What happens to your donation

Canadian Blood Services collects blood donations to be used to treat patients. Whole blood is separated into two main components:

- **Red Blood Cells**: Carry oxygen to tissues and are responsible for the removal of carbon dioxide through the lungs. Red blood cells are mostly used to treat patients following accidents and during surgery.

- **Plasma**: A liquid containing many of the body’s proteins. It is used to help fight infection and help clotting. Plasma may be transfused directly to patients or may be further processed to purify the antibodies it contains. The antibodies (also known as immune globulins) are used to treat patients with weak immune systems. Albumin is mostly used in emergency care to treat trauma or burn victims who have lost large amounts of blood. This processing of plasma into specialized products is done for Canadian Blood Services by plasma manufacturers, also called fractionators, located outside of Canada.

Depending on hospital requirements, three other components may be manufactured from a blood donation:

- **Platelets**: Provide the basis for clotting that helps control bleeding. Patients with prolonged bleeding associated with diseases such as cancer need large quantities of platelets as part of their treatment.

- **Cryoprecipitate**: Derived from plasma and contains high levels of clotting factors. It is used to help control bleeding.

- **Cryosupernatant plasma**: Provides a source of plasma with fewer clotting factors than regular plasma. It is used for plasma exchange in the treatment of rare conditions.

All components are stored at the appropriate temperature and conditions to optimize their quality and shelf-life. If the testing for transmissible diseases is found positive, the components become available for distribution to hospitals.

If your donation is found positive for a transmissible disease, Canadian Blood Services will inform you of your test result. Your donation will not be used. Examples include:

- **Factor VIII**: Used to treat a clotting disorder called hemophilia A, may be purified from plasma but since there is limited demand for it in Canada it is not currently being made from all of our donors’ plasma. Canadian Blood Services may donate or sell a portion of the unused material to another plasma manufacturer. The Factor VIII made from Canadian plasma could then be used for the treatment of patients in other countries who have limited access to Factor VIII.

- **Immune globulin**: Potentially be used for medical research to develop vaccines. If your donation is found positive for a transmissible disease, Canadian Blood Services will subject each donation to stringent quality testing, learning, stored for future testing.

Further processing of plasma

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  - **Each unit of blood undergoes a filtration process, called leukoreduction, to remove white blood cells which can be harmful to patients. The white blood cells are discarded and Canadian Blood Services must pay for their safe disposal as a special type of waste. However, these white blood cells could potentially be used for medical research to develop new drugs. Canadian Blood Services may sell the filtered cells on a cost-recovery basis while at the same time eliminating its current disposal fees.**

Our commitment to you

Canadian Blood Services wants to ensure that as much of every donation as possible is used while continually improving the cost-effectiveness and efficiency of the blood system. Giving or selling unused or end of shelf-life parts of the donation instead of discarding them could contribute towards this goal. Proceeds of any sales would be invested back into the blood system to balance out costs. Canadian Blood Services will subject each donation and cost-recovery sale opportunity to a rigorous review to ensure they meet ethical, legal and regulatory requirements and they are consistent with our mission and values.

Furthermore, any use for research purposes will be approved by an independent research ethics board. While every attempt is made to minimize wastage, there will be some components that will have to be discarded at the end of their shelf-life. Although expired products cannot be transfused they may be donated or provided on a cost-recovery basis.

Who to contact for more information

- **If you have any questions or concerns, please ask the local staff.**

- **If you would like to learn more on how whole blood, plasma and platelets are processed, please visit our website at www.blood.ca**