Medical Radiation and Your Child

Learning that your child may need a diagnostic test (X-ray or CT scan) is never easy. No doubt, you are concerned about your child’s health and wondering about the amount of radiation used in these procedures.

The Imaging Services team at Yavapai Regional Medical Center (YRMC) understands this. Our radiologic technologists are available to explain the procedure your physician has recommended for your child. YRMC’s Imaging Services team also has developed this pamphlet as a resource. Our goal is to provide you information about these important diagnostic procedures and answer questions you may have about the potential risks.

YRMC’s Imaging Services includes state-of-the-art technology as well as experienced and skilled healthcare professionals. These imaging experts are dedicated to delivering high-quality care and safe services to your child. If you would like additional information, please contact YRMC’s Imaging Services at (928) 771-5140.
What are X-rays?
The word X-ray often is linked with the procedure that helps to diagnosis fractures, pneumonias and other injuries or illnesses. However, the definition of the word X-ray is broader. X-rays are forms of radiant energy—like light or radio waves—that can produce pictures of internal structures in the body.

Why are X-rays needed for my child?
A number of imaging procedures, such as X-rays and CT scans use radiation to provide physicians with “snapshots” of what is occurring inside your child’s body. This information helps your child’s physician diagnosis and, if necessary, the physician will recommend appropriate treatment. Medical X-rays are used in numerous examinations and procedures. Some examples of diagnostic procedures include:

• X-rays to detect bone fractures, tumors, pneumonias, foreign objects and more.
• CT scans to produce cross-sectional images of the body.

Is my child in danger from overexposure to X-rays?
All of us are exposed to radiation every day. Air, building materials, rocks, soil and even our homes are sources of what is called naturally occurring background radiation. However, research shows that radiation exposure—even in a medical environment—must be carefully monitored as repeated exposure increases the risk of illness. YRMC’s Imaging Services team brings a wealth of experience and an exceptional commitment to patient safety as well as to high quality patient care and superior image quality. Consider that:

• The hospital’s radiologists and radiologic technologists are trained to use the minimum amount of radiation in order to gather the needed information or obtain optimal results.
• For most exams, the amount of radiation used is small so the benefits of the exam or procedure outweigh concerns about radiation exposure.
• When feasible, YRMC’s radiologists will recommend alternative imaging techniques that do not use radiation (e.g., MRI and ultrasound).

What safety measures will be used to protect my child?
YRMC’s radiologists and radiologic technologists are trained to adjust radiation doses based on the size of the child. They use the lowest dose necessary to obtain the needed results. During the procedure, a lead shield also is used to protect areas not being imaged from radiation exposure.

In addition, YRMC’s Imaging Services follows the following guidelines recommended by the Alliance for Radiation Safety in Pediatric Imaging. Those include:

• Imaging only when there is a clear medical benefit.
• Using the lowest amount of radiation for imaging based on the child’s size.
• Imaging only the indicated area.
• Avoiding multiple scans.
• Using alternative diagnostic tools (such as ultrasound or MRI) when possible.

Are these procedures safe for my child?
Medical radiation procedures are safe when delivered by radiologic technologists. According to the National Institutes of Health, the risk associated with an individual scan is small, but the risk does increase with additional studies. It is important to remember that the benefits of using these diagnostic tools typically clearly outweigh their risks.

Is there anything I can do to minimize my child’s exposure to radiation?
Keep records of your child’s imaging history just as you do for immunizations (see form to right). Sharing this information with your child’s physicians will help them determine if new tests are necessary.

How can I prepare my child for the procedure?
Your love and reassurance are important as your child may find the imaging equipment intimidating. YRMC’s radiologic technologists will show the utmost care for your child. While most imaging studies are not painful, some can be uncomfortable and many require that the child remain still while the images are recorded.

Would you like to learn more?
If you have additional questions, contact your physician or YRMC’s Imaging Services at (928) 771-5140. The following sources also provide credible, useful information:

• www.radiologyinfo.org
• www.imagegently.org