



# DAILY NEWS BULLETIN

LEADING HEALTH, POPULATION AND FAMILY WELFARE STORIES OF THE DAY  
Thursday 20220120

## कोरोना

चिंताजनक:कोरोना जांच बढ़ते ही नए मामलों में आया उछाल (Hindustan: 20220120)

<https://epaper.livehindustan.com/>

### बाजार में बिकेगा टीका

केंद्र सरकार की विशेषज्ञ समिति ने बुधवार को कोविशील्ड-कोवैक्सीन टीके को बाजार में बेचने की मंजूरी देने की सिफारिश की है। कोरोना पर बनी विशेषज्ञ समिति ने बुधवार को सीरम इंस्टीट्यूट ऑफ इंडिया और भारत बायोटेक के आवेदन की दोबारा समीक्षा की।

### पैर पसार रहा ओमीक्रोन

स्वास्थ्य विशेषज्ञों का कहना है कि दिल्ली, मुंबई जैसे महानगरों में संक्रमण में भले ही कमी आई हो लेकिन अब ओमीक्रोन राज्यों में पैर पसार रहा है, संक्रमण तेजी से बढ़ने के पीछे भी यही वजह है। इस महीने के आखिर तक यह स्थिति जारी रहने की आशंका भी व्यक्त की गई है।

देश में कोरोना जांच बढ़ने के साथ ही संक्रमण में एक बार फिर उछाल दिखने लगा है। बीते दिन 18.69 लाख लोगों की जांच की गई तो 282970 मरीज मिले। तीसरी लहर के दौरान यह अब तक आए सबसे ज्यादा मामले हैं तथा जांच भी सबसे ज्यादा हैं। चिंता की बात है कि दिल्ली-केरल समेत कई राज्यों में संक्रमण दर फिर बढ़ रही है। केरल में तो यह 37 को भी पार कर गई है।

केंद्रीय स्वास्थ्य मंत्रालय ने एक दिन पहले राज्यों को जांच बढ़ाने के निर्देश दिए थे। इसका असर नजर आने लगा है। पिछले पांच दिनों से संक्रमण में जहां लगातार कमी आ रही थी वहीं बुधवार को नए मामले करीब 19 फीसदी बढ़ गए। संक्रमण दर में भी एक दिन पहले की तुलना में फिर बढ़ोतरी दर्ज की गई है तथा बुधवार को यह 15.13 फीसदी दर्ज की गई है। सक्रिय मरीजों की संख्या भी बढ़कर 18.31 लाख हो गई है। बुधवार को इसमें 84372 मरीज जुड़े। बुधवार को 441 मौतें दर्ज की गई हैं इनमें 83 मौतें केरल की पहले की हैं।

**कोरोना ने तोड़ा 8 महीने का रिकॉर्ड; 24 घंटे में 3.17 लाख से अधिक नए मामले, मौत का दैनिक आंकड़ा 350 के पार (Hindustan: 20220120)**

<https://www.livehindustan.com/national/story-corona-broke-the-record-of-8-months-more-than-3-lakh-new-cases-in-24-hours-daily-death-toll-crosses-350-5618513.html>

कोरोना के दैनिक मामलों में रिकॉर्ड इजाफा देखने को मिला। बुधवार को तीन लाख से अधिक नए मामले सामने आए। केंद्रीय स्वास्थ्य मंत्रालय द्वारा जारी आंकड़ों के मुताबिक, बीते 24 घंटे में 3,17,532 केस सामने आए हैं। इससे पहले भारत ने पिछली बार 15 मई को (3,11,077) को 3 लाख से अधिक मामले दर्ज किए थे। आपको बता दें कि तीसरी लहर में इस आंकड़े को छूने में सिर्फ 23 दिन ही लगे हैं। दूसरी लहर में करीब 60 दिन लग गए थे।

केंद्र सरकार द्वारा जारी आंकड़ों के मुताबिक, इस महामारी के कारण कल 356 से अधिक लोगों की मौत हुई थी। मरने वालों के आंकड़े रात ग्यारह बजे तक के हैं। इसे देखते हुए मंगलवार को मरने वालों की संख्या 356 के आंकड़े को पार करने की संभावना है। आपको बता दें कि हम जो आंकड़े बता रहे हैं उनमें पंजाब, झारखंड और त्रिपुरा के आंकड़े शामिल नहीं हैं।

भारत दुनिया का दूसरा सबसे प्रभावित देश

वैश्विक स्तर की बात करें तो भारत अमेरिका के बाद दूसरा सबसे ज्यादा प्रभावित देश है। 17 जनवरी से अब तक देश ने 8.7 लाख से अधिक दैनिक मामलों की सूचना दी है। सबसे ज्यादा प्रभावित देशों के

तुलनात्मक अंतरराष्ट्रीय डेटा से पता चलता है कि जनवरी में अर्जेंटीना भारत और अमेरिका के अलावा एकमात्र अन्य देश था, जहां एक लाख से अधिक दैनिक मामले दर्ज किए गए थे। मृत्यु के आंकड़ों से पता चलता है कि अब तक भारत में दैनिक मृत्यु दर अमेरिका, रूस, कनाडा, मेक्सिको और पोलैंड जैसे देशों की तुलना में कम है। अमेरिका को छोड़कर अन्य सभी के लिए दैनिक मामलों की संख्या भारत की तुलना में कम है।

महाराष्ट्र में सबसे अधिक मामले

राज्यों में महाराष्ट्र सूची में सबसे ऊपर है। उसके बाद कर्नाटक का नंबर आता है। दोनों ने बुधवार को 40,000 से अधिक मामलों की रिपोर्टिंग की है। केरल ने 30,000 से अधिक मामलों की सूचना दी और उसके बाद तमिलनाडु और गुजरात का स्थान है जहां दैनिक गिनती 20,000 से अधिक थी। छह राज्यों ने 10,000 से अधिक मामलों की सूचना दी है। सूची में उच्च से निम्न मामलों के क्रम में उत्तर प्रदेश, दिल्ली, राजस्थान, ओडिशा, पश्चिम बंगाल और आंध्र प्रदेश शामिल थे।

महाराष्ट्र में 43,697, गुजरात में 20,966 नए मामले

महाराष्ट्र में बुधवार को कोरोना वायरस संक्रमण के 43,697 मामले सामने आए जो कि एक दिन पहले सामने आए मामलों से 10 प्रतिशत ज्यादा थे। इसके साथ ही ओमीक्रोन स्वरूप से संक्रमण के 214 नए मामले सामने आए। वहीं, पड़ोसी राज्य गुजरात में संक्रमण के 20,966 नए मामले सामने आए जो कि राज्य में अब तक सामने आए दैनिक मामलों की सर्वाधिक संख्या है।

महाराष्ट्र के स्वास्थ्य विभाग के अनुसार, पिछले एक दिन में राज्य में कोविड-19 से 49 मरीजों की मौत हो गई। वर्तमान में महाराष्ट्र में 23,93,704 मरीज घर पर पृथक-वास में हैं और 3,200 संक्रमित संस्थागत पृथक-वास में हैं। इस बीच गुजरात के स्वास्थ्य विभाग ने कहा कि बुधवार को संक्रमण के सबसे ज्यादा मामले सामने आए। नए मामले सामने आने के बाद गुजरात में संक्रमण के मामले बढ़कर 9,77,078 हो गए हैं। राज्य में पिछले एक दिन में महामारी से 12 मरीजों की मौत हो गई जिससे मृतकों की संख्या 10,186 पर पहुंच गई।

कर्नाटक में संक्रमण के 40,499, तमिलनाडु में 26,981, तेलंगाना में 3,557 नए मामले सामने आए

वहीं, कर्नाटक में बुधवार को कोरोना वायरस संक्रमण के 40,499 मामले सामने आने के बाद संक्रमितों की कुल संख्या 33,29,199 हो गई। इसके अलावा महामारी से 21 और रोगियों की मौत के साथ ही मृतकों की संख्या 38,486 हो गई। वहीं, तमिलनाडु में संक्रमण के 26,981 और मौत के 35 नए मामले सामने आए जबकि तेलंगाना में संक्रमण के 3,557 नए मामले सामने आए तथा तीन और रोगियों की

कोविड-19 से मौत हो गई। कर्नाटक में दिसंबर के अंतिम सप्ताह से संक्रमण के मामलों में तेज वृद्धि देखी जा रही है। मंगलवार को राज्य में 41,457 मामले सामने आए थे।

स्वास्थ्य विभाग के बुलेटिन के अनुसार, राज्य में उपचाराधीन रोगियों की संख्या 2,67,650 है। अब तक कुल 30,23,034 लोग संक्रमण से उबर चुके हैं। वहीं, तमिलनाडु के स्वास्थ्य विभाग ने बताया कि राज्य में संक्रमण के कुल 30,14,235 सामने आ चुके हैं और मृतकों की संख्या 37,073 तक पहुंच गई है। विभाग ने कहा कि बीते 24 घंटे में 17,456 लोगों के संक्रमण मुक्त होने के बाद ठीक चुके लोगों की संख्या 1,70,661 हो गई है। वहीं, तेलंगाना में संक्रमितों की कुल संख्या 7,18,196 तथा मृतकों की तादाद 4,065 हो गई है। स्वास्थ्य विभाग के बुलेटिन में कहा गया है कि दिनभर में 1,773 लोगों के संक्रमण से उबरने के बाद ठीक हो चुके लोगों की संख्या 6,89,878 हो गई है और उपचाराधीन रोगियों की संख्या 24,253 है।

**India reports over 3.17 lakh new Covid cases, 491 deaths (The Indian Express: 20220120)**

<https://indianexpress.com/article/india/coronavirus-live-updates-omicron-guidelines-vaccinations-7732748/>

Omicron Covid-19 India Latest Update: A beneficiary receives a dose of the Covid-19 vaccine in New Delhi.

India reported more than 3.17 lakh (3,17,532) new Covid-19 cases in the last 24 hours ending at 9 am on Thursday, marking a 12 per cent increase in fresh cases since Wednesday. The country's active caseload currently stands at 19,24,051, while the recovery rate stands at 93.69 per cent.

The total tally of Omicron cases rose to 9,287 on Thursday, 3.63 per cent higher than yesterday. As many as 491 Covid patients succumbed to the deadly infection in a day.

Here are some major Covid updates: The Covid test positivity rate has surged to 37 per cent in Kerala, as the Omicron-fuelled third wave continues to surge across the coastal state. "Next three weeks would be critical for Kerala," said state health minister Veena George. Meanwhile, Data show a sharp gender gap in vaccination, particularly in the country's top

metros. India has clocked over 158 crore vaccines – first, second and precaution doses taken together — until January 18, at a ratio of 954 women for every 1,000 men. In other news, a new study shows that an infection with the Omicron variant of the Covid virus may not generate broad immunity in unvaccinated individuals that can protect against other variants.

**नेचर में दावा: दुनियाभर में सरकारी आंकड़ों से दो से चार गुना ज्यादा मौतें, भारत में 50 लाख से ज्यादा की जान गई (Amar Ujala: 20220120)**

<https://www.amarujala.com/world/covid-19-deaths-much-higher-than-official-figures-worldwide-claims-nature>

सरकारी आंकड़ों के अनुसार कोविड-19 महामारी की शुरुआत के बाद से 55 लाख से ज्यादा लोग अपनी जान गंवा चुके हैं। नेचर में प्रकाशित एक नए शोध में दावा किया गया है कि मौतों की वास्तविक संख्या इससे कई गुना अधिक हो सकती है।

दुनिया भर में 2019 से फैली कोरोना महामारी से हुई मौतों का असल आंकड़ा सरकारों द्वारा जारी आंकड़ों से दो से चार गुना तक ज्यादा है। ब्रिटेन की प्रतिष्ठित पत्रिका नेचर ने एक शोध के आधार पर यह दावा किया है।

सरकारी आंकड़ों के अनुसार कोविड-19 महामारी की शुरुआत के बाद से 55 लाख से ज्यादा लोग अपनी जान गंवा चुके हैं। नेचर में प्रकाशित एक नए शोध में दावा किया गया है कि मौतों की वास्तविक संख्या इससे कई गुना अधिक हो सकती है।

दुनियाभर में बहस जारी है कि क्या विभिन्न देश विश्व मंच पर अपनी बदनामी व छवि खराब होने के डर से कोविड-19 की मृत्यु दर को छिपाते हैं? नेचर में प्रकाशित रिपोर्ट में लंदन में 'द इकोनॉमिस्ट' पत्रिका द्वारा इस्तेमाल किए जाने वाले तरीके व आंकड़ों के आधार पर यह दावा किया है। नेचर ने दावा किया कि कोविड-19 से वास्तविक मौतें सरकारी आंकड़ों से दो और चार गुना अधिक हो सकती हैं।

नेचर में प्रकाशित रिपोर्ट एक मशीन आधारित प्रक्रिया पर केन्द्रित है। इसमें संग्रहित आंकड़ों के आधार पर मौतों को लेकर यह अनुमान जताया गया है। इस शोध में दुनियाभर के देशों द्वारा कोविड-19 के

शिकार लोगों की सूचना देने के तरीकों का उदाहरण देकर यह दावा किया गया है। जैसे कि नीदरलैंड्स में महामारी के आरंभिक दिनों में केवल उन्हीं लोगों को कोविड से मृत माना गया, जिन्हें संक्रमित होने के बाद अस्पताल में भर्ती कराया गया था और वहां उनकी मौत हुई। दूसरी ओर बेल्जियम में सर्दी के शिकार लोगों की मौत को भी बगैर टेस्ट के कोविड-19 से मौत माना गया।

नेचर में प्रकाशित रिपोर्ट के अनुसार कोरोना मौतों के अनुसार विश्व स्वास्थ्य संगठन (WHO) का पहला आकलन जल्द आने वाला है। संगठन ने कोरोना से हुई मौतों की असल संख्या पता लगाने के लिए कई विशेषज्ञों की राय ली है। इन आंकड़ों की पांच साल पहले के मौतों के आंकड़ों से तुलना की जाएगी।

गरीब देशों में 20 गुना तक ज्यादा हो सकती हैं असल मौतें

रिपोर्ट के अनुसार धनी देशों में कोरोना से असल मौतें उनके मौजूदा आंकड़ों से एक तिहाई ज्यादा हो सकती हैं। वहीं गरीब देशों में यह संख्या मौजूदा आंकड़ों से 20 गुना तक ज्यादा हो सकती है। रिपोर्ट में यह भी दावा किया गया है कि कोरोना महामारी 1918-20 के बीच आई स्पेनिश फ्लू महामारी के बाद की सबसे बड़ी महामारी है।

भारत समेत 100 देशों में अतिरिक्त मौतों के आंकड़ों का खुलासा नहीं

डब्ल्यूएमडी आंकड़ों के अनुसार रूस में 2021 के अंत तक कोरोना से 3 लाख से ज्यादा मौतें हो चुकी थी, लेकिन असल मौतों का आंकड़ा 10 लाख के पार हो सकता है। इसी तरह भारत व चीन समेत 100 से ज्यादा देशों में अतिरिक्त मौतों के आंकड़ों को उजागर नहीं किया गया है। इसकी वजह यह हो सकती है कि इन देशों की सरकार मौत के आंकड़े नहीं जुटा रही हैं या उनका तेजी से प्रकाशन नहीं किया जा रहा है। जबकि इन देशों में कोविड-19 से लाखों मौतें हुई हैं।

भारत में मौतों का सरकारी आंकड़ा 4.87 लाख

भारत में पिछले साल कोरोना की दूसरी लहर के दौरान मौत का तांडव देखा गया था। देश में कोरोना की शुरुआत से अब तक 4,87,000 से ज्यादा मौतें रिपोर्ट की गई हैं। लेकिन इकॉनामिस्ट के उक्त मॉडल के आधार पर देश में 50 लाख से ज्यादा मौतों का अनुमान जताया गया है।

चीन में 4600 मौतों का दावा, नेचर का दावा 7.50 लाख मौतें हुईं

इसी तरह महामारी के केंद्र बने चीन में मौतों का सरकारी आंकड़ा 4600 बताया गया है, जबकि उक्त मॉडल के आधार पर 150 गुना ज्यादा मौतों का अनुमान है। शोध के अनुसार चीन में महामारी से 7.50 लाख से ज्यादा मौतें हुई हैं।

**कोरोना की तीसरी लहर की चपेट में तेजी से संक्रमित हो रहे हैं बच्चे, 25 फीसद बच्चों में है ये लक्षण (Dainik Jagran: 20220120)**

[https://www.jagran.com/madhya-pradesh/bhopal-children-are-increasingly-infected-by-the-third-wave-of-corona-25-percent-of-children-have-these-symptoms-22397716.html?itm\\_source=website&itm\\_medium=homepage&itm\\_campaign=p1\\_component](https://www.jagran.com/madhya-pradesh/bhopal-children-are-increasingly-infected-by-the-third-wave-of-corona-25-percent-of-children-have-these-symptoms-22397716.html?itm_source=website&itm_medium=homepage&itm_campaign=p1_component)

कोरोना की तीसरी लहर की चपेट में तेजी से संक्रमित रहे हैं बच्चे,

अस्पतालों की ओपीडी में 18 साल से कम उम्र के बच्चे भी पहुंच रहे हैं। इनमें 25 फीसद बच्चों में सर्दी-जुकाम खांसी व बुखार के लक्षण हैं। इन्हें ओपीडी में घर में ही होमआइसोलेट रहने की सलाह दी जा रही है।

ग्वालियर, जेएनएन । भोपाल में कोरोना की तीसरी लहर के दौरान संक्रमण का दायरा तेजी से फैल रहा है। मालूम हो कि कोरोना की तीसरी लहर की चपेट में बच्चे तेजी से आ रहे हैं। उन्हें सर्दी-जुकाम, कफ वाली खांसी और तेज बुखार के लक्षण भी हैं, इसके बावजूद बच्चे घर पर रहकर ही दो से तीन दिन में कोरोना हराकर स्वस्थ हो रहे हैं। जिले में पिछले 24 दिन में 463 बच्चे कोरोना की चपेट में आ चुके हैं। इनमें किसी को भी अस्पताल में भर्ती करने की आवश्यकता नहीं पड़ी।

मालूम हो कि अस्पतालों की ओपीडी में 18 साल से कम उम्र के बच्चे भी पहुंच रहे हैं। इनमें 25 फीसद बच्चों में सर्दी-जुकाम, खांसी व बुखार के लक्षण हैं। इन्हें ओपीडी में घर में ही होमआइसोलेट रहने की सलाह दी जा रही है। डाक्टरों के अनुसार राहत की बात यह है कि वायरस इस बार गले से नीचे नहीं उतर रहा, इसलिए फेफड़ों पर कोई प्रभाव भी नहीं डाल रहा है।

शिशु रोग विशेषज्ञ का कहना है कि बच्चे बीमार तो पड़ रहे हैं, उन्हें तेज बुखार व कफ के साथ खांसी की शिकायत भी आ रही है। वह अस्पताल में भर्ती हुए बिना घर पर ही दो-तीन दिन उपचार लेकर ठीक हो रहे हैं। अब तक किसी भी बच्चे का सीटी स्कैन व एक्सरे तक कराने की जरूरत महसूस नहीं हुई। मरीज को भर्ती नहीं करना पड़ा तो आक्सीजन की जरूरत भी नहीं पड़ी। तीसरी लहर बच्चों के लिए घातक बताई जा रही थी। बच्चे संक्रमित तो हो रहे हैं, लेकिन इनमें से किसी भी बच्चे को अस्पताल में भर्ती करने की आवश्यकता नहीं पड़ी।

डाक्टरों का कहना है रोग से लड़ने के लिए बच्चों में रोग प्रतिरोधक क्षमता अधिक होती है, इसीलिए वह कोरोना को आसानी से मात दे रहे हैं। हालांकि बच्चों को सुरक्षित रखने विशेष सावधानी की जरूरत है। सर्दी-जुकाम, खांसी-बुखार से पीड़ित बुजुर्ग बच्चों के संपर्क में न आएं, आवश्यकता है।

यह सावधानी रखें

- बच्चों में बीमारी के लक्षण आने पर तत्काल डाक्टर से परामर्श लें।
- अभिभावक बिना परामर्श के बच्चों को दवाओं का सेवन न कराएं।
- बच्चों को सर्दी से बचाएं। खुले मैदान में जाने से रोकें।
- चेहरे पर मास्क जरूरी लगाएं, सैनिटाइजर का उपयोग करें।

18 दिन में निकले 6023 संक्रमित

आयु वर्ग संक्रमित

0 से 18 463

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## कोलेस्ट्रॉल

**बढ़ा हुआ कोलेस्ट्रॉल डाइट से कम करेंगे ये ताकतवर सफेद बीज, बस लेना होगा दिन में 2 चम्मच (Navbharat Times: 20220120)**

[https://navbharattimes.indiatimes.com/lifestyle/health/consume-2-tbsp-til-or-sesame-seeds-daily-can-lower-yours-high-cholesterol-level-and-prevent-heart-attack/articleshow/88947056.cms?utm\\_source=mostreadwidget](https://navbharattimes.indiatimes.com/lifestyle/health/consume-2-tbsp-til-or-sesame-seeds-daily-can-lower-yours-high-cholesterol-level-and-prevent-heart-attack/articleshow/88947056.cms?utm_source=mostreadwidget)

सर्दियों के लिए तिल एक पोषक तत्वों से भरपूर खाद्य पदार्थ है। अध्ययन के अनुसार, रोजाना 2 बड़े चम्मच तिल का सेवन रोजाना करने से बढ़ा हुआ कोलेस्ट्रॉल कम हो जाता है और हार्ट से जुड़ी बीमारियां भी नहीं होती।

सर्दियों में गुड़ के साथ तिल का स्वाद बहुत पसंद आता है। इसलिए सर्दियों में तिल से बनी मिठाई खूब खाई जाती हैं। इन दिनों में तिल के लड्डू से लेकर सलाद की टॉपिंग तक हम इसे हर व्यंजन में किसी न किसी रूप में इस्तेमाल करते हैं। आखिर करें भी क्यों नहीं, इसे खाने से स्वास्थ्य को बहुत लाभ जो मिलते हैं। दरअसल, तिल में मोनो अनसैचुरेटेड फैटी एसिड होता है, जो शरीर से कोलेस्ट्रॉल को कम करने के लिए जाना जाता है।

इसमें प्रोटीन, मैंगनीज, विटामिन ई और फाइबर जैसे पोषक तत्व भी बहुत अच्छी मात्रा में पाए जाते हैं, जो हार्ट, स्ट्रेस और डायबिटीज से जुड़ी समस्याओं से छुटकारा दिलाने में कारगर है। यह लंग कैंसर, पेट के कैंसर, ब्रेस्ट कैंसर के खतरे को भी कम करने में फायदेमंद साबित होता है। इन सभी स्वास्थ्य लाभों की वजह से ही चीनी दवा से लेकर आयुर्वेद तक तिल की चर्चा हर जगह होती है।

Nutrition Research में प्रकाशित एक स्टडी के अनुसार, तिल बैड कोलेस्ट्रॉल और हाई ट्राइग्लिसराइड लेवल को कंट्रोल करने में सहायक है। सिर्फ इतना ही नहीं, यह और भी कई बीमारियों में रामबाण साबित होता है। तो आइए जानते हैं, हमें अपनी डेली डाइट में तिल को शामिल क्यों करना चाहिए।

रोज करें 2-3 चम्मच तिल का सेवन

अध्ययन के अनुसार, रोजाना 2-3 चम्मच तिल का सेवन करने से लिपिड को नियंत्रित करने में मदद मिलती है। यह एलडीएल कोलेस्ट्रॉल को 8-16 प्रतिशत और कुल कोलेस्ट्रॉल को 8 प्रतिशत तक कम

करती है। चूंकि, तिल में फैट की मात्रा बहुत ज्यादा होती है, इसलिए कई स्टडीज में अपने दैनिक आहार में कैलोरी की जगह तिल का सेवन करने की सलाह दी है।

तिल के बीज कोलेस्ट्रॉल को कम करने में कैसे प्रभावी हैं

स्टडी के अनुसार, तिल बैड कोलेस्ट्रॉल और ट्राइग्लिसराइड लेवल को नियंत्रित करने में बहुत प्रभावी है। कई स्टडीज से पता चला है कि तिल में पाया जाने वाला सेसमिन छोटी आंत से कोलेस्ट्रॉल के अवशोषण को रोकने में मदद करता है और एंजाइम एचएमजी सीआए रिडेक्ट्स की गतिविधि को भी कम कर सकता है, जो शरीर में कोलेस्ट्रॉल बनाने के लिए जिम्मेदार होता है।

स्टडी में पाया गया है कि केवल दो महीनों में 3.6 मिग्रा सेसमिन LDL को 16 प्रतिशत और कुल कोलेस्ट्रॉल लेवल को 8 प्रतिशत तक कम कर देता है। साथ ही तिल में पाया जाने वाला अल्फा लिनोलेइक एसिड ट्राइग्लिसराइड लेवल को कम करने के लिए जाना जाता है। इतना ही नहीं तिल में पाया जाने वाला घुलनशील फाइबर ब्लड में कोलेस्ट्रॉल के अवशोषण को रोककर ब्लड में एलडीएल कोलेस्ट्रॉल के स्तर को कम करता है।

तिल के बीज को अपने आहार में कैसे शामिल करें

सर्दियों के मौसम में हाई प्रोटीन, फाइबर, हेल्दी फैट और चीनी में कम तिल का सेवन सबसे अच्छा माना गया है। इन बीजों को अपने आहार में शामिल करने का सबसे अच्छा तरीका है कि इन्हें होलव्हीट ब्रेड और मफिन में शामिल किया जाए। आप चाहें, तो अपने सलाद या सूप के ऊपर कुछ भुने हुए बीज भी डाल सकते हैं। अपने तिल के बीज को ग्रेनोला, नट्स और अन्य बीजों के साथ नाश्ते में मिलाना भी बेस्ट ऑप्शन है। सर्दियों के मौसम में आप तिल के तेल का उपयोग खाना पकाने और तलने के लिए भी कर सकते हैं।

तिल पोषक तत्वों से भरपूर है, लेकिन किसी भी प्रकार के दुष्प्रभाव से बचने के लिए आहार में कोई भी बदलाव करने से पहले हमेशा न्यूट्रिशन एक्सपर्ट से सलाह लेने का सुझाव दिया जाता है।

## NFHS

### **NFHS data offers a reality check for claims of Swachh Bharat success (The Indian Express: 20220120)**

<https://indianexpress.com/article/opinion/columns/nfhs-data-offers-a-reality-check-for-claims-of-swachh-bharat-success-7732463/>

Over the years, the National Family Health Surveys (NFHS) have evolved into a major source of data, producing a vast array of indicators on the demographic, health, nutrition and socio-economic status of people. The technical and resource support provided by national and international agencies enables NFHS to be ambitious in its coverage of topics and attempts to satisfy the expectations of all stakeholders. The recently conducted NFHS-5 (2019-20) gathered information from around 6.4 lakh households. This is much beyond what the NSSO or any other national survey usually covers. With such a large sample size, it legitimately claims to be capable of producing reliable estimates, even at the district level.

Survey agencies usually try to collect as much data as possible not only to satisfy the funding agencies but also to meet the interests of an ever-widening data user community. We have commented on how some estimates of population sex ratio from NFHS-5 could have come from its emphasis on surveying “families”, leaving out single member male-headed households like defence forces, student hostels, workers/migrant camps, etc (‘When numbers hide’, IE, December 8). We now look at another set of indicators relating to household sanitation.

Sanitation practices are indeed the most influential in family health and collecting such data is vital to understanding the health behaviour of the people. Fortunately, sanitation has also been studied in a special series of surveys conducted by the Ministry of Drinking Water and Sanitation and the most recent results are from its National Annual Rural Sanitation Survey (NARSS) Round-3 (2019-20). We also had an NSSO survey on sanitation and housing conditions in 2018. It will be interesting to situate the findings of NFHS-5 along with the claims of the government on sanitation for two reasons: How far NFHS-5 matches with the NARSS sponsored by the implementing ministry and whether the rejection of an earlier NSSO survey finding by the government stands up to scrutiny.

Sanitation-related indicators have come to be of immense importance in the backdrop of the Swachh Bharat Mission (SBM). All villages, gram panchayats, districts, states and Union territories in India declared themselves “open-defecation free” (ODF) by October 2, 2019, by constructing over 100 million toilets in rural India. The government is now moving towards the next Phase II of SBMG to reinforce ODF behaviours and focus on providing interventions for the safe management of solid and liquid waste in villages.

NFHS collects sanitation data in great detail from surveyed households. These include the type of toilet facility used, its location, access, sharing, and drainage system. Usually, in surveys, collection of visible and verifiable physical information has the advantage of fewer response errors, unlike quantitative information and any omission of homeless or marginalised homes can only lead to the presentation of an improved picture rather than a dismal one. It is in this context that we look at the findings of NFHS on sanitation.

An improved sanitation facility in NFHS means having any kind of flushing out facility, pit latrine or one not shared with any other household. The NARSS, however, is aligned with the SBM and is implemented through private agencies with the express purpose of deriving Disbursement Linked Indicators (DLI). NARSS thus measures the performance of each state with respect to the DLIs and the survey components included a household sample survey and a village survey. DLI 1 focuses on the reduction in the prevalence of open defecation. The indicator is based on the rural population having access to sanitation facilities and their use determined on the basis of access to a toilet, functionality of the toilet, safe disposal mechanism of human excreta, hygiene status of toilet and safe disposal of child faeces. DLI 2 measures the rural population of ODF villages showing a sustained ODF status. This is calculated based on households having access and use of a toilet, besides the use of a toilet in schools and public places and absence of visible faeces in village surroundings and places historically used for open defecation. The estimates of improved sanitation and the population living in ODF villages are thus comparable with the DLI published by NARSS.

So far, only a few detailed state reports are available from NFHS. However, we have fact sheets that give key indicators for all states and the all-India level. The percentage of the rural population with improved sanitation is poor for many states. For states for which detailed reports are in the public domain, besides the percentage of the population not having improved sanitation, we also have the percentage not using any toilet facility and using open spaces or fields. The NARSS reports a very rosy picture of SBM achievements. Except for Kerala, where all indicators converge, we observe the NFHS findings strongly challenging the claimed achievements in sanitation for most other states. The NSSO had conducted a survey during July-December 2018 covering drinking water, sanitation, hygiene, etc. It had reported 71.3 per cent of households having access to latrine — far lower than the NARSS 2018-19 figure of 93.3 per cent. Though the NSSO findings did show a vast improvement in sanitation practices in rural areas, these findings were not accepted by officials who then pointed fingers at the possibility of the NSSO respondents underreporting access to toilets to grab benefits from government schemes.

If one were to accept official claims, the findings from NFHS-5, though available partially, clearly indicate the need for reinforcing the behavioural change the government plans to sustain during Phase II of SBM. These findings also highlight the need for cross-validating administrative data by independent sample surveys.

## **Antimicrobial resistance**

### **The global toll of bacterial resistance to drugs (The Indian Express: 20220120)**

<https://indianexpress.com/article/explained/explained-global-toll-bacterial-resistance-to-drugs-7732479/>

Hundreds of thousands of deaths occur today due to previously treatable infections — such as lower respiratory and bloodstream infections — because the bacteria that cause them have become resistant to treatment. A comprehensive estimate of the global impact of antimicrobial resistance (AMR), covering 204 countries and territories and published in The Lancet, has found that 1.27 million people died in 2019 as a direct result of AMR, which is now a leading cause of death worldwide, higher than HIV/AIDS or malaria.

The analysis

The Global Research on Antimicrobial Resistance (GRAM) report used statistical modelling to estimate deaths linked to 23 pathogens and 88 pathogen-drug combinations. Apart from 12.7 lakh deaths caused directly by AMR (these would not have occurred had the infections been drug-susceptible), another 49.5 lakh deaths were associated with AMR (a drug-resistant infection was implicated, but resistance itself may or may not have been the direct cause of death). HIV/AIDS and malaria were estimated to have caused 8.6 lakh and 6.4 lakh deaths respectively in 2019.

Of the 23 pathogens studied, drug resistance in six (*E coli*, *S aureus*, *K pneumoniae*, *S pneumoniae*, *A baumannii*, and *P aeruginosa*) led directly to 9.29 lakh deaths and was associated with 3.57 million. One pathogen-drug combination – methicillin-resistant *S aureus*, or MRSA – directly caused more than 1 lakh deaths. Resistance to two classes of antibiotics often considered the first line of defence against severe infections – fluoroquinolones and beta-lactam antibiotics – accounted for more than 70% of deaths caused by AMR.

Antibiotics in Covid

“There is a lot of improper use of antibiotics happening in Covid too. A study reported by ICMR (Indian Council of Medical Research) from 10 hospitals showed that when Covid patients acquire drug-resistant infections in hospitals, the mortality is almost 50-60%,” said Dr Kamini Walia, programme officer, AMR, ICMR. “However data is difficult to collect because of absence of hospital information systems in most hospitals. The real impact of drug-resistant infections in patients can be determined when the laboratory reports are connected with the clinical outcome,” Dr Walia said.

Dr Ramanan Laxminarayan, Center for Disease Dynamics, Economics & Policy (US), who was not involved in the study, told The Indian Express that until changes in ICMR guidelines

earlier this week, azithromycin was routinely prescribed for all Covid patients even though there is no evidence that this is helpful. "... The absolute lack of regard for the life-saving value of antibiotics may come back to haunt us when we need these drugs for bacterial infections," he said.

"This is the first time we have evidence-based numbers as to what could be the toll of drug resistance in terms of morbidity and mortality," Dr Walia said. "We have tried to come up with what could be the burden of these infections in the country. However deaths are not recorded due to drug-resistant infections but reported mainly as symptoms or the disease with which the patient got admitted," Dr Walia said. "... it (drug resistance) has yet to be linked with clinical outcomes. That has been one of the key reasons why we have not got the policymakers' attention to do something substantial to address the problem."

**1.2mn people died in 2019 from antibiotic-resistant bacterial infections: Study (Hindustan Times: 20220120)**

<https://www.hindustantimes.com/india-news/12-million-people-died-in-2019-of-antibiotic-resistant-bacterial-infections-study-101642652427998.html>

The study, published in Lancet, is by far the most comprehensive estimate of the global impact of antimicrobial resistance

Hundreds of thousands of deaths now occur due to previously treatable infections as they have become resistant to drugs.

NEW DELHI: At least 1.2 million people died in 2019 as a direct result of antibiotic-resistant bacterial infections, according to a study published in the medical journal Lancet. This is by far the most comprehensive estimate of the global impact of antimicrobial resistance.

The analysis covering 204 countries and territories found that antimicrobial resistance (AMR) was now a leading cause of death worldwide, higher than HIV/AIDS or malaria. In effect, hundreds of thousands of deaths now occur due to common, previously treatable infections such as lower respiratory and bloodstream infections as the bacteria that cause them have become resistant to drugs.

The report highlights an urgent need to scale up action to combat AMR and outlines immediate actions for policymakers that will help save lives and protect health systems. These include optimising the use of existing antibiotics, taking greater action to monitor and control infections, and providing more funding to develop new antibiotics and treatments.

“These new data reveal the true scale of antimicrobial resistance worldwide and are a clear signal that we must act now to combat the threat. Previous estimates had predicted 10 million annual deaths from antimicrobial resistance by 2050, but we now know for certain that we are already far closer to that figure than we thought. We need to leverage this data to course-correct action and drive innovation if we want to stay ahead in the race against antimicrobial resistance,” said the study co-author Chris Murray, Institute for Health Metrics and Evaluation, University of Washington.

Estimates of the health impacts of AMR have been published for several countries and regions, and for a small number of pathogen-drug combinations in a wider range of locations. However, until now no estimates have covered all locations and a broad range of pathogens and drug combinations, according to the researchers.

The new Global Research on Antimicrobial Resistance (GRAM) report estimates deaths linked to 23 pathogens and 88 pathogen-drug combinations in 204 countries and territories in 2019.

“Statistical modelling was used to produce estimates of the impact of AMR in all locations – including those with no data – using 471 million individual records obtained from systematic literature reviews, hospital systems, surveillance systems, and other data sources,” said the paper.

Disease burden was estimated in two ways: deaths caused directly by AMR (ie deaths that would not have occurred had the infections been drug-susceptible and therefore more treatable), and deaths associated with AMR (ie where a drug-resistant infection was implicated in deaths, but resistance itself may or may not have been the direct cause). Deaths caused by and associated with AMR were calculated for 204 countries and territories and reported for 21 global regions and seven super-regions.

The analysis shows AMR was directly responsible for an estimated 1.27 million deaths worldwide, and associated with an estimated 4.95 million deaths, in 2019. HIV/AIDS and malaria have been estimated to have caused 860,000 and 640,000 deaths, respectively, in 2019.

Drug resistance in lower respiratory infections – such as pneumonia – had the greatest impact on AMR disease burden, causing more than 400,000 deaths and associated with more than 1.5 million deaths. Drug resistance in bloodstream infections – which can lead to the life-threatening condition sepsis – caused around 370,000 deaths and was associated with nearly 1.5 million deaths. Drug resistance in intra-abdominal infections – commonly caused by appendicitis – led directly to around 210,000 deaths and was associated with around 800,000.

While AMR poses a threat to people of all ages, young children were found to be at particularly high risk, with around one in five deaths attributable to AMR occurring in children aged under five years.

Deaths caused directly by AMR were estimated to be highest in Sub-Saharan Africa and South Asia, at 24 deaths per 100,000 population and 22 deaths per 100,000 population,

respectively. AMR was associated with 99 deaths per 100,000 in Sub-Saharan Africa and 77 deaths per 100,000 in South Asia. In high-income countries, AMR led directly to 13 deaths per 100,000 and was associated with 56 deaths per 100,000.

Of the 23 pathogens studied, drug resistance in six alone (E coli, S aureus, K pneumoniae, S pneumoniae, A baumannii, and P aeruginosa) led directly to 929,000 deaths and was associated with 3.57 million. One pathogen-drug combination – methicillin-resistant S aureus, or MRSA – directly caused more than 100,000 deaths in 2019, while six more each caused between 50,000 and 100,000 deaths.

Across all pathogens, resistance to two classes of antibiotics often considered the first-line defence against severe infections – fluoroquinolones and beta-lactam antibiotics – accounted for more than an estimated 70% of deaths caused by AMR.

The health impact of pathogens varied widely based on location, with deaths attributable to AMR in Sub-Saharan Africa most often caused by S pneumonia (16% of deaths) or K pneumonia (20%), while around half of deaths attributable to AMR in high-income countries were caused by Slead-based aureus (26%) or E. coli (23%).

“With resistance varying so substantially by country and region, improving the collection of data worldwide is essential to help us better track levels of resistance and equip clinicians and policymakers with the information they need to address the most pressing challenges posed by antimicrobial resistance. We identified serious data gaps in many low-income countries, emphasising a particular need to increase laboratory capacity and data collection in these locations,” said study co-author Christiane Dolecek.

## **Multiple sclerosis**

### **Common virus may play role in debilitating neurological illness (The Indian Express: 20220120)**

<https://indianexpress.com/article/technology/science/common-virus-neurological-illness-7732009/>

Epstein-Barr virus infects nearly everyone in their teen or young adult years, and few go on to develop multiple sclerosis.

Cells infected with Epstein-BarrCells infected with Epstein-Barr, a common herpes virus that can cause mononucleosis and establishes a latent, lifelong infection of the host. (CDC)



For decades, researchers have suspected that people infected with an exceedingly common virus, Epstein-Barr, might be more likely to develop multiple sclerosis, a neurological illness that affects 1 million people in the United States. Now, a team of researchers reports what some say is the most compelling evidence yet of a strong link between the two diseases.

The virus infects nearly everyone in their teen or young adult years, and few go on to develop multiple sclerosis. The researchers also note that it is not the only known risk factor for people who develop the illness. But they say their data points to it being the clearest of them all. While it remains to be seen whether the finding will result in treatments or cures for multiple sclerosis, the study may further motivate research into therapies and vaccines for the condition.

In their study, published in *Science*, the researchers examined data from 10 million people on active duty in the US armed forces over two decades. The strength of their study, said its principal investigator, Dr. Alberto Ascherio, a public health researcher at the Harvard T.H. Chan School of Public Health, is that they were able to follow people for years and ask whether infections with Epstein-Barr preceded multiple sclerosis.

Among the service members in the study, 801 developed multiple sclerosis, a disabling disease that occurs when the immune system attacks the fatty insulation that protects nerves in the brain and spinal cord. Most who develop the disease are diagnosed between the ages of 20 and 50. The disease is rare, though — an individual's chance of getting multiple sclerosis is one-half of 1 per cent.

At the same time, the virus in question, Epstein-Barr, is common, infecting nearly everyone in the population at some point. Although few are aware that they were infected, some develop mononucleosis. The virus remains in the body for life.

Because so few who are infected with the virus get multiple sclerosis, it cannot be the sole cause of the disease. Other risk factors have been identified, including some, like low levels of vitamin D and smoking, that were seen previously by the Harvard group using the same data set. There also are genetic factors — 900 abnormal genes have been identified in patients with multiple sclerosis, said Dr. Anthony J. Reder, a multiple sclerosis expert at the University of Chicago, who was not involved in the new study. Gender also plays a role; most patients are women.

But, Ascherio said, no risk factor stands out like Epstein-Barr infections.

To ask how much the virus increases risk, the investigators studied the small proportion of people who were not infected with the virus early in their service careers but subsequently became infected. They detected infections by the presence of antibodies to the virus.

Among the multiple sclerosis patients, 32 out of 33 got infected with Epstein-Barr before they developed MS.

As a control group for their study, the scientists tracked 90 individuals who were not initially infected with Epstein-Barr and who also did not get multiple sclerosis. Of them, 51 subsequently became infected with Epstein-Barr.

That meant an Epstein-Barr virus infection increased the risk of multiple sclerosis over thirtyfold, Ascherio said.

But Reder cautioned that it could be hard to tease out cause and effect from an epidemiological study. People who develop multiple sclerosis have overactive immune systems that make them develop high levels of antibodies to viral infections. Multiple sclerosis might arise not because of the virus but because of the body's response to it.

"Multiple sclerosis patients have fewer viral infections than normal," he said, because their immune systems are so active that they effectively fight off viruses. "Multiple sclerosis patients often say, 'I never get a cold.' When I hear that, my ears perk up."

The drugs used to treat multiple sclerosis suppress the immune system, Reder noted. So far, he added, antiviral drugs have not helped patients with multiple sclerosis.

The Harvard group tried to control for the possibility that the immune system's response, not the virus itself, increases the risk of multiple sclerosis in those infected with Epstein-Barr. They asked if antibodies to another common virus, cytomegalovirus, also were linked to a greater risk of multiple sclerosis. They were not.

But cytomegalovirus, Reder said, for unknown reasons, seems to protect against multiple sclerosis. So the fact that those infected with it did not have a higher risk of multiple sclerosis might not be surprising.

Others said the study was convincing evidence of cause and effect.

"The way it was done is quite compelling," said Dr. Michael Davin Kornberg, a multiple sclerosis specialist at Johns Hopkins. "It really is the most convincing data we've had for a causal association."

That leaves the question of what to do now.

Dr. Bruce Cree, a multiple sclerosis researcher at the University of California, San Francisco, noted that it might be difficult to treat multiple sclerosis by going after Epstein-Barr because it can be difficult to find the actual virus in patients. Even though multiple sclerosis is a disease of the brain and spinal cord, he could not find the virus in patients' spinal fluid.

But patients do seem to harbor cells in their brains that produce antibodies to Epstein-Barr virus. Cree is researching whether he can treat multiple sclerosis patients by eradicating those cells, which are infected with Epstein-Barr.

Dr. Lawrence Steinman, a multiple sclerosis researcher at Stanford, who wrote a perspective accompanying the Harvard group's paper, said an experimental mRNA vaccine against

Epstein-Barr was one of a number of approaches being designed to stop the virus from affecting the brain.

The question now, he said, is, “Can we make multiple sclerosis go away?”

This article originally appeared in The New York Times.

## **Women Health**

### **Resilience linked to sexual health in menopausal women: Study (Hindustan Times: 20220120)**

<https://www.hindustantimes.com/lifestyle/health/resilience-linked-to-sexual-health-in-menopausal-women-study-101642652402818.html>

A new study has found that resilience is linked to sexual health and a better quality of life during the menopause transition.

The menopause transition may be considered an adverse situation for most women because it involves a long process of adaptations that can cause negative feelings and a depressed mood.(Shutterstock)

The menopause transition may be considered an adverse situation for most women because it involves a long process of adaptations that can cause negative feelings and a depressed mood.(Shutterstock)

A new study has found that resilience is linked to sexual health and a better quality of life during the menopause transition.

The research has been published in the 'Menopause Journal'.

The menopause transition may be considered an adverse situation for most women because it involves a long process of adaptations that can cause negative feelings and a depressed mood. The transition to menopause involves physical, psychological, and social changes that can have a severe effect on a woman's overall quality of life. In addition, menopausal women are also more vulnerable to sexual dysfunction as a result of changes within their bodies during the transition.

Female sexual dysfunction (FSD) can be defined as the inability of women to participate in a sexual relationship as they would wish. It is a multifactorial problem that may include lack of

satisfaction with sexual activity, reduced sexual desire, pain with sexual activity, poor arousal, or difficulty reaching orgasm.

Previous studies had shown that sexual satisfaction is associated with the overall quality of life in menopausal women, with lower general well-being in sexually dissatisfied women.

This new study involving 101 symptomatic menopausal women, however, represented the first time that research has focused on the effect of sexual health on the resilience scores of menopausal women and their quality of life.

It found that resilience scores were significantly higher in women with high sexual function scores and demonstrated that menopause-related quality of life was significantly worse in low-resilient women.

As a result, the researchers concluded that a woman's resilience is linked with her sexual health as well as her quality of life during the menopause transition.

"This study highlights the potential protective effects of resilience as it relates to sexual health in menopausal women. This capability enables individual women to adapt to change, resist the negative effect of stressors, and return to normal function more quickly after adverse events. Fortunately, this skill set can be strengthened, potentially representing another tool that clinicians can use to help women with sexual dysfunction," said Dr Stephanie Faubion, NAMS medical director.

## **Skeletal muscles**

### **Muscles starve in the absence of vitamin D, study of mice finds (The Hindu: 20220120)**

<https://www.thehindu.com/sci-tech/science/muscles-starve-in-the-absence-of-vitamin-d-study-of-mice-finds/article38275243.ece?homepage=true>

The study examined the molecular nature of muscle dysfunction in mice, in the absence of vitamin D

Skeletal muscles normally brim with energy, yet they starve in the absence of Vitamin D, says recent research led by Aneeshkumar A. G. of National Institute of Immunology, New Delhi. This research demonstrates that glycogen stored in the skeletal muscles is not converted into a usable form of energy without Vitamin D.

Usually, the glucose absorbed from the food is converted into glycogen and stored in the skeletal muscle. This stored energy reserve is used by muscles to

## **Corona Vaccine**

### **Covaxin booster increases neutralising antibodies, study finds (The Hindu: 20220120)**

<https://www.thehindu.com/sci-tech/science/covaxin-booster-increases-neutralising-antibodies-study-finds/article38275378.ece?homepage=true>

The control arm of the study had 93 participants and the intervention arm had 91 participants, but most of these people were under 55 years

A joint study by Bharat Biotech and ICMR has provided the first evidence of the immune response of a homologous booster six months after the second dose. The randomised control trial was carried out on 184 participants belonging to the phase-2 trial arm that received 6 microgram of the vaccine for both first and second dose.

The booster dose was found to be safe. The most frequent adverse events reported were mild and transient pain and itching at the injection site.

## **Climate change**

### **Climate change: Substituting food items rather than whole diets can still make a big difference (Medical News Today: 20220120)**

<https://www.medicalnewstoday.com/articles/climate-change-substituting-food-items-rather-than-whole-diets-can-still-make-a-big-difference>

New research examines the impact of replacing dietary beef with poultry on a person's carbon footprint. Ezra Bailey/Getty Images

Humans' food systems account for around a third of global greenhouse gas emissions.

Consequently, if a person changes the foods they eat, they could reduce their carbon footprint.

However, wholesale dietary changes may be one step too far for some people.

In the present study, researchers found that substituting particular food items — rather than whole diets — can still significantly reduce an individual's carbon footprint.

In a new study, researchers have found that a person can potentially reduce their carbon footprint significantly by substituting particular food items — in particular, beef.

The research, which appears in the *American Journal of Clinical Nutrition*, may motivate people to adapt their diet since it does not indicate a need to make wholesale changes to what they cook and eat.

### Food and global heating

Researchers have found that human food systems cause around one-third of global greenhouse gas emissions. Greenhouse gases are a key driver of global heating, which threatens ecosystems and biodiversity, as well as human health.

Individuals can reduce their contributions to greenhouse gas emissions and global heating by changing the types of food they consume.

However, some people may find changing to an entirely new diet challenging, particularly if they have never prepared or eaten the foods the new diet requires.

The researchers behind the present study wanted to see if making a minor change — for example, substituting a single food item in a person's diet — could also significantly reduce their carbon footprint. If so, this might be a more feasible approach than a person changing their diet completely.

Dr. Diego Rose spoke to *Medical News Today*. Dr. Rose is the study's lead author and is Professor and Director of Nutrition at the School of Public Health & Tropical Medicine, Tulane University, New Orleans.

“Previously, we developed techniques to assess the carbon footprints of self-selected American diets for large samples of individuals. When we ranked these individuals' 1-day diets by their carbon footprints, we found that the top 20% of individuals accounted for an outsized share (46%) of the total impact.”

“We wanted to know what was driving these higher impact diets, so we drilled down into the individual diets, looking at each item they ate on a given day. In many cases, we saw that just one item in the diet turned an otherwise average diet into a high-impact diet.”

“This item was typically a beef item, and we noticed that by substituting it for a less impactful animal food — say, chicken — the overall impact of the diet would be much less.”

– Dr. Diego Rose

“That’s when we decided to study this more rigorously,” added Dr. Rose.

Over 16,000 study participants

To do this, Dr. Rose and his colleagues drew on data from the National Health and Nutrition Examination Survey (NHANES) Trusted Source between 2005–2010. They included data from 16,800 18 years or older participants who had given information on a 24-hour dietary recall to interviewers.

The researchers then looked at the daily reported greenhouse gas emissions and water scarcity footprint.

With this information, the researchers could then identify food items that contributed the most to the adverse effects of a person’s diet and propose substitute items that might substantially reduce these adverse effects.

The researchers found that beef had the most significant adverse environmental effect. Approximately 20% of the participants ate beef at least once a day.

If the participants placed their beef consumption for another type of meat, such as turkey, they would reduce the greenhouse gas emissions associated with their diet by 48%. This change would also reduce the participants’ water scarcity footprint by 30%.

MNT spoke to Dr. Rosalind Fallaize, a lecturer in Nutrition and Dietetics at the University of Hertfordshire, Hatfield, United Kingdom. Dr. Fallaize said it was important to consider both climate change and health impacts, as the study does. However, she also highlighted that it is also important to consider the costs of switching food items.

“The analysis shows us that small dietary substitutions — [that is,] swapping beef [for] pork [or] poultry products — can reduce the environmental impact of our diets while maintaining overall diet quality. This study uses a large [United States] dataset and robust methods. It is great to see the combined consideration of the environmental impact and diet quality.”

“The paper considers a measure of diet quality — the Healthy Eating Index — to evaluate the dietary impact of the changes, ensuring that substitutions do not negatively impact this. [However,] it would be interesting to explore the impact of these changes at the micronutrient level, that is, vitamins and minerals — for example, beef contains more vitamins B12 and folate than poultry.”

“An aspect which is sometimes overlooked in this area of research is the material cost of making dietary changes — for those experiencing food poverty, cost is a key barrier. It’s important that [we consider this] when promoting more sustainable diets so that we do not exacerbate health inequalities.”

– Dr. Rosalind Fallaize

‘Self-efficacy:’ Why smaller changes are easier

For Dr. Rose, a strength of the findings is that they increase a person's chances of reducing their adverse climate effects. This is because substituting a single, high-impact food item is less of a change than switching an entire diet and so more likely to happen.

"It's pretty clear from [the] research that people will not make changes if they don't feel they are able to make changes. This 'self-efficacy,' or belief in one's ability to succeed, is at the core of behavioral change theories."

"A simple change, especially when you're not giving up much, is obviously easier to remember and to enact [than] complex changes. Once made, the change reinforces one's ability to succeed, and a positive feedback loop can be created for additional changes," said Dr. Rose.

Dr. Fallaize agreed.

"The authors cite a very important aspect of changing behavior in their paper: self-efficacy, or the belief in our own ability to perform a behavior, for example, swapping beef for pork at dinner."

"Small substitutions are often much easier to adopt than whole diet changes [or] overhauls — [for example,] swapping from a meat-based to a strict vegan diet — so we may feel more confident in our ability to do this."

"Substitution of beef with poultry [or] pork is also more likely to draw on the same cooking skills, removing the frequently-faced barrier of not knowing how to prepare [or] cook or incorporate new or different foods in your diet. Once this small substitution has embedded into our diet [or] lifestyle, we can then try another."

"Ultimately, small substitutions are more likely to become lasting changes, which is the goal when trying to adopt a more sustainable and or healthier diet," said Dr. Fallaize.

Gathering consumer support

Dr. Rose said that it was getting easier for consumers to identify the adverse climate effects of their food purchases.

"This is a relatively new field, which lags quite a bit behind nutrition labeling. That said, there are new tools that are constantly being developed."

"In France, they are developing Eco-Score, a front-of-package labeling tool that assesses [the] overall environmental impact of a food. There are some apps that can provide information on this as well, for example, GreenChoice."

"But the overall availability of resources on this front is pretty thin. We're in the process of developing something ourselves."

Dr. Rose said governments had an essential role in helping consumers identify lower-impact food items.



“Governments need to prioritize research in this area, specifically the life cycle assessments of food products that are at the root of this work. They also need to support the collation of all the different studies that are done in this area into usable databases that can then be disseminated.”

“Here in the U.S., the Department of Agriculture has a long history of doing research and supporting database development on the nutrient composition of foods. This has allowed third-party developers to create diet assessment apps, which the public can then use to assess their own food choices based on nutrition.”

“There really is no reason why the same approach couldn’t be taken for assessing [the] environmental impacts of diets, other than perhaps a lack of awareness or a lack of political will,” said Dr. Rose.

In the U.K., Dr. Fallaize highlighted the One Blue Dot toolkit developed by the Association of UK Dietitians as a valuable resource for consumers interested in lowering the adverse environmental effects of their diet.