

*The Sickle Cell Disease Coalition Research & Clinical Trials Working Group is focused on distilling key sickle cell disease (SCD) information presented at national conferences and disseminating it to the SCD community. Each summary is written in plain language to ensure comprehension of topics covered. This summary is from the 2020 American Society of Hematology Annual Meeting. The original abstract entitled [“COVID-19 Outcomes in Individuals with Sickle Cell Disease and Sickle Cell Trait Compared to Blacks without Sickle Cell Disease or Trait”](#) is available online as well.*

## **Researchers study the effects of COVID-19 on persons with sickle cell disease and sickle cell trait**

Every year, the American Society of Hematology meets to talk about new research. At its 2020 meeting, researchers and doctors shared what they have learned about the rate of hospitalization, disease symptoms, and deaths due to COVID-19 in patients with sickle cell disease (SCD) and sickle cell trait (trait) compared to Black patients infected with COVID-19 but without SCD or trait.

Growing evidence from the 2020 COVID-19 pandemic suggests that people with high blood pressure, diabetes, heart disease, and obesity are at a higher risk of more serious COVID-19 illness. However, the impact of COVID-19 on individuals with SCD or trait compared to those without SCD or trait was not known. The Coronavirus causes a severe acute respiratory syndrome and has unevenly affected Black populations. Overall, Black patients have a higher rate of death (22.2%) compared to the general population (13%). SCD and trait are found mostly in the Black population. In the Black population in the United States, approximately 1 out of every 400 persons has SCD and 1 out of every 13 persons has trait.

Researchers thought that perhaps Black persons living with SCD are at a higher risk of severe COVID-19 illness and death compared to Black persons who do not have SCD or trait. They also thought that perhaps those with trait might not have significantly different COVID-19 outcomes compared to Blacks who do not have SCD or trait. To test these ideas, they looked at data in electronic health records from many locations. They identified individuals with SCD or trait and looked to see whether they had any COVID-19 symptoms, whether they had been hospitalized, and whether they had died, all with 2 weeks of getting a COVID-19 diagnosis.

### **Researchers learned:**

As of July 15, 2020, the researchers found 122 COVID-19 patients with SCD and 172 COVID-19 patients with trait. They compared the health status of these two groups to a large group of Black patients who were diagnosed with COVID-19 but did not have SCD or trait. COVID-19 patients with SCD were notably younger and a higher proportion had asthma, type 1 diabetes, and pre-existing liver conditions compared to Black persons without SCD or trait. Individuals with SCD were found to be about two times more likely to be hospitalized, develop pneumonia, and experience pain due to COVID-19 than Black persons who do not have SCD or trait. The researchers did not find any differences in COVID-19 outcomes between those with trait and those who do not have SCD or trait.

These findings show that SCD presents additional risk of severe COVID-19 illness and hospitalization, after balancing for age, gender, and other preexisting conditions. However, the death rate between those with SCD and those without SCD or trait was not significantly different.

**Keep in mind:**

The results of research studies are always limited in what they can and can't tell you. This research to date is ongoing and more data collected over time will help better define risks. However, these findings do stress the critical need to prevent infection with COVID-19 among those living with SCD and to ensure appropriate care should they become infected.

Always consult your doctor before entering a clinical trial.

**Questions to ask your doctor**

- Should I take special precautions beyond what is already recommended to avoid infection given my SCD or trait status?
- Are there clinical trials I could join?

Access the American Society of Hematology Research Collaborative's [SCD Clinical Trials Pamphlet](#) to learn more about clinical trials for SCD.