

The McCann Family

Carol and Tim have a six-year-old daughter named Grace. They have just learned that she has leukemia and that she needs a bone marrow transplant. To find a donor, the doctors have asked for the blood types of all of the family members, including parents, grandparents, aunts, uncles, and first cousins, hoping to find someone who will match Grace's type O blood. In humans there are four different blood types: A, B, AB, and O. Each of these types are genetically different in that people with type A and B blood each have a different protein on the surface of their blood cells. People with AB blood produce a combination of both surface proteins, and people with O blood do not produce any surface proteins.

Carol and Tim immediately got on the phone and called all of their relatives. Some family members knew their blood type, but others had to go and have their blood tested. Within in a week Carol had all of the information from her side of the family. She found that her own blood is type A and that her only sister, Laura, has type AB. Laura is married to Will and they have a set of twins. Surprisingly, Ron, the male twin has type B blood and Rose, the female twin, has type AB blood. Carol's parents, Sue and Jay, have type A blood and type B blood respectively.

It took Tim a little longer to get a response from his side of the family, but once they had all called back he found that his sister Donna has type O blood. Tim has type B blood and their parents, Karen and Walter, have B (Karen) and O (Walter). Donna's husband, Tony, has type A blood and their only son, Ryan, has type A like his father.

Carol and Tim also have two other children. Their oldest son, Jerry, has type A blood and their middle daughter, Beth, has type AB blood.

Of the thirteen people directly related to Grace in this family, only two have a blood type that matches hers. Next the doctors will need to do more tests on these two people to find out if they could be bone marrow donors for Grace.