

Sibling donors reduce chances of graft-versus-host disease

Younger donors were safer for patients



Blood and marrow transplant (BMT) can cure leukemia, sickle cell disease, and other blood diseases. However, BMT can cause serious effects, such as graft-versus-host disease (GVHD).

Many children who need BMT don't have a fully matched donor. A half-matched (haploidentical or haplo) donor can be a parent or sibling.

Doctors wanted to know which haplo donors are least likely to cause GVHD. Researchers studied more than 1,000 children and teens, younger than 19, who received a haplo transplant. Everyone had a transplant in the US during 2013-2019.

Some patients got acute GVHD, which typically occurs early, in the first 3 months after transplant. Others had chronic GVHD, which may happen later after transplant. GVHD sometimes affects the eyes, digestive system, genitals, lungs, mouth, and skin.

The donors' age and relationship affected patients' chances of getting GVHD. **Younger donors were safer for patients.**

Serious acute GVHD happened in:

- 10% of all patients
- 7% of patients with donors younger than 18

Chronic GVHD happened in:

- 23% of all patients
- 16% of patients with donors younger than 18
- 36% of patients whose mothers were their donors

When available, a *sibling* donor is associated with less GVHD than a *parental* donor.

Keep in mind

It's important to protect children who are asked to donate cells.

Experts recommend:

- An independent doctor, not the patient's doctor, should examine the child donor.
- This doctor should explain the how donation works and side effects.

Donating is usually safe, but children should understand the process and should feel comfortable.

Learn more about

- [Haplo donor clinical trials](#) at CTsearchsupport.org
- More [study summaries](#) at CIBMTR.org
- [NMDP Patient Support Center](#) at NMDP.org or 1 (888) 999-6743

Source

Liberio N, Allbee-Johnson M, Ahn KW, Moskop A, Phelan, R, Broglie, L, et al. [Optimizing Haploidentical Donor Selection for Pediatric Hematopoietic Cell Transplant](#). Journal of Clinical Oncology. 2026 April 10;44(11):1003-1015. doi: 10.1200/JCO-25-01591. Epub 2026 Feb 25. PMC13162296.

About this research summary

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