

Prediabetes linked to higher heart attack risk in young adults

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Young adults with higher than normal blood sugar levels that signal prediabetes were more likely to be hospitalized for heart attack compared to their peers with normal blood sugar levels, according to in

preliminary research to be presented at the American Heart Association's Quality of Care and Outcomes Research Scientific Sessions 2022. The meeting will be held Friday and Saturday, May 13-14, 2022, in Reston, Virginia, and features the latest research focused on the quality of cardiovascular medical care and patient outcomes in the treatment and prevention of heart disease and stroke.

Having prediabetes means that one's [blood sugar levels](#) are higher than normal, with fasting blood sugar between 100 to 125 mg/dL, although not high enough to be diagnosed as Type 2 diabetes. Prediabetes is common and increases the risk of developing Type 2 diabetes.

According to the National Institutes of Health, about 88 million adults in the U.S., ages 18 years of age or older, have prediabetes, which is more than one-third of U.S. adults. Nearly 29 million adults with prediabetes are ages 18 to 44 years.

"Prediabetes, if left untreated, can significantly impact health and can progress to Type 2 diabetes, which is known to increase a person's risk for [cardiovascular disease](#)," said study author Akhil Jain, M.D., a resident physician at Mercy Catholic Medical Center in Darby, Pa.

"With heart attacks happening increasingly in [young adults](#), our study was focused on defining the risk factors pertinent to this young population, so that future scientific guidelines and health policies may be better able to address cardiovascular disease risks in relation to prediabetes."

Researchers reviewed patient health records in the National Inpatient Sample, which is the largest publicly available database of hospitalizations in the U.S. Specifically, records from the year 2018 for [heart attack](#)-related hospitalizations among young adults, ages 18 to 44 years old, were examined.

The analysis found:

- Of the more than 7.8 million young adults hospitalized for heart attack in 2018, more than 31,000, or 0.4%, had blood sugar levels correlating to prediabetes.
- Among those with prediabetes, the incidence of heart attack was 2.15% compared to 0.3% in young adults with normal blood sugar levels.
- Adults with prediabetes were more likely than their peers without prediabetes to have [high cholesterol](#) (68.1% vs. 47.3%, respectively) and obesity (48.9% vs. 25.7%, respectively).
- Adults with prediabetes who were hospitalized for heart attack were more likely to be men of Black, Hispanic or Asian/Pacific Islander race or ethnicity.
- Adults with prediabetes who were hospitalized for heart attack were more likely to have higher household incomes, to be hospitalized in urban teaching hospitals or to be hospitalized in the Midwest and West regions of the U.S., compared to adults with heart attacks who did not have prediabetes.

"After taking into account various influencing and modifying factors, we found that young adults with prediabetes had 1.7 times higher chances of being hospitalized for a heart attack compared to their peers without prediabetes," Jain said. "Despite having higher chances of having a heart attack, the young adults with prediabetes did not have higher incidences of other major adverse cardiovascular events, such as [cardiac arrest](#) or stroke."

While prediabetes is a precursor to Type 2 diabetes and other serious health complications, it can be reversed. Many of the steps taken to prevent prediabetes are the same steps to prevent heart disease.

"When blood sugar levels meet the criteria for prediabetes, this is a wake-up call to take action. It's important for people with prediabetes to know [lifestyle changes](#) are key to improving their glucose levels and overall

health, and possibly reversing prediabetes and preventing Type 2 diabetes," said Eduardo Sanchez, M.D., M.P.H., FAHA, FAAFP, the American Heart Association's chief medical officer for prevention and the clinical lead for the Association's Know Diabetes by Heart initiative. "Eating a [healthy diet](#), being physically active and losing weight, if needed, are all meaningful ways to reverse a prediabetes diagnosis. For smokers, participation in a program to stop smoking is also extremely important. Other lifestyle and behavior changes, like reducing stress, may seem small, yet they can have a large impact on many different areas of life and can make a difference, as well."

In-depth research on heart attacks in young adults with prediabetes is lacking and more needs to be done, according to Jain.

"Our study should be considered as a foundation for future research to clearly establish [heart](#) disease burden in young adults with prediabetes, given the prevalence of prediabetes of nearly 1/3 of adults in the U.S. It is essential to raise awareness among young adults about the importance of routine health check-ups including screening for prediabetes and to take steps to prevent or delay the development of Type 2 diabetes and associated cardiovascular events such as a [heart attack](#)," he said.

More information: [professional.heart.org/en/meet ... nd-outcomes-research](https://professional.heart.org/en/meet...nd-outcomes-research)

Provided by American Heart Association

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