

News and Views

Do Eyeglasses Protect Against COVID-19?

Wearing eyeglasses may protect against respiratory viruses, suggests a study of nearly 4,000 participants published in *JAMA Network Open*.¹ However, the study was inconclusive with regard to protection against spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).

In this study, researchers enrolled 1,852 adults to investigate the efficacy of wearing eyeglasses as a barrier to SARS-CoV-2 and other respiratory viruses in public places for 2 weeks; the control group included 1,865 individuals. Two-thirds (~66%) of the study group was female. Persons who did not regularly wear eyeglasses, currently had no COVID symptoms and had not been COVID-positive in the preceding 6 weeks were included in this randomized controlled trial conducted from February 2 to April 24, 2022.

Sixty-eight (3.7%) subjects who wore assigned eyeglasses to be worn in public places had a positive result for COVID-19, which was the primary outcome of the study, compared to 65 (3.5%) in the control group with absolute risk difference of 0.2%. Nearly 10% of participants in the intervention group tested positive for SARS-CoV-2 based on self-report versus 11.5% in the control group. The incidence of respiratory symptoms was 30.8% among the glasses-wearing group compared to 34.1% of those who did not wear glasses (absolute risk difference, -3.3%). In this trial, conducted when Omicron was the dominant variant, the incidence of COVID-positive cases was comparable between the two groups. However, the incidence of respiratory infections was lower among those who wore eyeglasses. Although eye glasses or other types of glasses such as sunglasses were not conclusively proven to protect against COVID-19, wearing glasses can be considered as part of preventive measures because “it is simple, low cost and has few negative consequences”. They may provide a partial barrier to the infection.

Reference

1. Fretheim A, et al. Effect of wearing glasses on risk of infection with SARS-CoV-2 in the community: a randomized clinical trial. *JAMA Netw Open*. 2022;5(12):e2244495.

Walk for a Healthy Heart

Walking 10k steps daily may seem an intimidating goal for many. Don't be disheartened, if you are not able to

achieve this. A recent study published in the journal *Circulation* says that the beneficial effects of walking on heart health progressively increased even with small increases in the number of steps per day in older adults. Daily step count ranging between 6,000 and 9,000 lowered the risk of cardiac events by up to 50% among older adults compared to those who walked just 2,000 steps in a day.¹

A meta-analysis of 8 studies involving 20,152 adults was conducted to examine the association of daily step counts and cardiovascular events - fatal and nonfatal coronary heart disease, stroke, heart failure - by age group (younger and older adults) and the amount of physical activity. The mean age of participants was 63.2 years; 52% were women. Based on the physical activity, the participants were categorized into four quartiles, quartile 1 being the least and quartile 4 being the group with the maximum activity. The hazard ratios (HR) were generated using restricted cubic spline models.

The older adults walked less with a median number of 4,323 steps per day, whereas the younger adults walked more with 6,911 steps per day. During a mean follow-up period of 6.2 years, 1,523 cardiovascular events (12.4 per 1,000 person-years) occurred. The association of daily steps and the first cardiovascular event, which was the primary outcome of the study, differed considerably between the older (≥ 60 years of age) and younger adults (< 60 years of age).

The risk of a cardiac event was the least among older adults in quartile 4 (median steps 9,259) with HR of 0.51. For those in quartile 3 (median steps 5,520), the HR was 0.62; for quartile 2 (median steps 3,823), the HR was 0.80 compared with those in quartile 1 with the lowest step count (median steps 1,811). In the spline model, a significant curvilinear association was noted for older adults demonstrating the link between more steps and decreased risk of cardiovascular disease (CVD) in this age group. Among the younger participants, the HR for risk of CVD among quartile 2 was 0.79, 0.90 for quartile 3 and 0.95 for quartile 4 compared with the lowest quartile. These results were nonsignificant versus the lowest quartile. In the spline model, no significant association was noted between steps per day and CVD events for them.

No association was noted between the pace of steps and cardiovascular risk.

The key takeaway from this meta-analysis is the inverse relationship between the number of daily steps and risk of CVD among older adults. The risk progressively declined as the daily step count increased. Walking 6,000 to 9,000 steps per day reduced CVD risk by as much as 50% compared to those who walked 2,000 steps per day. However, no such association was observed for younger adults. This can be attributed to the shorter follow-up duration, which was insufficient to measure the incidence of heart disease in the younger adults. This, note the authors, is a limitation of their study.

These findings have significant clinical implications for older adults in particular. One, that it is important to be physically active and two, that gradually increasing the number of steps in a day reduces their risk of acute cardiac events. Physical activity also helps preserve their cognitive skills.

There is no age bar for exercise. Walking is the simplest and most inexpensive form of exercise. Physicians should set attainable goals for all their patients, not just the older adults, who walk less than 10,000 steps in a day and encourage them to be more active for optimum cardiovascular health.

Reference

1. Paluch AE, et al; Steps for Health Collaborative. Prospective association of daily steps with cardiovascular disease: a harmonized meta-analysis. *Circulation*. 2023;147(2):122-31.

Booster Shot can Cut Down Omicron Transmission in Closed Settings

According to a study published in the journal *Nature Medicine*, booster shots helped limit the transmission of Omicron variants during the first wave. The study conducted by researchers from the University of California showed that the likelihood of viral transmission fell by 11% for each additional dose.

In the study, the researchers analyzed data collected from the California Department of Corrections and Rehabilitation (CDCR). The collected data showed that in the duration of 5 months, 22,334 inmates contracted SARS-CoV-2 Omicron infections, and 31 inmates were hospitalized. The researchers observed that the

vaccinated residents were 28% less likely to transmit the COVID infection in comparison to 38% of the unvaccinated residents.

The study, however, found that the likelihood of transmission increased by 6% every 5 weeks since the last vaccine shot. Also, inmates with hybrid immunity acquired from both infection and vaccination were 40% less likely to transmit the virus. (Source: <https://www.daijiworld.com/news/newsDisplay?newsID=1035962>)

Study Reveals that Common, Serious Gut Disorders are Often Misdiagnosed

According to a study published in the journal *Neurogastroenterology & Motility*, rumination is frequently misdiagnosed as other gastrointestinal conditions, resulting in a delay in proper treatment. In this study, the researchers from the Massachusetts General Hospital (MGH) have described this syndrome, how to distinguish it from other conditions, and how to treat it.

The lead author of the study explained that rumination is a behavioral syndrome where patients regurgitate food into their mouths while eating and sitting upright. The research team categorized this syndrome as a disorder of gut-brain interaction (DGBI). They explained that in most cases, doctors think that regurgitations develop as a habit involving an uncomfortable, mounting sensation or inner tension caused by contraction of the abdominal walls after eating. As a result, the symptoms are often misunderstood as functional dyspepsia (stomach pain or indigestion) or gastroparesis.

In this study, the researchers screened 242 patients who were referred to specialists for gastric symptoms pointing toward rumination, such as dyspepsia and gastroparesis. The findings of the study showed that 31 patients (12.8%) checked all the boxes for rumination syndrome, which was determined using a gastric symptom scoring system.

Additionally, they found that patients with rumination were more likely to also experience heartburn, particularly daytime symptoms. Also, more than 48% of the patients reported psychosocial impairment associated with the symptoms of the syndrome. (Source: <https://theprint.in/health/study-reveals-common-serious-gut-disorder-is-often-misdiagnosed/1295548/>)

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