Radiation Exposure from X-ray or Nuclear Medicine Exams during Pregnancy

A woman having an x-ray exam is exposed to a small amount of radiation to produce the images. If she is pregnant, her baby may also be exposed. In a nuclear medicine exam, a small amount of radioactive dye is injected into the woman’s body that may also expose the baby to radiation. In most cases, the risk to the baby from the radiation is very small. It is about the same as risks to your baby from activities in everyday living like driving a car or flying in an airplane. The benefit to the woman having the exam and her baby outweighs this risk. If you are trying to become pregnant or may already be pregnant, we may postpone the exam to avoid any risk to your baby.

The amount of radiation used to make images is very small. It is about the same as the amount of radiation that you and your baby are exposed to from natural sources. Any bad effects from radiation only happen when the amount of radiation is much higher. If you are pregnant when you have an x-ray or nuclear medicine exam, the risk to your baby’s health depends on the amount of radiation exposure and the stage of pregnancy at the time of the exam.

- **During the first two weeks of pregnancy** after the start of your last period, there is no risk to the baby from radiation.

- **During the third week of pregnancy**, the baby should be unharmed, but there is a very small chance that radiation could cause a loss of the pregnancy.

- **During weeks 4-10**, the organs of the baby like the heart, lungs, skin, and muscles are starting to develop. At this time, there is a very small chance of causing a birth defect.

- **During weeks 10-17**, the nerves and the brain are growing. The risks are small for most exams at this stage. Much larger doses of radiation could cause brain damage and intellectual disability.

- **During weeks 18 until birth**, radiation is unlikely to cause birth defects or other health effects, unless the dose is very large.

- **At anytime during pregnancy**, there may be a very slight increased risk of cancer later in the baby’s life.

**What can I do to prevent harm to my child?**

Although there are no bad effects for most exams using radiation, we wish to err on the side of safety for you and your child. Before any imaging exam, be sure to **let your doctor know if you are pregnant or you think you may be pregnant**.