Blood or marrow transplant can help children with severe sickle cell disease

Matched, sibling donor is best

Blood or marrow transplant (BMT) can help people with severe sickle cell disease, but little was known about the best age for a person to get BMT or which type of donor is best.

Sickle cell disease is the most common inherited blood disease. It can shorten people's lives by about 20 years and cause severe pain and strokes.

BMT is the only known cure for sickle cell disease (although researchers are studying other treatments, like gene therapy). Researchers studied about 900 people in the United States who had sickle cell disease and got BMT during 2008-2017. Researchers found that these people lived longer and stayed healthier if:

- they got BMT while aged 12 or younger;
- their donor was a closely matched brother or sister

Almost 1 in 5 people with sickle cell disease have a healthy, fully-matched sibling donor. Siblings can be a donor even if they have sickle cell trait.

More research is needed on the best donors for people who don't have a closely matched sibling. For some people who don't have a matched sibling, a half-matched family member or an unrelated donor from the Be The Match Registry® may be an option.

Ask your doctor

- What is the best treatment for my sickle cell disease?
- What are the risks and possible benefits?

Learn more about

- This research
- Sickle cell disease, at BeTheMatch.org
- Clinical trials for sickle cell disease, at JCCTP.org
- The need for diverse donors, at BeTheMatch.org
- More study summaries at cibmtr.org

About this research summary

This information is provided on behalf of the Consumer Advocacy Committee of the CIBMTR® (Center for International Blood and Marrow Transplant Research®).

Source

Eapen M, Brazauskas R, Walters MC, et al. Effect of donor type and conditioning regimen intensity on allogeneic transplantation outcomes in patients with sickle cell disease: a retrospective multicentre, cohort study. The Lancet Haematology. 2019;6(11):e585-e96. Epub 2019/09/10. doi: 10.1016/s2352-3026(19)30154-1. PMCID: PMC6813907.