



DOWN SYNDROME PROGRAM
www.massgeneral.org/downsyndrome

Leukemia in People with Down Syndrome: What You Need to Know

Leukemia is a type of cancer that affects the white blood cells. In this handout, you will learn about leukemia and how it affects people with Down syndrome.

WHAT IS LEUKEMIA?

Leukemia is a type of cancer that affects a person's white blood cells. Leukemia causes the body to make large numbers of **abnormal** (not normal) blood cells called **blasts**. When there are too many blasts in a person's body, they develop leukemia.

WHAT ARE POSSIBLE SIGNS OF LEUKEMIA?

- Feeling very tired
- Very pale skin
- Fever or night sweats
- Pain in the bones or joints
- Bruises or red spots on the arms or legs
- Bleeding easily
- Getting infections easily
- Weight loss
- Loss of appetite (not feeling hungry)

ARE CHILDREN WHO HAVE DOWN SYNDROME MORE LIKELY TO DEVELOP LEUKEMIA?

Yes. Children who have Down syndrome are slightly more likely to develop leukemia than other children of the same age and developmental stage. But the chance of a child with Down syndrome developing leukemia is very low.

WHAT ARE THE DIFFERENT TYPES OF LEUKEMIA?

- **Acute myeloid leukemia (AML)** is most common in children ages 1-4.
- **Acute megakaryoblastic leukemia (AMKL)** is a rare type of AML that most often affects children who have Down syndrome.
- **Acute lymphoid leukemia (ALL)** is most common in children ages 2-6, but it can develop at any age.
- **Transient myeloproliferative disorder (TMD)** is most common in newborns whose blood cells are abnormal. In children who have Down syndrome, TMD can turn into AML.
- **Myelodysplastic syndrome (MDS)** is a group of diseases that affects how **bone marrow** (soft core of the bone) makes blood cells. MDS can turn into AML.

HOW DO DOCTORS TEST FOR LEUKEMIA?

There are no screening tests for leukemia. Instead, doctors test for leukemia through a blood test if a child has some of the symptoms.

HOW DO DOCTORS TREAT LEUKEMIA?

Cancer doctors (also called **hematologists** or **oncologists**) treat cancer with **chemotherapy**. Chemotherapy drugs help lower the number of blast cells in the body.

Children who have Down syndrome can be more sensitive to side effects of chemotherapy. The doctor will adjust the chemotherapy to limit the side effects while still getting the best benefits.