

Risks associated with receipt of blood transfusion from previously pregnant donor

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Among patients who received red blood cell transfusions, receiving a transfusion from a donor who was ever pregnant, compared with a male donor, was associated with an increased risk of death among male recipients of transfusions but not among female recipients, according to a study published by *JAMA*.

The most common cause of [transfusion](#)-related mortality is transfusion-related acute lung injury (TRALI), which has also been shown to be associated with transfusions from female donors. Furthermore, TRALI is associated specifically with transfusions from female donors with a history of pregnancy. Rutger A. Middelburg, Ph.D., of Sanquin Research, Leiden, the Netherlands, and colleagues conducted a study of first-time transfusion recipients at six major Dutch hospitals to quantify the association between red [blood](#) cell transfusion from female donors with and without a history of pregnancy and mortality of red blood cell recipients.

The group for the primary analyses consisted of 31,118 patients who received 59,320 red blood cell transfusions from 1 of 3 types of donors (88 percent male; 6 percent ever-pregnant female; and 6 percent never-pregnant female). The number of deaths in this group was 3,969 (13 percent mortality). For male recipients of red blood cell transfusions, all-cause [mortality rates](#) after a red blood cell transfusion from an ever-pregnant female donor vs male donor were 101 vs 80 deaths per 1,000 person-years. For receipt of transfusion from a never-pregnant female donor vs male donor, mortality rates were 78 vs 80 deaths per 1,000 person-years. Among female recipients of [red blood cell](#) transfusions, mortality rates for an ever-pregnant female donor vs male [donor](#) were 74 vs 62 per 1,000 person-years.

Several limitations of the study are noted in the article.

"Further research is needed to replicate these findings, determine their clinical significance, and identify the underlying mechanism," the authors write.

More information: *JAMA* (2017). [DOI: 10.1001/jama.2017.14825](#)

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