

## CT Scan Information for Parents

CT (also called CAT scan) is a technology which uses ionizing radiation to take pictures of the human body. CT scans can provide important information to your doctor about what is going on inside your child's body. However, there are risks associated with CT scans which are important to understand.

### **Radiation:**

The ionizing radiation which a CT scan uses to make pictures is the same kind of radiation used to make X-rays. However, a CT scan requires more radiation to make a picture because the picture is more detailed. A CT scan of the chest requires more radiation than an X-ray of the chest.

We are all exposed to radiation every day from natural sources (cosmic radiation, radioactive minerals in the earth, etc.). We know that large doses of radiation can cause harm to people and increased risks of cancer. Children are more sensitive to radiation than adults. We do not know for sure whether the low doses of radiation from CT scans increase an individual's risk of cancer. But, to be safe, we believe it is best to minimize radiation, especially to children.

We can minimize the risk of radiation by only performing CT scans when necessary. We can use other imaging methods (such as US or MRI) when we are able. Sometimes, rather than imaging, your doctor may recommend waiting and seeing if symptoms change or get better with time.

It is also important to make sure that CT scans are adjusted to use smaller doses of radiation when scanning smaller patients. A child having a CT scan should be getting a "child-size" dose and not an "adult-size" dose of radiation.

### **Intravenous Contrast:**

Sometimes, a medication is given through an IV during a CT scan in order to increase the amount of information available on a CT scan. This medication is called an intravenous contrast agent (sometimes just called "contrast" or referred to as "IV dye").

Like all medications, intravenous contrast agents could cause an allergic reaction. This is uncommon, but could happen in any patient, even those who have never had an allergy before. Some allergic reactions are mild and require no treatment. Some reactions can be treated with oral or IV medications. Rarely, allergies to contrast can become life-threatening and need to be treated in the emergency department or hospital. If your child's doctors feel that your child has an increased risk of allergic reaction, they may recommend pre-medication to decrease the risk of allergic reaction.

Intravenous contrast agents can rarely cause damage to the kidneys. Most often, this is transient and the kidneys recover normal function over time. Rarely, intravenous can cause permanent damage to the kidneys. Fortunately, damage to the kidneys is extremely unlikely in a child who is otherwise healthy.

### **The Bottom Line:**

If your doctor recommends a CT scan, it is because he or she feels the benefit of the CT scan is greater than the risk. CT is a powerful tool to see what is going on inside your child's body. If you have questions about the safety of CT for your child, you can ask your child's pediatrician or radiologist for more information.

For more information: [www.imagegently.org](http://www.imagegently.org)