 cases in the United States remains low at 3.8% so far, but health experts expect it to rise.

Preprint studies that are yet to be peer reviewed have characterized differences between the BA.1 and BA.2 subvariants, which may explain why the latter is outcompeting its sibling variant.

Although BA.2 shares many of BA.1's mutations, the two subvariants differ by 28 mutations, some of which are responsible for the rapid surge in BA.2 cases.

Notably, the mutations unique to these subvariants are also present in the spike protein, which mediates the entry of SARS-CoV-2 into cells and is the target of COVID-19 vaccines. Specifically, BA.2 carries eight new mutations in the spike protein but lacks 13 mutations that the BA.1 spike protein harbors.

BA.2 seems to be more transmissible

The rapid surge in the prevalence of BA.2 in multiple countries suggests that this variant is more contagious than BA.1. One study estimates that BA.2 is up to 33% more transmissible than BA.1 and considers that its spread could be a serious issue for global health in the near future.

Moreover, a nationwide study comparing the spread of the BA.1 and BA.2 variants in Danish households in late December 2021 and January 2022 suggested that the latter was more contagious. The study found that the secondary attack rate, which measures the probability of transmission of the virus to household members, was 39% for BA.2 and 29% for BA.1.

The study also reported that fully vaccinated Trusted Source and booster-vaccinated individuals were less likely to pass on or contract an infection due to either subvariant compared with unvaccinated individuals.

In addition, unvaccinated individuals were more likely to spread the BA.2 subvariant to their household members than BA.1.

BA.2 can evade immunity but not completely

The household transmission data from the Danish study also showed that both vaccinated and unvaccinated individuals were more susceptible to a SARS-CoV-2 infection due to BA.2 compared with BA.1.

The relative increase in susceptibility to the BA.2 variant was greater in vaccinated individuals than unvaccinated individuals. In other words, it was more adept at evading the immune protection offered by vaccines to cause an infection.

Speaking to Medical News Today, the co-author of this study, Dr. Frederik Plesner Lyngse, a researcher at Copenhagen University, said, “[BA.2] possesses immune-evasive properties that reduce the protective effect of vaccination against infection, but [does] not increase its infectiousness from vaccinated persons with breakthrough infections.”

“All individuals are more susceptible to BA.2 compared to BA.1, unconditional on their vaccination, previous infection status [or both]. Unvaccinated individuals are more infectious if they [acquire an infection] with BA.2 compared to BA.1, while vaccinated individuals (vaccination and/or previous infection) that have a breakthrough infection are less infectious if [they contract an infection] with BA.2 compared to BA.1.”

– Dr. Frederik Plesner Lyngse

The levels of antibodies that can bind and neutralize SARS-CoV-2 tend to predict the extent of protection from infection. Two studies have independently shown that individuals immunized with mRNA vaccines showed significantly lower levels of neutralizing antibodies against the BA.1 and BA.2 subvariants than the original wild-type SARS-CoV-2.

Receiving a third shot as a booster also increased neutralizing activity against these Omicron lineages, but the neutralizing antibodies levels in response to BA.2 were slightly lower than BA.1.

Dr. Lyngse said they found that “vaccinations work in both reducing susceptibility (probability of [acquiring infection]) and infectiousness (probability of [causing infections in] others) — and that boosters reduce it even more.”

Given the modest difference in neutralizing activity against BA.2 and BA.1, Dr. Dan Barouch, a virologist at Harvard Medical School and author of one of the above studies, noted:

“The ability of BA.2 to outcompete BA.1 is probably due to increased transmissibility of the virus, rather than additional immune escape beyond BA.1.”

Do treatments work against BA.2?

Researchers developed the currently available COVID-19 vaccines to elicit an immune response against the wild-type SARS-CoV-2 spike protein. The lower neutralizing antibody response against BA.1 and BA.2 in fully vaccinated individuals likely reflects the high number of mutations in the Omicron spike protein.

These mutations on the Omicron spike protein also explain why most of the monoclonal antibodies that were effective against previous SARS-CoV-2 variants have diminished neutralizing activity against BA.1.

Sotrovimab was one of the few monoclonal antibodies that retained neutralizing activity against this variant.

Recent studies have shown a significant decline in the neutralizing activity of sotrovimab against the BA.2 variant. The AstraZeneca antibody combination Evusheld and the Eli Lilly antibody bebtelovimab are two authorized antibodies that still retain activity against both BA.1 and BA.2 variants.

In light of the ability of these Omicron subvariants to evade most therapeutic monoclonal antibodies, scientists fear that further mutations in the SARS-CoV-2 spike protein could render all currently available monoclonal antibody treatments ineffective.

BA.2 does not seem to be more severe

A recent laboratory study suggests that a BA.2 infection may cause more severe illness than BA.1. The study showed it replicated much faster than BA.1 in cultures of upper and lower respiratory tract cells.

Subsequent experiments in hamsters also suggested that BA.2 had a superior ability to replicate and spread in the lungs than BA.1. It also caused more lung damage and had greater adverse effects on lung function in these experiments.

However, data on disease severity in humans so far suggest that the BA.2 variant does not cause more severe illness than BA.1.

A study that researchers conducted in South Africa evaluated the risk of hospitalization due to BA.1 and BA.2 infections between December 5, 2021, and January 29, 2022, when the prevalence of BA.2 infections in the country grew from 3% to 80%. Upon analyzing the outcome of 95,470 COVID-19 cases, the study found that a similar proportion of individuals with BA.1 and BA.2 infections required hospitalization.

A statement Trusted Source by the World Health Organization (WHO), citing this study and other unpublished real-world evidence from the United Kingdom and Denmark, noted that BA.2 variant may not differ from BA.1 in its ability to cause severe illness in humans.

The discrepancy between the laboratory study and real-world clinical data could be due to the inability of the animal model to recapitulate all aspects of COVID-19 in humans.

Dr. Larry Corey, a virologist at Fred Hutchinson Cancer Research Center in Seattle, said, “Currently, there is no evidence either from South Africa or places in the U.S. that suggest differences in the clinical spectrum and course between BA.1 and BA. 2.”

“The BA.2 epidemic has had a 6–8-week later start, so severity data do lag behind. But to date, there is no evidence of significant differences, and cross-protection between the two variants seems in the short term quite high,” he told MNT.

Mental Health

Study identifies 10 factors linked to Alzheimer's risk (Medical News Today: 20220303)

<https://www.medicalnewstoday.com/articles/study-identifies-10-factors-linked-to-alzheimers-risk>

A new study finds links between health conditions and Alzheimer's risk. There is no effective treatment for Alzheimer's disease, but scientists hope to identify early risk factors that doctors can target to prevent or slow its progress.

An observational study has now highlighted 10 medical conditions associated with a diagnosis of Alzheimer's disease up to 10 years later.

The conditions include known risk factors for the disease, such as depression and hearing loss, and conditions with no links to the disease, such as constipation.

The study does not reveal whether these conditions help cause Alzheimer's or are early symptoms.

People with dementia experience a progressive loss of their ability to remember, think, and communicate effectively.

However, the changes in the brain that are responsible for dementia may begin decades before its effects on cognition and behavior become apparent.

The World Health Organization (WHO) Trusted Source indicates that of the 55 million people worldwide living with dementia, 60–70% have Alzheimer's disease.

Attempts to develop an effective treatment for Alzheimer's have met with little success. Researchers are increasingly turning their attention to detecting the disease early.

The key to this strategy is to identify early, “modifiable” risk factors that doctors can target with drugs or other interventions.

Researchers at the Paris Brain Institute in France have now found statistical associations between 10 health conditions and a diagnosis of Alzheimer's disease up to 10 years later.

Major depression was the earliest condition to be associated with a subsequent diagnosis of Alzheimer's, appearing at least 9 years in advance.

Other conditions that the study linked to a later diagnosis of Alzheimer's included:

anxiety

constipation

abnormal weight loss

a type of arthritis called cervical spondylosis

reaction to severe stress

hearing loss

sleep disorders

They also showed that falls and fatigue had links to Alzheimer's risk.

The next step will be to determine whether these conditions help cause the disease or whether they are early signs of changes in the brain that are already happening.

"Diseases like Alzheimer's can begin in the brain up to 2 decades before symptoms start to show," said Katy Bray, Ph.D., told Medical News Today. Dr. Bray is a public engagement manager at Alzheimer's Research UK and was not involved in the research.

"It is difficult to know how these conditions may contribute to the development of the disease or if they could also be very early symptoms," Dr. Bray told Medical News Today.

The study appears in *The Lancet Digital Health* [Trusted Source](#).

How the study worked

The researchers analyzed the primary healthcare records of 20,214 people with Alzheimer's disease in the United Kingdom and 19,458 people with Alzheimer's in France.

They compared each person's medical records with a control matched for sex and age who had not received a diagnosis of a progressive brain disease during the 15-year study period.

Out of the 123 health conditions they investigated, 10 had a statistically significant association with a diagnosis of Alzheimer's disease 2–10 years later in France and the U.K.

Some of the conditions, such as depression, hearing loss, and sleep disorders, are already known risk factors for Alzheimer's.

However, this study was the first to identify constipation as a possible risk factor. The link between the two conditions became apparent 7 years before the diagnosis of Alzheimer's.

Interestingly, constipation is also associated with depression and is an established early sign of other brain diseases, such as Lewy-body dementia and Parkinson's disease.

"The connections made allowed us to confirm known associations, such as hearing problems or depression, and other less-known factors or early symptoms, such as cervical spondylosis or constipation," says Thomas Nedelec, Ph.D., the first author of the study.

"The question remains as to whether the health problems encountered are risk factors, symptoms, or warning signs of the disease," he added.

In their paper, the authors conclude:

“Our findings make it possible to model the possible trajectories of risk factors in the period preceding the diagnosis of Alzheimer’s disease, providing new insights into possible windows for prevention.”

The study had some notable limitations. For example, it was unable to take other risk factors that contribute to Alzheimer’s, including education level, ethnicity, socioeconomic status, and genetics, into account.

Importance of mental health care

“This study adds a wealth of data to our understanding of mental disorders, such as depression, as a risk factor for dementia,” said Claire Sexton, Ph.D., director of scientific programs and outreach at the Alzheimer’s Association in the United States, who was not involved in the study.

However, she emphasized that because their study was observational, rather than a clinical trial, for example, the scientists were unable to establish whether depression helps cause Alzheimer’s.

“Just because someone has depression does not mean they will go on to develop Alzheimer’s,” Dr. Sexton told MNT.

“However, these data support the idea that taking care of one’s mental health is incredibly important for overall well-being and potentially cognitive health,” she added.

Another recent study^{Trusted Source} also found an association between mental health conditions and dementia.

Strong potential for prevention

In 2020, the Lancet Commission on dementia^{Trusted Source} added three new modifiable risk factors: excessive alcohol consumption, head injury, and air pollution to its existing list, which includes:

hypertension

smoking

obesity

depression

physical inactivity

diabetes

The report concluded that modifying all the risk factors that researchers have identified could prevent or delay dementia in up to 40% of people.

“While midlife is emerging as a key time for dementia risk, it’s never too early or too late in life to take action on brain health,” Dr. Bray told MNT.

“This includes not smoking, only drinking in moderation, staying mentally and physically active, eating a balanced diet, and keeping cholesterol and blood pressure levels in check,” she said.