# Physical activity may still not match pre-COVID-19 pandemic levels

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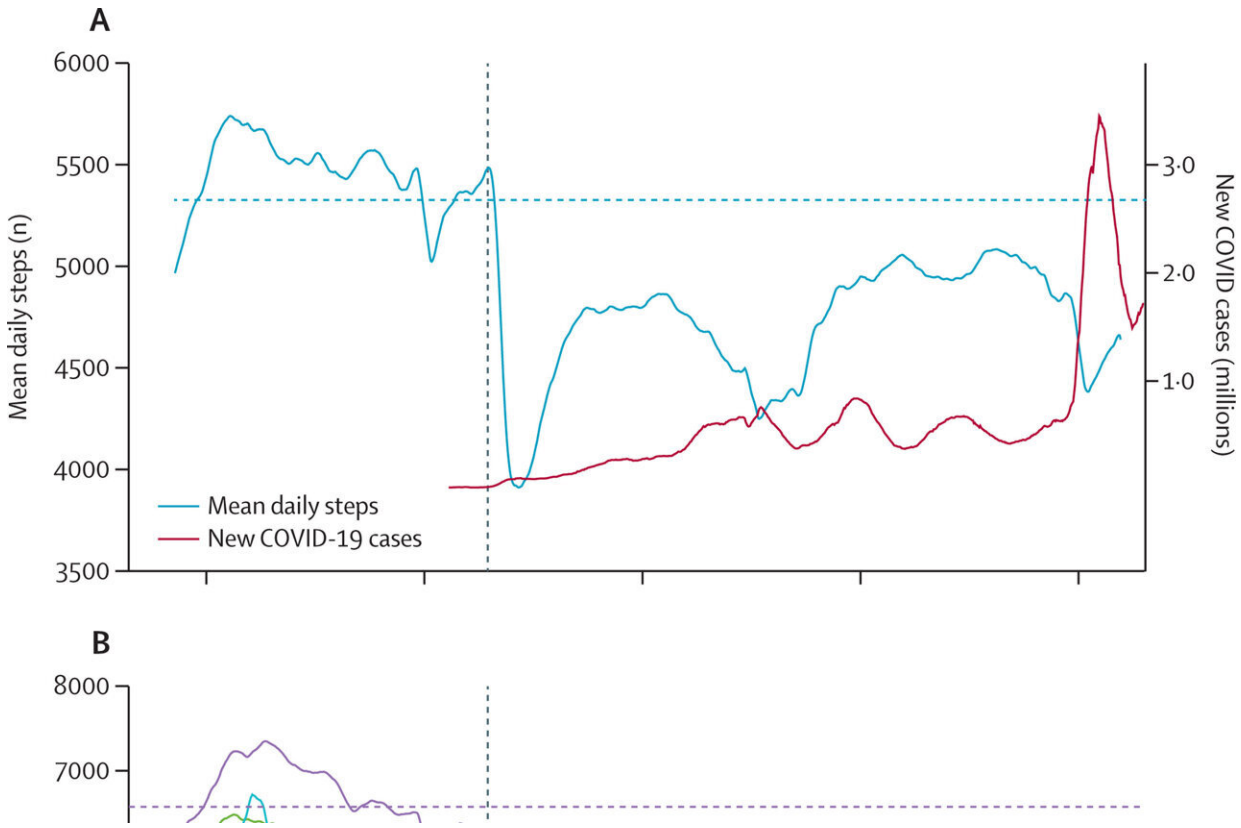


Worldwide physical activity in the 2 years since COVID-19 onset (A) Global mean daily step count. (B) Mean daily step counts by continent. Dotted lines indicate mean baseline step count by region, calculated from Jan 1, 2019–Dec 31, 2019. Vertical black line denotes March 11, 2020, when COVID-19 was declared a global pandemic. All values are plotted by region over a rolling 10-day averaged window for smoothness. Mean pre-pandemic steps per day by continent: Africa=5111, North America=4838, Asia=6072, Europe=6565, Oceania=5881, and South America=5563. Credit: *The Lancet Global Health*

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Step counts—a measure of physical activity—were markedly lower early in the COVID-19 pandemic than pre-pandemic and remained lower, on average, in the two years following the onset of the global pandemic.

In a data analysis publishing August 31 in *The Lancet Global Health*, a team of researchers from UC San Francisco examined worldwide trends in physical activity, measured by step counts, in the two years following the beginning of the COVID-19 pandemic.

The researchers used anonymous, individual data from Jan 1, 2019, to Feb 17, 2022, collected from the free Azumio Argus smartphone app, a health-wellness app. A total of 140,424,429 daily step count measurements were provided by 1,255,811 unique users from more than 200 countries and territories during the study period.

During this timeframe, worldwide physical activity recovered somewhat, but it remained lower than the rate of 5,323 steps per day during the 2019 calendar year. The mean step count in the 90 days preceding the end of the study period (November 2021–February 2022) was lower for all continents compared with the same 90-day, 2019–2020 pre-pandemic period. The same mid-pandemic, 90-day period in 2020–2021 was also lower for all continents compared with the pre-pandemic period.

The period of May to November 2021 exhibited the greatest global recovery of step counts (4,997 steps per day), but step counts remained 10% lower than the global pre-pandemic baseline from May to November 2019 (5,574 steps per day) with regional variation. Step counts recovered the most in North America (4% lower) and Europe (14% lower), and the least in South America (29% lower) and Asia (30%

lower).

"Patterns of step-count recovery appear to reflect regional differences in the timing of COVID-19 infection surges and might also correlate with changes in regional social distancing policies and vaccination availability," said first author Geoffrey Tison, MD, MPH, a cardiologist and an assistant professor in the UCSF Division of Cardiology.

"As the global pandemic persists, understanding its long-term ramifications on physical activity is crucial. These insights might help to inform public health and regional policy decisions to balance necessary efforts of mitigating infection while also maintaining access to physical activity and other important determinants of health."

In all continents, the step-count low point during the COVID-19 surge of January 2022 was less severe than that during January 2021, suggesting a gradual return to pre-pandemic physical activity levels globally. However, these results vary by region: November 2021–February 2022 were significantly higher in North America and Europe compared with the same mid-pandemic 2020–2021 period—suggesting recovery of physical activity—whereas they were significantly lower in Asia.

**More information:** Geoffrey H Tison et al, Worldwide physical activity trends since COVID-19 onset, *The Lancet Global Health* (2022). DOI: 10.1016/S2214-109X(22)00361-8

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