Are Those With Sickle Cell Trait More at Risk of COVID-19?

A study underway of 300 adults hopes to answer that question within six months to one year.

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People with sickle cell disease are at greater risk for severe illness from COVID-19, but what about the nearly 3 million Americans who have the sickle cell trait and don't even know it? A new study underway at Grady Memorial Hospital in Atlanta looks to determine whether these individuals are also at risk, reports STAT.

Sickle cell disease is an inherited condition that affects 100,000 Americans, particularly African Americans. The illness occurs in about 1 out of every 365 Black newborns. Having one copy of the sickle cell gene makes a person a sickle cell trait carrier; on the other hand, to be diagnosed with the disease a person must carry two copies of the gene. However, the sickle cell trait can trigger serious health complications, such as oxygen deprivation, kidney cancer and chronic kidney disease.

For the study, Morehouse School of Medicine physicians in Atlanta will enroll 300 adults who were hospitalized for COVID-19 and who tested positive for the sickle cell trait. The researchers will compare the medical records and health outcomes for sickle cell trait carriers with those of noncarriers to determine which group fared more poorly medically. Results are expected within six months to a year.

The idea for the inquiry grew out of new research showing that people with the sickle cell trait could experience oxygen deprivation in certain situations. "Extreme, low-oxygen conditions, like those at higher altitudes or during scuba diving, can trigger extreme pain, microinfarctions (tiny strokes) and even death in some people with sickle cell disease," said Deenen Vojta, MD, a former pediatrician and executive vice president of global research and development at UnitedHealth Group who helped design the investigation. "COVID may be one of those triggering conditions."

Researchers are interested to find out whether those with the trait are more susceptible to COVID-19 and whether this factors into why Black Americans contract and die of the new coronavirus at twice the rate of white people.

"Sickle cell trait, in the absence of extreme conditions or major health problems, has negligible consequences for most people," said Hermon Taylor, MD, MPH, the director of the Cardiovascular

Research Institute at Morehouse and one of the study's lead investigators. "COVID could change that dynamic—turning a silent condition into a deadly risk—and we must take a closer look."

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