


# COVID-19 Pandemic

## Rising Blood Pressure

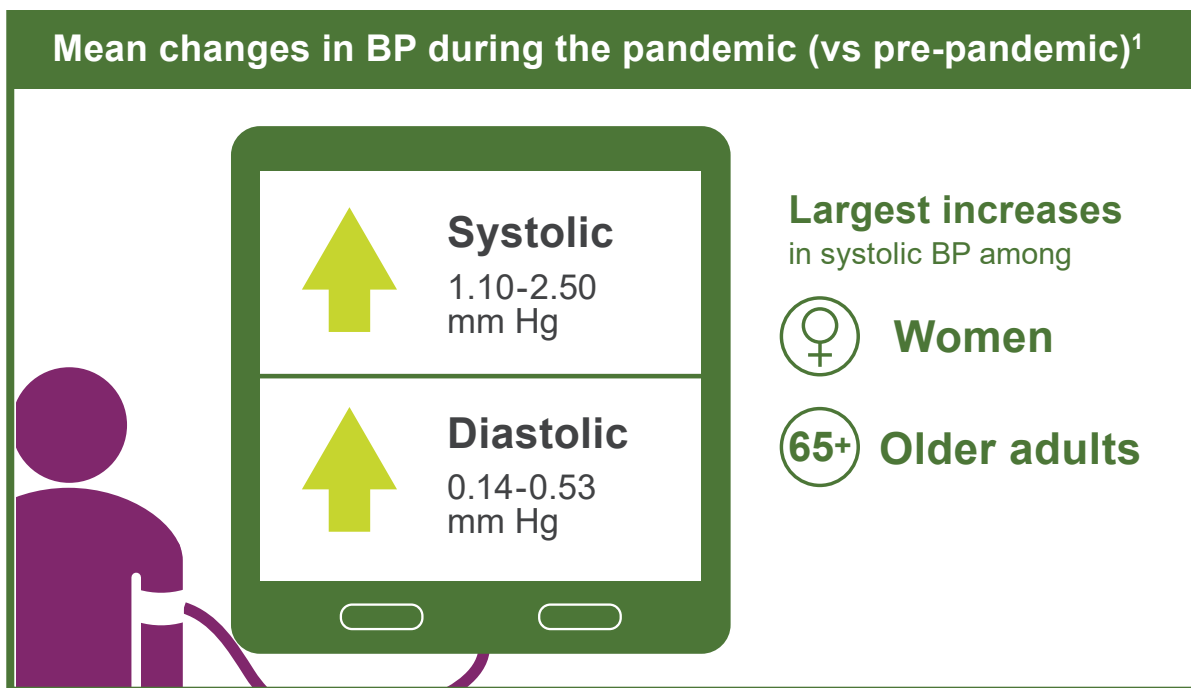
 How did blood pressure (BP) change during the COVID-19 pandemic?


### Background

The COVID-19 pandemic disrupted daily life and routine medical care, including treatment of chronic conditions like high BP. At the population level, even small increases in BP can make cardiovascular disease more likely.

### Study population and results

BP had been measured for 464,585 participants in an employer-sponsored health program (53.5% women; mean age 46 years). BP from the pre-pandemic period (January 2019-March 2020) was compared to the mean of each month during the pandemic period (April-December 2020).



 Blood pressure increased during the COVID-19 pandemic. Surveillance and treatment for high blood pressure will be important to manage potential increases in cardiovascular disease.

<sup>1</sup>Laffin LJ, Kaufman HW, Chen Z, et al. Rise in blood pressure observed among US adults during the COVID-19 pandemic. *Circulation*. Published online December 6, 2021. doi:10.1161/CIRCULATIONAHA.121.057075

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### Article Title: Rise in Blood Pressure Observed Among US Adults During the COVID-19 Pandemic

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### Background

- In the United States, nearly half of adults have high blood pressure (BP), making it a national public health priority.<sup>1</sup>
- Owing to factors such as disruptions in routine preventive medical care brought on by the COVID-19 pandemic, the prevalence of high BP may have increased.
- **Objective:** To test this hypothesis, investigators examined changes in BP among a US adult population during and before the COVID-19 pandemic.

### Methods

- This was a longitudinal study of BP trends among employees and their spouses/partners who participated in an employer-sponsored health assessment program at Quest Diagnostics from 2018 through 2020.
- Systolic and diastolic BP data from 2018 and the pre-pandemic (January 2019-March 2020) and pandemic periods (April-December 2020) were used to determine the mean changes in BP each year from the preceding year.
- Participant BPs in 2018, the pre-pandemic period, and the pandemic period (adjusted for time, sex, and age) were categorized as normal BP, elevated BP, or stage 1 or 2 hypertension; recategorization between time periods was analyzed.

### Results

- The study included 464,585 participants (mean age, 46 years; 53.5% women) from all 50 states and the District of Columbia.
- There was no statistically significant change in BP from January 2018 through December 2019, or during the pre-pandemic period from January 2019 through March 2020 ( $P>0.1$ ).
- In contrast, systolic and diastolic BP was significantly higher during each month of the pandemic compared to the previous year ( $P<.0001$ ); the mean increases in systolic BP for each month compared to the previous year ranged from 1.10 mm Hg to 2.50 mm Hg, and the increase in diastolic BP ranged from 0.14 mm Hg to 0.53 mm Hg.
- During the pandemic, a greater percentage of participant BPs were recategorized to a higher BP category (26.8%) than to a lower BP category (22.0%) ( $P<.0001$ ); recategorizations to higher and lower BP categories from 2018 to the pre-pandemic period were equivalent.

### Conclusions

- This large US adult population demonstrated significant increases in BP during the COVID-19 pandemic compared to periods before the pandemic.
- Addressing chronic medical conditions remains crucial during the pandemic and should include surveillance of BP to assess the permanence of the increases noted in this study.

### Reference

1. Adams JM, Wright JS. A national commitment to improve the care of patients with hypertension in the US. *JAMA*. 2020;324:1825-1826. doi:[10.1001/jama.2020.20356](https://doi.org/10.1001/jama.2020.20356)

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