Information Sheet
Transfusion-Related Acute Lung Injury (TRALI)

TRALI is an acute complication following blood transfusion that is characterized by severe shortness of breath, often associated with fever and low blood pressure. Although rare, it is one of the most common causes of transfusion-related death. TRALI can occur rapidly after a blood transfusion and is often associated with the receipt of plasma or platelet products.

In order to maintain the safest possible blood supply for our patients, we need to reduce the risk of TRALI in the plasma and platelets we collect.

There is no specific test to identify blood products that will cause TRALI in a transfusion recipient. However, we do know that units of plasma or platelets that have caused a TRALI reaction in a transfusion recipient often contain antibodies to human leukocyte antigens (HLA). These antibodies are known as HLA antibodies and are on the white blood cell (leukocyte) surfaces. When women are exposed to their baby’s blood during pregnancy and delivery, they may develop HLA antibodies. There is a direct relationship between pregnancy history and having a positive test for HLA antibodies.

The presence of these HLA antibodies in a healthy individual’s blood does not cause health problems, and generally does not cause harm when transfused to patients. However, in rare cases, HLA antibodies may contribute to a TRALI reaction in a transfusion recipient.

We can reduce the chance that blood products—particularly plasma or platelet products—contain these HLA antibodies, and reduce the risk of a TRALI reaction in transfusion recipients by expanding the screening process for all female donors.

If you are a female donor, we will ask you how many pregnancies you have had. If you are donating apheresis, we will test a sample of your blood for HLA antibodies. This screening will be performed each time the number of pregnancies you have had changes.

If your test for HLA antibodies is negative
- You can continue to donate platelets and or plasma.

If your test for HLA antibodies is positive
- You will be notified by mail; the notification letter will not say anything about your pregnancy history. You will be asked to stop donating plasma or platelets by apheresis.
- You will be encouraged to help us in the future by donating red blood cells or by helping the Red Cross as a volunteer.

A positive test result does not affect your health. TRALI is a condition that only affects some blood recipients. It does not affect blood donors.

If you have any questions about this information, please ask the supervisor at your collection site.

If you are a regular donor and you have been pregnant in the past, please continue to donate on a regular schedule at this time. Not all individuals who have been pregnant develop HLA antibodies, and your help is needed to supply life-giving blood products to the patients who depend on us.