

Sickle cell puts black patients at higher risk for severe COVID

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Sickle cell disease increases the risk of death or serious complications

from COVID-19 infection, a pair of new studies suggests.

People with [sickle cell disease](#)—a [genetic blood disorder](#) predominantly found in Black people—are 6.2 times more likely to die from COVID-19 than the general Black population of the United States, one study found.

"Sickle cell disease patients should be aware that they are a high-risk group, because they are usually more medically vulnerable. They should definitely be taking precautions like [face mask](#) wearing, social distancing and hand hygiene," said lead researcher Dr. Lana Mucalo, of the Medical College of Wisconsin, in Milwaukee.

Sickle cell disease also appears to increase the risk of hospitalization and complications like pain and pneumonia, above and beyond the COVID-19 risk posed by other health problems, added the lead researcher of the second study, Dr. Ashima Singh, also of the Medical College of Wisconsin.

Both studies were presented last week during the American Society of Hematology's virtual annual meeting and could, in part, help explain why Black people have been more vulnerable to severe, life-threatening COVID-19 infections during the pandemic, said Dr. Chancellor Donald, who is medical director of the University Medical Center New Orleans.

"The results bolster our understanding of the connections between existing health disparities and the disproportionate effects of the COVID-19 pandemic on Black Americans and other racial minorities," said Donald, who was not involved in either study.

Sickle cell disease is caused by a [genetic defect](#) that causes normally pliable red blood cells to become hard and sticky, forming a c-shape much like a sickle. These abnormal blood [cells](#) die early, causing

anemia, and also tend to clot easily in small blood vessels, producing a wide range of painful and life-threatening complications.

Most people in the United States who have [sickle cell](#) disease are Black, according to the U.S. National Institutes of Health. About one in 13 Black Americans are born with the genetic trait for sickle cell, and one in 365 is born with the full-fledged disease.

Race also has proven to be a factor in severe COVID-19. Black people are nearly four times more likely to be hospitalized with COVID-19 and nearly three times more likely to die from their infection, according to the U.S. Centers for Disease Control and Prevention.

The study led by Mucalo analyzed 370 COVID-19 cases that occurred in people with sickle cell disease, using data from an international sickle cell registry, to compare how these patients fared compared to the general Black population.

People with sickle cell had a death rate of 2.6% among those aged 18 to 34 and nearly 12% among those aged 35 to 50 years old, far higher than the fatality rate of less than 1% among all Black people in both age groups, the researchers found.

"The problem is that sickle cell disease is a rare disease, which also means there is a lack of providers for sickle cell disease. Those patients might experience a delay in their care," Mucalo said, adding that sickle cell patients also have very high rates of emergency room visits.

The Singh-led study assessed COVID-19 outcomes among 122 people with sickle cell disease, comparing them to a group of more than 15,000 Black people who don't have sickle cell but do have other health problems that make them vulnerable to severe COVID-19. Those other risk factors include heart disease, diabetes and lung disease.

Singh's team found that nearly half of COVID-19 patients with sickle cell disease required hospitalization, about double the 23% hospitalization rate of Black patients with other [health problems](#).

Sickle cell patients also were more likely to develop pneumonia (31% versus 20%) and suffer pain (43% versus 13%).

"This speaks to a need for health equity for patients with sickle cell [disease](#), as they are at risk of significantly more severe expression of COVID-19," Singh said in a statement.

Research presented at meetings should be considered preliminary until published in peer-reviewed journal.

More information:

The U.S. National Heart, Lung, and Blood Institute has more about [sickle cell disease](#).

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