

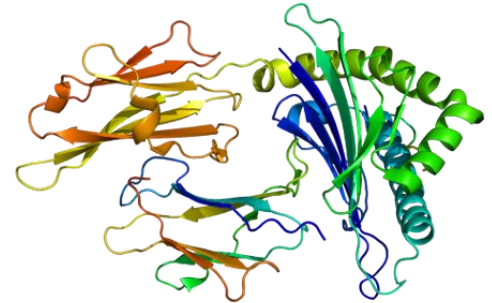
## What Donors Need to Know About Human Leukocyte Antigens (HLA) Typing

### What is HLA Typing?

HLA typing is a special blood test used to identify human leukocyte antigens.

### What is HLA (Human Leukocyte Antigens)?

HLA is one type of antigen inherited from parents. Antigens are proteins found on the surface of cells that help the immune system mark which cells belong in the body and which do not.



HLA types need to be known before a patient can have a bone marrow transplant. Transplanted stem cells from the donor need to match the patient's cells as closely as possible in order to decrease side effects recipients may have from a bone marrow transplant. We do this by taking a sample of blood or other body tissue cells such as a cheek swab as the HLA molecules are on all of the cells of the body

### Finding the Best Match

It is important that the HLA on the donor and patient match as closely as possible. The more similarities two people share, the better the match. A good match means the two immune systems will see each other as less foreign and are less likely to attack each other.

Full siblings (that is, brothers and sisters who have the same mother and same father) are most likely to be HLA-matched. If two siblings inherit the very same HLA from both parents, they are said to be a HLA identical match.

You have a 25% (one in four) chance of being a HLA identical match with your sibling. Why? There is a basic rule in HLA inheritance. You have a:

- 25% chance of inheriting the **same** HLA as your sibling
- 25% chance of inheriting **none** of the same HLA as your sibling
- 50% chance of inheriting **half** of the same HLA as your sibling

When a doctor decides that a transplant is the best treatment, the patient and their full siblings will have samples collected for HLA typing. If one of the family members is a HLA match, further testing will be done.

If none of the siblings are a good HLA match, the doctor will sometimes ask to have more family members tested. Since HLA type is inherited from parents and passed on to children, parents and children have the next best chance of being closely HLA matched. If there are no close HLA matches within the patient's family, a search can be started to find an unrelated donor with the same HLA as the patient. It is possible that the patient could have some of the same HLA as someone not related to them.

In the event that there are no family matches or matches in the registry, transplant is still possible using half-matched donors or umbilical cord blood stem cells. In 2021, nearly everybody can find a match!

**If you are in need of immediate assistance, please call 732-235-2465 and select the option that best meets your needs.**