

## **Healthy Lifestyle and COVID-19: Implications for Promoting a Healthier Nation and Moving Forward**

**Background/Objective:** Both infectious and chronic diseases are significant contributors to early mortality and decreased quality of life and have become a public health crisis as the nation faces the COVID-19 pandemic. Abundant research has indicated the association of lifestyle with chronic disease, but to date, little analysis has been conducted assessing lifestyle practices and the potential impact of COVID-19 infection. Therefore, the purpose of this study was to determine the potential association between lifestyle factors (i.e., exercise, diet, health history, spirituality, sleep) and severity of COVID-19 illness across different communities and socio-demographics.

**Methods:** Our methods included survey data collected across the United States via social media and included questions on lifestyle (i.e., exercise, diet, health history, spirituality, sleep), COVID-19 infection, and socio-demographics (including U.S. region) and potential confounders. Chi-square and logistic regression were utilized to assess the association between lifestyle factors and COVID-19.

**Results:** As of to date, over 650 subjects have participated, with 15% reporting COVID-19 infection. Among the participants reporting less than once-a-week exercise, 23% reported infection. Among those who reported inadequate sleep, 23% reported COVID-19 infection. A significant association was observed between inadequate sleep and COVID-19 infection (OR=1.57, 95% CI: 1.00 - 2.46), with females exhibiting the greater association (OR= 2.22, 95% CI: 1.29 – 3.80). Though not significant, it appears individuals with exercise > 30 min/day reported less COVID-19 (OR= 0.65, 95% CI= 0.40 - 1.07).

**Discussion:** Our findings indicate a potential relationship between lifestyle factors and COVID-19 illness and identify opportunities for health promotion. Healthy lifestyle factors are critically important in the recovery from the pandemic and preparation for future outbreaks to reduce susceptibility to infectious diseases. Underserved communities are often at a greater disadvantage for access to healthier lifestyle options which not only drive chronic disease but increase susceptibility to infectious diseases. Our study highlights opportunities for healthy lifestyle promotion and encourages equity in informing recovery response and resilience building. Our study also highlights these differences and encourages viewing ongoing COVID-19 and post COVID-19 support through an equitable lens, to drive sustainable, positive recovery needed in the wake of the pandemic. The study's findings will assist in providing communities with information and resources important for building resilience even in the face of COVID-19 and encourage preparedness for future pandemics.

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