

Abnormal Blood Tests in Children With Down Syndrome

Problems with blood in children with Down syndrome are rare. It is important to understand these conditions though. Read this document to learn more about reasons and ways to check your child's blood.

WHAT IS "TMD"?

Transient Myeloproliferative Disorder (TMD) happens when blood cells are not made normally.

- It is seen in about 1 in 10 infants with Down syndrome.
- In TMD, there is an increase in immature forms of white blood cells. There is also a decrease in normal cells, which can lead to anemia.
- In most children, TMD will go away on its own by the time your child is three months old. However, some children develop leukemia later in life.
- If your child has or had TMD, it is important for a pediatric blood expert to check him/her regularly.

IF MY CHILD NEVER HAD TMD, IS HE OR SHE STILL ABLE TO GET LEUKEMIA?

- Yes. Children with Down syndrome are more likely than other children to develop leukemia.
- However, leukemia is rare in general. Only 1 percent of children with Down syndrome will develop leukemia.
- TMD increases a child's risk of a specific type of leukemia called acute myeloblastic leukemia. But, children with Down syndrome are at an increased risk of developing all forms of acute leukemia.

WHY IS MY CHILD MORE LIKELY TO DEVELOP ACUTE LEUKEMIA?

Leukemia is a type of cancer that happens when there are too many immature white blood cells. Sometimes the mechanisms that control how many of each type of cell the body produces don't work right. This happens when one or more of our genes changes the genetic code. These genes are often found on chromosome 21 in patients with leukemia. Because people with Down syndrome have an extra copy of chromosome 21, they are more likely to have the mutated genes that cause leukemia.

HOW IS MY CHILD SCREENED FOR LEUKEMIA?

We do not routinely screen children for leukemia unless they have had TMD as a baby. However, you should contact your child's doctor if you notice your child has any of the following signs:

- Extreme tiredness
- Major changes in eating habits
- Shortness of breath
- Easy bruising
- A rash of purple spots
- Bleeding gums
- Pain in legs
- Limping