



Childhood transplants linked to slightly higher risk of heart problems and diabetes

Scientists urge checkups for cholesterol and blood pressure

Children who had blood or marrow transplants (BMT) had a slightly above-average risk of heart problems about 8 years later. Scientists said that people who had BMT in childhood should get regular checkups of their blood cholesterol and blood pressure. This helps prevent serious problems.

Researchers checked 661 young people who had transplants between 1995 and 2008. At the time of the study, the people's average age was 18. The young people had slightly higher rates of weak hearts, diabetes and obesity.

- Less than 1% (1 in 100 people) had a stroke or heart attack
- About 3% (3 in 100 people) had weakened hearts, called cardiomyopathy
- About 7% (7 in 100 of people) had diabetes
- About 18% (18 out of 100) had high levels of fat (cholesterol or triglycerides) in their blood
- About 52% (52 in 100 people) were overweight or obese

Side effects of life-saving treatments

Two things were linked to a higher risk of heart problems: a chemotherapy medicine called anthracycline, and radiation therapy to the head or chest. And people who had chronic graft-versus-host disease (GVHD) had a higher risk of diabetes, possibly due to medicines for GVHD.

Keep in mind

Some of the 661 people in the study may have had incomplete medical records. So we need more research to better understand the risks from BMT.

Get your heart checked

Researchers said people who had a transplant in childhood should get the same tests for heart problems that all children get. Some children may need to be checked more often, depending on their own health, family history and ethnicity. Doctors at the American Academy of Pediatrics (AAP) recommend these tests:

- **Age 3+:** Check blood pressure and weight at regular, well-child visits
- **Age 9-11:** Get blood tested for cholesterol and triglycerides
- **Age 10+:** Check for diabetes if your child is overweight and the doctor says it's needed
- **Age 17-21:** Get blood tested for cholesterol and triglycerides

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How to help your heart at any age

Doctors promote these healthy habits for the whole family:

- At each meal, eat some fruits and vegetables
- Avoid sugary drinks like soda or fruit drinks
- Drink water or low-fat milk
- Get 1 hour per day of physical activity. Ask your doctor what's safe and healthy for you
- Limit your leisure screen time to less than 2 hours a day
- Do not allow a TV set, tablet, phone or other screen in your child's bedroom
- Avoid tobacco, e-cigarettes or vaping products

Questions you may have

If you have concerns about heart health after BMT, consider asking the doctor:

- When should my child (or I) get tested for high cholesterol, high blood pressure and diabetes?
- How can I protect my child's (or my) heart?
- Would it help to see an expert such as a registered dietitian or exercise specialist?

Learn more about:

- [This research study](#)
- [Long-term recovery after BMT](#)
- [Cardiomyopathy in children](#)
- [Heart disease: reduce your child's risk](#)

Source

Duncan CN, Brazauskas R, Huang J, et al. Late cardiovascular morbidity and mortality following pediatric allogeneic hematopoietic cell transplantation. Bone Marrow Transplantation. doi:10.1038/s41409-018-0155-z. Epub 2018 Mar 26.

About this research summary

Ground-breaking research into blood and marrow transplant is happening every day. That research is having a significant impact on the survival and quality of life of thousands of transplant patients. But the research is written by scientists for scientists. By providing research news in an easy-to-understand way, patients, caregivers, and families have access to useful information that can help them make treatment decisions.

This information is provided on behalf of the Consumer Advocacy Committee of the CIBMTR[®] (Center for International Blood and Marrow Transplant Research[®]). The CIBMTR is a research collaboration between the National Marrow Donor Program[®]/Be The Match[®] and the Medical College of Wisconsin.