

Study to measure optimum frequency of blood donation

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Donated blood. Credit: NHSBT

A study commencing in the same week as World Blood Donor Day will determine whether blood can be safely collected more frequently than present practice.

Today, June 14, countries across the world will celebrate World Blood [Donor](#) Day to raise awareness of the need for safe blood and blood products and to thank voluntary unpaid [blood donors](#) for their life-saving gifts of blood.

Also commencing this week is a landmark research study by a collaboration between NHS Blood and Transplant (NHSBT) and the Universities of Cambridge and Oxford, which will help determine whether blood can be safely collected more frequently than present practice.

As the UK population ages, the demand for blood and blood products is likely to increase. One approach to increase [blood supplies](#) is to collect blood more frequently from existing donors. However, there is no strong scientific evidence to define the optimum interval between blood donations to maximise blood collections while maintaining donor well-being.

The study, which starts to recruit participants this week, aims not only to determine the optimal frequency of blood donations but also to define whether it is appropriate to tailor this interval to donors by their demographic, haematological, genetic and [lifestyle factors](#).

A joint England and Wales Special Health Authority, NHSBT provides a reliable, efficient supply of blood and associated services to the NHS in England and North Wales. NHSBT needs to collect up to 7,000 units of whole blood each day to meet demand from hospitals. This study, the first of its kind for NHSBT, will help determine whether donors can safely donate more frequently to help meet this demand.

Led by Professor John Danesh at the Department of Public Health and Primary Care at the University of Cambridge and Professor David Roberts at NHSBT, John Radcliffe Hospital, Oxford, the INTERVAL study will recruit up to 50,000 blood donors to a [randomised controlled trial](#) conducted within the framework of the UK's NHSBT service.

“Limits are set for the intervals between donation frequency to minimise iron deficiency,” explained Cambridge researcher Dr Carmel Moore,

who is coordinating the trial. “The present inter-donation intervals in England are 12 weeks for men and 16 weeks for women, yet in Europe donation frequency can be as frequent as every eight weeks. A decisive experiment is needed to determine whether blood can safely be given more frequently by the 1.4 million people who give blood each year in England.”

The trial involves NHSBT staff across the 25 permanent donation clinics in England and will enrol whole-blood donors to a two-year study. Men will be randomly assigned to 12-, 10- or 8-week inter-donation intervals and women to 16-, 14- or 12-week intervals. At the end of the study, the impact of donation intervals on the amount of blood collected and donors’ health and well-being will be assessed.

“In addition to evaluating the inter-donation interval, we are interested in assessing whether some people may be able to safely give blood more frequently and will be happy to do so,” added Dr Moore. “On the other hand, others may be more susceptible to iron deficiency with repeat [blood donations](#). To prevent donors becoming iron deficient, haemoglobin levels are routinely measured before giving blood; if levels are too low the donor is asked to return at a later date. Being turned away can be a bad experience and lead to people’s unwillingness to donate again. Tailoring donation intervals to individuals would mean more susceptible donors could be invited to donate less frequently, which may improve donor satisfaction and retention.”

“The study’s key anticipated contribution to the NHSBT will be to provide evidence to inform long-term policies that improve the health and well-being of donors and ensure the supply of blood,” said Jane Pearson, Assistant Director – Nursing and Component Donation Services (NHSBT).

Professor Danesh added: “Contributing to broader public health

research, an additional value of the project will be provided through the creation of a national epidemiological bioresource to study the health of [blood](#) donors.”

Provided by University of Cambridge

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