Donor Haemovigilance

December 2025

The contents of this document are believed to be current. Please continue to refer to the websites for in-date versions.

Clinical assessment of donor adverse events (DAEs):

Assessing donors with suspected allergic reactions

This document is intended for healthcare professionals responsible for the clinical assessment of donors experiencing potential adverse events following blood donations. This will not replace the clinical judgement required for the evaluation of donor adverse events.

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Update information

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Questions to ask when assessing a donor with a suspected allergic reaction

These reactions range from mild allergies to more severe, generalised reactions, or even life-threatening anaphylaxis.

Donors may develop allergic reactions following exposure to solutions used for disinfection of the arm (such as chlorhexidine), adhesive bandages, latex in gloves, metal needles. Sometimes donors may develop an allergic reaction to environmental allergens. Rarely, apheresis donors can develop allergic reactions when they are sensitive to chemicals used for sterilisation of the kit, e.g. ethylene oxide.

These reactions may occur soon after donation or in the hours to days post-donation.

What are the symptoms?

- Any skin changes? If yes, localised or generalised?
  - Itchiness
  - Redness
  - Blisters or swelling
  - Hives (macular rash)
- Swelling of the face, eyes or lips
- Any airway/breathing symptoms?
  - Swelling of the tongue
  - Throat tightness
  - Wheezing
  - Difficulty breathing
  - Rapid shallow breathing
  - Stridor (abnormal breathing sounds)
- Circulatory symptoms?
  - Light-headedness/dizziness or fainting
  - Fast or slow heartbeat
  - Collapse
- Any other symptoms?
  - Gastrointestinal symptoms like nausea, vomiting, abdominal pain, diarrhoea
- Did they develop symptoms suddenly or gradually?

Table 1: Types of allergic reactions[2]

Non-anaphylaxis	Mild localised skin symptoms
	Generalised skin/mucosal reactions
Anaphylaxis	**A**irway and/or **B**reathing and/or **C**irculatory problems ± skin symptoms

In the context of blood donation, gastrointestinal problems in the absence of Airway and/or Breathing and/or Circulatory problems do not usually indicate anaphylaxis.

Please always keep in mind that a mild reaction (non-anaphylaxis) can progress to a severe reaction at any time.

Red flags that warrant an urgent medical review

Symptoms suggestive of allergic reaction AND any of the following:

- **Breathing problems; difficulty in breathing/talking, stridor (abnormal breathing sounds), throat tightness, wheezing, rapid shallow breathing, light-headedness/dizziness or fainting, fast or slow heart rate**
- **Collapse**

When did this happen?

- Pre donation?
- During donation?
- Post donation?
  If yes, where did it happen?
  - At the donation session, e.g. following needle removal or at refreshment table?
  - After leaving the donation session?
    - If yes, how long afterwards (i.e. how many hours or days later)?

Has it affected activities of daily living (ADL)?

- Have the donor's activities of daily living been affected?
  If yes:
  - Which activities and to what extent?
  - For how long?

Were there any possible contributing factors?

- Was the donor exposed to any other suspected allergen, e.g., insect bite, food allergy?
- Is there any previous history of allergies?
  If yes:
  - What was the allergen? (e.g. adhesive, cleaning solution (chlorhexidine), environmental factors, nut allergy, medication)
  - What was the reaction?
  - Has the donor ever had an allergic reaction associated with a blood donation?
  - Does the donor carry an auto-injector (e.g. an EpiPen®)?
- Is the donor known to have asthma?
- Does the donor have sensitive skin or any other skin condition affecting their arms?

Management and follow-up

- Did the donor receive any treatment?
  - What was the treatment?
  - Did they require outside medical care/ external health care practitioner, e.g. General Practitioner, Emergency Department?
  - Were they admitted to the hospital?

- Has the donor been referred to the GP or a specialist for further investigations?
  If yes:
  - What tests were carried out?
  - What was the result?
    - Was the allergen identified? If yes, what was it?

Please note that, in case of chlorhexidine allergy, sensitivity is generally low for a single test. Usually, two or three different test approaches are required to exclude chlorhexidine allergy.

Post donation advice and information leaflets should be available in your blood service for donor education.

Donor follow-up should be provided according to your local guidelines. The donor should be given appropriate advice based on individual clinical assessment. Ensure the medical record includes the advice provided to the donor at the time of discussion, including if they have been advised to seek outside medical care.

Consider future donations?

Is the donor eligible to return to donate in the future?

NB: donors with chlorhexidine allergy need to be permanently withdrawn from donations.

Are there any implications for the donation-related components?

For donors with severe allergic reaction: donation may need to be recalled as there is a possible risk to the recipient. Please follow your local guidelines.

References

1. Cooling L and Sherbeck J (2023). Ethylene oxide-type hypersensitivity reactions in G-CSF mobilized, peripheral blood hematopoietic progenitor cell donors and review. Journal of Clinical Apheresis, 38(4):427–436. https://doi.org/10.1002/jca.22046
2. Anaphylaxis Working Group of Resuscitation Council UK (2021). Emergency treatment of anaphylaxis: Guidelines for healthcare providers. Available at https://www.resus.org.uk/library/additional-guidance/guidance-anaphylaxis/emergency-treatment (accessed 09.12.25)
3. Allergy and Anaphylaxis Australia (2024). Signs and symptoms of an allergic reaction. Available at https://allergyfacts.org.au/signs-and-symptoms-of-an-allergic-reaction/ (accessed 09.12.25)