Radiation Comparison
Radiation levels are commonly measured in millisieverts (mSv). The average person in the United States receives 3 mSv per year from background radiation.

Radiation used in medical imaging exams can be compared to background radiation and other sources of radiation. However, the radiation doses listed for imaging exams are average doses – they may vary depending on each individual patient.

<table>
<thead>
<tr>
<th>Exam/Procedure</th>
<th>Radiation dose for Adults</th>
<th>Compared to background radiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bone Density (DEXA)</td>
<td>0.001 mSv</td>
<td>3 hours</td>
</tr>
<tr>
<td>X-ray Extremity</td>
<td>0.001 mSv</td>
<td>3 hours</td>
</tr>
<tr>
<td>Cross-country airplane flight</td>
<td>0.05 mSv</td>
<td>5 days</td>
</tr>
<tr>
<td>X-ray Chest (2 view)</td>
<td>0.1 mSv</td>
<td>10 days</td>
</tr>
<tr>
<td>Mammography</td>
<td>0.4 mSv</td>
<td>7 weeks</td>
</tr>
<tr>
<td>CT Sinuses</td>
<td>0.6 mSv</td>
<td>2 months</td>
</tr>
<tr>
<td>CT Head</td>
<td>2 mSv</td>
<td>8 months</td>
</tr>
<tr>
<td>Radon gas from home</td>
<td>2 mSv</td>
<td>8 months</td>
</tr>
<tr>
<td>Background radiation</td>
<td>3 mSv</td>
<td>1 year</td>
</tr>
<tr>
<td>CT Virtual Colonoscopy</td>
<td>2-5 mSv</td>
<td>8 months – 2 years</td>
</tr>
<tr>
<td>CT Chest/Abdomen/Pelvis</td>
<td>5-10 mSv</td>
<td>2-3 years</td>
</tr>
</tbody>
</table>

Exam/Procedure Radiation dose Compared to background radiation
Bone Density (DEXA) 0.001 mSv 3 hours
X-ray Extremity 0.001 mSv 3 hours
Cross-country airplane flight 0.05 mSv 5 days
X-ray Chest (2 view) 0.1 mSv 10 days
Mammography 0.4 mSv 7 weeks
CT Sinuses 0.6 mSv 2 months
CT Head 2 mSv 8 months
Radon gas from home 2 mSv 8 months
Background radiation 3 mSv 1 year
CT Virtual Colonoscopy 2-5 mSv 8 months – 2 years
CT Chest/Abdomen/Pelvis 5-10 mSv 2-3 years

Radiation levels are commonly measured in millisieverts (mSv). The average person in the United States receives 3 mSv per year from background radiation. Radiation used in medical imaging exams can be compared to background radiation and other sources of radiation. However, the radiation doses listed for imaging exams are average doses – they may vary depending on each individual patient.

**locations**

**Blaine: 763.225.6500**
Blaine Medical Center, Suite 130
11855 Ulysses Street NE
Blaine, MN 55434

**Burnsville: 952.898.2333**
Burnsville Medical Center, Suite 204
14000 Nicollet Avenue South
Burnsville, MN 55337

**Coon Rapids: 763.792.1900**
MMEC I, Suite 140
8990 Springbrook Drive
Coon Rapids, MN 55433

**Maple Grove: 763.416.7888**
Arbor Lakes Medical Building, Suite 310
12000 Elm Creek Blvd.
Maple Grove, MN 55369

**Northwest: 763.795.1600**
Mercy Specialty Center, Suite 180
11850 Blackfoot Street NW
Coon Rapids, MN 55433

**Southdale: 952.405.2777**
Southdale Medical Building, Suite 125
6545 France Avenue South
Edina, MN 55435

**The Breast Center (Coon Rapids): 763.786.9460**
MMEC I, Suite 125
8990 Springbrook Drive
Coon Rapids, MN 55433

[ www.suburbanimaging.com ]
Radiation Exposure
We are exposed to small amounts of radiation every day from natural sources, including soil, rocks, air, water and the atmosphere. This is called background radiation.

Other common sources of radiation exposure include cross-country airplane flights, radon gas found in homes and medical imaging exams that use x-rays, including:

- CT (computed tomography)
- PET/CT (positron emission tomography/computed tomography)
- mammography
- nuclear medicine exams
- bone density (DEXA)
- fluoroscopy (injections)
- radiography (x-ray exams)

Radiation in Medical Imaging
The use of medical imaging has revolutionized the field of medicine and has significantly advanced the diagnosis, treatment and follow-up care people receive, improving health outcomes.

Imaging equipment has become more widely available and the number of imaging exams performed each year has also increased. Attention to radiation exposure from medical imaging exams has also grown.

There is some concern that radiation from medical x-rays could minimally increase your risk of developing cancer later in life. This potential risk decreases with age, so attention to radiation exposure is most important for children and young adults.

However, there is no definitive scientific evidence that radiation from medical imaging exams causes cancer. To be safe, the medical community advocates taking reasonable precautions to limit the radiation exposure from medical imaging, including:

- image only when there is a clear reason
- use the least amount of radiation needed for a quality diagnostic exam
- image only the indicated area
- limit multiple scans
- suggest alternative imaging exams that do not use radiation, such as MRI or ultrasound, when appropriate

Radiation Safety Program
We maintain a radiation safety program to ensure compliance with federal and state radiation safety standards. The program monitors imaging departments that:

- use radiation to obtain images (CT, PET/CT, x-ray, fluoroscopy, mammography)
- use radioactive materials for medical purposes (nuclear medicine, PET/CT)

Our program is directed by one of our radiologists and a radiation physicist. Each is specially trained to understand the process, effects and medical use of radiation on the human body.

State-of-the-Art Equipment
Our advanced CT scanners adjust the amount of radiation needed to obtain quality images based on a patient’s body mass. For example, a 5’1” tall, 120 pound female patient would receive less radiation than a 6’2” tall, 360 pound male patient.

Image Gently™ and Image Wisely™
Suburban Imaging is a member of the international Image Gently and Image Wisely campaigns.

An initiative of the Alliance for Radiation Safety in Pediatric Imaging, Image Gently educates medical professionals and parents about steps to lower the radiation dose in the imaging of children.

Image Wisely is an awareness program of several medical associations advocating the use of the lowest optimal radiation dose for necessary studies in adult imaging.

Medication and Imaging Record Card
We recommend that all patients keep track of their medications, medical allergies/reactions and imaging exams. Ask one of our receptionists for a personal wallet card so you can record this information.

What You Should Know
If you have questions about your imaging exam, ask one of our technologists. Important questions to ask about your imaging facility include:

- Is the facility accredited by the American College of Radiology?
  Suburban Imaging: yes
- Are the technologists credentialed?
  Suburban Imaging: yes
- Does a board-certified radiologist protocol and interpret the study?
  Suburban Imaging: yes
- Are the machines/scanners checked annually or more frequently by a medical physicist?
  Suburban Imaging: yes
- Is there a quality assurance program for diagnostic imaging?
  Suburban Imaging: yes