

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 A COMPLETE BLOOD COUNT (CBC) TEST?

Our blood has a mix of cells, protein and water. The CBC test looks at the three main kinds of cells that our bone marrow makes:

- **Red Cells** – These have hemoglobin, which moves iron and oxygen in your body. Your doctor may check a hemoglobin test to evaluate the red blood cells.
- **White Cells** – These cells help fight infection. All white blood cells start out in an immature state and then become fully functional. Leukemia can happen when too many immature cells are made.
- **Platelets** – These cells help stop bleeding. There is an increased risk of bleeding if you do not have enough platelets.

HOW OFTEN ARE MY CHILD'S BLOOD CELL COUNTS SUPPOSED TO BE CHECKED?

A CBC is taken when your child is a newborn, and then a hemoglobin level will be checked every year starting at age one.

WHY IS MY CHILD MORE LIKELY TO BE ANEMIC?

- Anemia is a disease in red blood cells that have low levels of iron.
- Anemia makes the heart work much harder in order to deliver enough oxygen to the body. Iron deficiency is the most common cause of anemia.
- Children with Down syndrome have been shown to have lower iron than other children.

DOES MY CHILD NEED IRON SUPPLEMENTS?

- Your child might need to take iron pills if he/she has iron deficiency anemia.
- It is important to have enough iron because iron is needed for many of the brain's functions.
- However, too much iron can be dangerous. Talk to your child's doctor before starting any iron supplements.

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.