

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.

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