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Implementation: To be determined by each Service

## Change Notification UK National Blood Services No. 27 - 2020

### Blood tests

This change applies to the Guidelines for the Blood Transfusion Services in the United Kingdom 8<sup>th</sup> Edition 2013

Please make the following changes to section 3.15 Blood Tests:

#### 3.15.1: Estimation of the concentration of haemoglobin in donor blood

The haemoglobin (Hb) concentration should be determined each time a potential donor presents. The acceptable higher and lower limits ~~for venous blood are 125 g/L for female donors and 135 g/L for male donors (140 g/L for all donors of double red cells by apheresis).~~ are described in the Whole Blood and Components Donor Selection Guidelines (see [Haemoglobin Estimation](#)) and vary according to donor sex and the type of donation planned.

Several methods of screening donors for their blood Hb concentration are available (or in development). These include:

- gravimetric method using solutions of copper sulphate on blood samples obtained by fingerprick
- spectrophotometric devices using capillary or venous samples
- non-invasive technology
- full blood count using venous or capillary samples.

The final method chosen must be validated, and validation should include comparison to a full blood count measured on a venous sample.

A donor whose ~~fingerprick~~ sample fails the Hb screening ~~should test can~~ be offered a ~~second line~~ test on a sample of venous blood ~~for accurate determination of their Hb concentration. This is to enable the donor to receive appropriate advice either from the donor clinical support officer or the donor's general practitioner.~~ The Hb concentration in the ~~venous~~ sample may be determined immediately ~~at the session~~ if a suitably validated haemoglobinometric device capable of rapid and accurate analysis is available ~~at the session or retained to be sent to an appropriate laboratory~~. If the concentration so determined is at or exceeds those quoted above the donor may be invited to give a full donation.

Donors whose Hb concentration is below the minimum values should not be bled. The reason for deferral should be explained and the donors advised to see their own general practitioner if this is considered to be appropriate as defined by Blood Service procedures.

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~~If a quantitative method of Hb determination is employed, before or after the donation, individuals found to have a concentration of Hb above the normal upper limit as indicated in the JPAC Donor Selection Guidelines<sup>1</sup> should be referred for further investigations.~~

### 3.15.2: Copper sulphate haemoglobin screen

If used, aqueous copper sulphate, coloured blue, with a specific gravity of 1.053, equivalent to 125 g/L haemoglobin, is required to test female donors. If used, aqueous copper sulphate, coloured green, with a specific gravity of 1.055, equivalent to 135 g/L, is required to test male donors. These stock solutions should be colour-coded and labelled accordingly.

Stock solutions shall be stored at room temperature in tightly capped, dark glass containers to prevent evaporation and contamination. Copper sulphate solutions are temperature sensitive and must be stored and used within the temperature ranges specified in the Blood Service's procedures.

### 3.15.3: Additional tests for component donors

~~In addition, component donors should have the following blood tests performed at the initial visit:~~

- ~~• full blood count for all donors~~
- ~~• serum albumin and total serum protein levels for plasma donors (total serum protein has no relevance to platelet donors).~~

~~The lower limit of acceptability for haemoglobin level should be as for normal whole blood donation. Special considerations as stated in sections 3.6.3, 3.14.1 and 3.15.1 apply to red cell donation by apheresis.~~

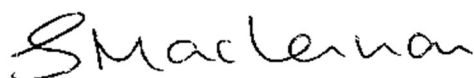
All component donors must have a full blood count performed at the first donation and this must be repeated at least annually.

The platelet count should be performed at each visit for plateletpheresis donors.

Total serum protein must be measured at the first donation for all plasma donors and this must be repeated at least annually. Total serum protein must not be less than 60 g/L.

~~The full blood count must be carried out at least annually for all component donors and serum albumin and total serum proteins must be measured at least annually for plasma donors.~~ A system must be in operation for regular review of these results, together with a documented protocol of the action to be taken in the light of any abnormal findings.

All Blood Services should perform a risk assessment to evaluate the relative risks and benefits of implementation of leucocyte antibody screening of female platelet and plasma donors. If leucocyte antibody screening is implemented, female platelet donors with a subsequent history of who have had a new pregnancy (regardless of the outcome) should be re-tested (see section 16.8.8).



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