

Medicine given to donors of blood stem cells is safe

7-year study of filgrastim shows it does not cause blood disorders



The largest ever long-term study of people who donated peripheral blood stem cells (PBSC) show that medicines for these donations are safe.

Researchers surveyed almost 22,000 adults who donated blood or marrow during 1999-2015 in the US. Blood stem cells can cure some cancers and disorders. There are 2 ways to donate these cells: from either peripheral blood or bone marrow.

Donating PBSC is similar to donating plasma. In the days before donation, the donors get a medicine called filgrastim, which helps the bones send stem cells into the circulating blood. It takes up to 8 hours to collect the stem cells, using a needle in the donor's arm and a special machine. The machine removes stem cells and returns all other blood cells to the donor. PBSC donors recover in about a week.

Donating bone marrow is a surgical procedure, with local anesthesia, where doctors use a needle to take out the stem cells from the pelvic bone. Doctors do not give filgrastim for bone marrow donation. Bone marrow donors recover from the surgery in about 3 weeks.

In this study, researchers focused on previously reported health problems, including autoimmune problems, such as lupus and multiple sclerosis; blood clots; and cancer. About 22,000 donors filled out surveys every 2 years for about 7 years. Donors reported whether they got those health problems. Doctors reviewed medical records of people who had these problems. Whether or not donors got filgrastim, all donors had the same rates of autoimmune problems, blood clots and cancer. This means the filgrastim did **not** cause these problems. In fact, donors were younger and healthier than average Americans.

Keep in mind

These results apply to adults, aged 18 and older. The study did not include children. Some donors were not included in the study because they could not be reached or did not respond to survey.

Learn more about

- [Donation process](#) at NMDP.org
- [Donating PBSCs](#) at NMDP.org
- More [study summaries](#) at CIBMTR.org

Source

Stefanski HE, Kuxhausen M, Bo-Subait S, et al. [Long-term Outcomes of Peripheral Blood Stem Cell Unrelated Donors Mobilized with Filgrastim](#). Blood Adv. 2024. Epub 2024/04/30. PMID: 38687368. doi: 10.1182/bloodadvances.2024012646.

About this research summary

CIBMTR thanks study participants. This information is provided on behalf of the Consumer Advocacy Committee of CIBMTR® (Center for International Blood and Marrow Transplant Research®). CIBMTR is a research collaboration between the Medical College of Wisconsin and NMDP.

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This plain-language summary was written by Jennifer Motl at the Medical College of Wisconsin and reviewed by an author of the full article. ©2024 by CIBMTR, license [CC BY-SA 4.0](#).