

Changing how we heat our homes can benefit both health and climate



Many people who use wood-burning stoves are unaware of the associated health hazards from indoor air pollution, especially for children and older adults. Cleaner, safer forms of domestic heating are now available that provide the added bonus of lower greenhouse gas emissions.

The cheerful glow of a wood-burning stove creates a cozy atmosphere on a cold winter's night, but the aesthetic appeal of wood burners comes at a high price for human health.

The Environmental Protection Agency (EPA) warns that wood smoke is largely responsible for poor air quality during winter months in many residential areas across the United States. Burning wood, in addition to producing toxic gases such as nitrogen oxides and carbon monoxide, also generates tiny, solid particles called

particulates. "The particle pollution is especially dangerous because these particles are so tiny that they can travel deep into the lungs, causing irritation and inflammation," said Dr. John M. James, medical specialist and spokesperson at the Asthma and Allergy Foundation of America.

"Immediate exposure can cause coughing, wheezing, shortness of breath, chest tightness, and asthma attacks," he told Medical News Today. "Chronic exposure can lead to an overall decline in lung function and chronic bronchitis," he added. According to the EPA, particulate matter (PM) can also cause heart attacks, stroke, irregular heart rhythms, and heart failure, especially in people who are already at high risk for these conditions.

"Wood smoke can irritate your lungs, cause inflammation, affect your immune

system, and make you more prone to lung infections, likely including SARS-CoV-2, the virus that causes COVID-19."

— Environmental Protection Agency
The smaller the particulates, the more easily they pass through the lungs into the bloodstream and throughout the body. The most harmful particles are therefore less than 2.5 micrometers (thousandths of a millimeter) across and are known as PM2.5. In addition to domestic wood-burning, other sources of PM2.5 include power stations, the engines of motor vehicles, and rubber tires as they wear down. Multiple health effects: The particles lodge in the lungs, heart, brain, and other organs, where they can have serious impacts on health, especially for vulnerable individuals such as children, older adults, and people with pre-existing conditions. —Agencies

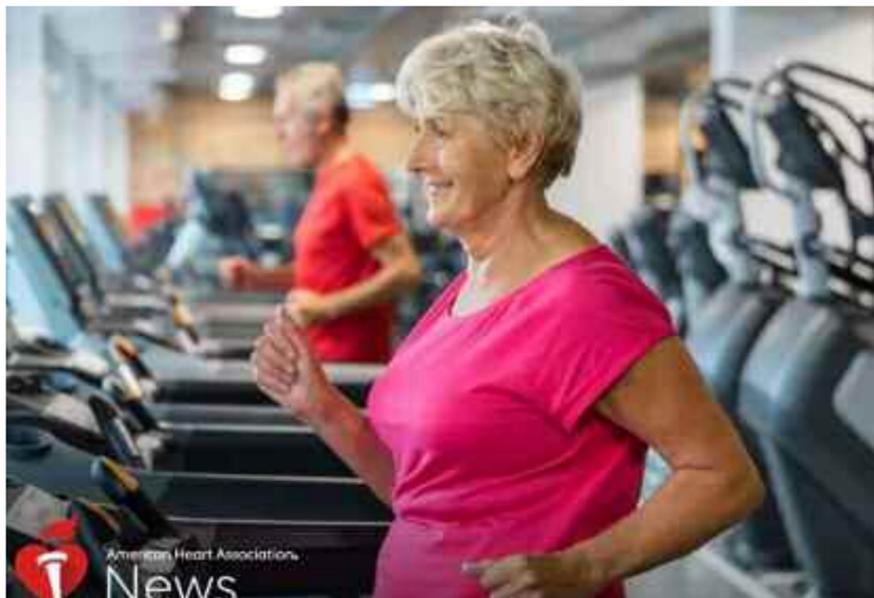
'Good' cholesterol may decrease your risk of Alzheimer's disease

Good cholesterol or high-density lipoprotein (HDL) is essential to health. Still, the impact of HDL on the brain is not fully understood. Alzheimer's disease is a disorder that impacts people's ability to think and function in everyday life. Researchers are still working on developing treatments and understanding the condition. A recent study suggests that higher levels of small high-density lipoproteins might decrease the risk for Alzheimer's disease.

Alzheimer's disease is a debilitating condition that primarily affects older adults. People who have it can become forgetful and become unable to carry out tasks of daily living. Currently, the disorder has no cure. Researchers are still trying to understand how the disease develops, how to prevent it, and how to best treat it. A recent study published in *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* Trusted Source offers new insight. Researchers studied the connection between small HDLs or "good" cholesterol in the cerebrospinal fluid and the risk for Alzheimer's disease. The results suggest that higher levels of small HDL were associated with a lower risk of developing Alzheimer's disease. Cholesterol is a substance that your body needs. For example, the body uses cholesterol to make certain hormones, properly digest food, and make new cells. The body makes cholesterol, but people can also get it from food sources. As noted by the American Heart Association Trusted Source, cholesterol exists in the body in two primary forms: low-density lipoprotein (LDL) and high-density lipoprotein (HDL). LDLs can build up in the bloodstream and increase the risk of strokes and heart attacks, so it is essential for your LDL count not to be too high. —Agencies



Being easily fatigued may signal future heart problems



ISLAMABAD: The study, appearing in the *Journal of the American Heart Association*, looked at a participant pool of 625 individuals with an average age of 68 years.

The study team found that those who tired easily had an overall higher chance of developing cardiovascular disease.

First, the researchers calculated each person's 10-year risk of heart disease or stroke, using two different formulas. Then, 4.5 years later, they assessed each participant with a test that consisted of "an extremely slow walk." Each person had to walk for 5 minutes on a treadmill set at a pace of 1.5 miles per hour. This exercise test was to examine their "fatigability." After studied all the data, the researchers found that those who had higher cardiovascular risk scores from years ago were more likely to report that this simple physical task

was exhausting. "Even if you're exhausted because you have a newborn at home, this would be considered a very easy task," says study author Jennifer Schrack, an associate professor in the epidemiology department at Johns Hopkins Bloomberg School of Public Health in Baltimore, MD. "It should be very light exertion. When people think the effort is more than very light, that's informative." Cardiovascular disease (CVD) is the leading cause of death worldwide, according to the World Health Organization (WHO). While the current numbers of deaths due to CVD are high, experts believe they will increase over the next 15 years from 17.9 million in 2016 to over 23.6 million in 2030 around the world. The American Heart Association (AHA) estimate there are 85.6 million of people in the United States with more than one type of

CVD, and approaching half of these adults are 60 years old or above.

CVD is a broad term that can refer to several different conditions. There are several ways to reduce the chances of developing CVD. Eating well is a significant part of having a healthy cardiovascular system. This means consuming foods that are low in saturated fat, trans fats, and sodium. It is also vital to include fruits and vegetables, whole grains, nuts, legumes, and seeds. Also, it is crucial to be physically active. The WHO goal for maintaining a healthy heart is to do at least 150 minutes each week of moderate aerobic exercise, such as brisk walking. Many people break this up into five 30-minute sessions each week. Alternatively, they can swap this regime for 75 minutes of high-intensity aerobic exercise, such as jogging or running.

Study links insomnia genes to heart disease, stroke risk

ISLAMABAD: Heart disease is the leading cause of death in the United States, with stroke coming in at number five. Maintaining a healthy heart is central to preventing heart or cardiovascular disease (CVD), and our sleep is part of this strategy. The Centers for Disease Control and Prevention (CDC) advise that "most adults need at least 7 hours of sleep each night." But what links sleep to our hearts? Experts have previously identified associations between poor sleep and heart disease. Earlier this year, *Medical News Today* featured a study that identified a significantly greater risk of death from heart disease in people who had high blood pressure together with insomnia and stress. So, what can another study add to the picture? Most population studies look for associations, but they cannot pinpoint cause and effect. While it may make sense to many people that poor sleep causes poor heart health, there is little data to confirm which is the chicken and which is the egg. A new study aims to do just that. Susanna Larsson, an associate professor of cardiovascular and nutritional epidemiology at the Karolinska Institute in Stockholm in Sweden, and Dr. Hugh Markus, a professor of stroke medicine at the University of Cambridge in the United Kingdom, published their analysis this week in the journal *Circulation*. What sets this study apart from others is the use of Mendelian randomization (MR). This method uses genetic markers to investigate whether a risk factor can cause a particular disease. A person inherits genetic markers, which will not change during their lifetime. Therefore, the technique works under the assumption that a disease cannot modify these markers. This allows scientists to look at causation. Earlier this year, a large scale genetic analysis using data from 1.3 million people identified 956 genes across 202 locations in our genome that have a link to insomnia. Larsson looked at a group of genetic variants called single nucleotide polymorphisms (SNPs) from this dataset and any potential ties to heart health. SNPs are mutations that only change one base in a particular genetic sequence. This analysis allowed her to measure the odds of cardiovascular disease risk associated with an individual's genetic propensity toward insomnia, powered by Rubicon Project Larsson used publicly available data from large association studies of people with various forms of heart disease. —Online



Why mental healthcare is less accessible to marginalized communities

Individuals from minoritized ethnic communities are generally less likely to use mental healthcare services than the majority white population. Some of the reasons for disparities in mental health utilization by marginalized ethnic groups include provider discrimination, lack of adequate health insurance, high costs, limited access to quality care, stigma, mistrust of the healthcare system, and limited awareness about mental illnesses. Why do people from historically marginalized communities feel put off from accessing mental healthcare? Image credit: Ekaterina Lesnik/EyeEm/Getty Images. Although the prevalence of mental disorders is lower in Black people than in white people in the United States, the impact of these disorders tends to be more severe in marginalized communities. For instance, depression is more likely to persist in Black and Hispanic individuals, despite its lower prevalence in these minoritized ethnic groups than in white individuals. Moreover, mental illnesses are more likely to cause disability in people from historically marginalized ethnic groups. Disparities in the utilization of mental health services could be partly responsible for these differences in outcomes. A 2015 survey found that 48% of white adults with mental illness utilized any mental health services in the previous year. In contrast, 22% of Asian Americans and around 31% of Black and Hispanic individuals with mental illness received

Omega-3 fatty acid medications can boost cardiovascular health

ISLAMABAD: Triglycerides are fats in the blood. Some are naturally produced by the liver, while others come from calories that the body doesn't need to use immediately. The more calories a person takes in, the likelier they are to have a high triglyceride count.

Higher levels, calculated as above 200 milligrams per deciliter (mg/dl), can increase a person's risk of having a stroke or heart attack by causing a narrowing of the arteries. Estimates suggest that around a quarter of the adult population of the United States may have triglyceride levels above 150 mg/dl. Exceedingly high levels — above 500 mg/dl — can also result in inflammation of the pancreas, otherwise known as pancreatitis. Thank-

fully, there are a few ways to reduce triglyceride levels. Getting regular exercise, reducing alcohol consumption, and eliminating sugar and refined carbohydrates can help, as can other steps to maintain a healthy weight, such as swapping saturated for unsaturated fats. Sometimes, these changes are not enough to make a substantial difference. If this is the case, a doctor will rule out conditions such as type 2 diabetes and hypothyroidism before prescribing medication for high triglyceride levels. Currently, two triglyceride-lowering prescriptions exist, and both involve omega-3 fatty acids. One contains a fatty acid called eicosapentaenoic acid (EPA). The other combines EPA with a second fatty acid: do-

cosahexaenoic acid (DHA).

Previous research had not compared the effects of these medications. But a recent review-based advisory from the AHA, published in its journal *Circulation*, has concluded that both are equally effective. The researchers based their findings on an analysis of 17 clinical trials and found that "Treatment with 4 grams daily of any of the available prescription choices is effective," explains first study author Ann Skulas-Ray, Ph.D., from the Department of Nutritional Sciences at the University of Arizona, in Tucson.

Skulas-Ray also notes that these medications can be "used safely in conjunction with statin medicines that lower cholesterol." —Agencies

