

GUIDANCE ON DECLARED PREGNANCY

Harry S. Truman Memorial Veteran's Hospital
800 Hospital Drive, Columbia, MO 65201
Radiation Safety Office
Cell: 573-397-3074, Ext.: 52590, Office: B050

Employees who work with or near sources of ionizing radiation have an annual whole body exposure limit of 5000 mrem or 50 mSv total effective dose equivalent (TEDE). Employees that become pregnant and declare their pregnancy in writing are limited to a lower TEDE of 500 mrem or 5 mSv for the entire gestation period. This reduced limit provides additional protection to the developing fetus. This reduced limit is warranted because rapidly developing cells are generally more vulnerable to biological insult than less rapidly growing cells, regardless of the type of insult (radiological, chemical, viral, etc.).

For an employee to make an informed decision regarding the risks of working with radioactive materials during pregnancy, they will need to:

- Read the NRC Regulatory Guide 8.13 "Instruction Concerning Prenatal Radiation Exposure", and
- Make an appointment with the radiation safety officer to discuss the risks of ionizing radiation during pregnancy specific to their work environment

The employee can decide whether or not they wish to declare their pregnancy. If an employee decides to declare their pregnancy, they will need to complete the "Declaration of Pregnancy" form and commit to the limitations outlined here:

A declaration of pregnancy may be made voluntarily at any time during a pregnancy and may be withdrawn at any time. For consistency we have modeled the declared pregnancy program on the Nuclear Regulatory Commission's suggested guidance, 10 CFR 20.1003 and 10 CFR 20.1208.

By making a declaration of pregnancy the employee accepts the following conditions:

- *The dose limit will be reduced to 500 mrem or 5 mSv to the embryo/fetus for the entire gestation period.*
- *The facility will make efforts to avoid substantial variation in dose, to achieve a dose rate of no more than 50 mrem or 0.5 mSv per month.*
- *The dose to the embryo/fetus will be taken to be the sum of:*
 - *The dose equivalent to the embryo/fetus from any radionuclides in the declared employee, and*
 - *The deep dose equivalent to the declared pregnant employee*
- *If the employee has already received or exceeded 500 mrem or 5 mSv by the time this declaration of pregnancy is made, the dose to the embryo/fetus will be limited to 50 mrem or 0.5 mSv for the remainder of the pregnancy.*
- *In order to achieve these dose limits, the facility may be required to change the employee's job or job responsibilities during the pregnancy.*

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DOSIMETRY

The declared pregnant employee's new dose limit will be 500 mrem or 5 mSv for the duration of the pregnancy. The employee may be issued a fetal dosimeter that will be exchanged monthly. The monthly exchange allows for more frequent dose review and necessary changes in practices or job duties to be identified more quickly.

If there is a need to monitor dose to the fetus from internalization of radionuclides by the employee, a plan will be developed and implemented. Bioassays may be required based on the employee's intake potential. Monitoring results will be reported on a monthly basis for the remainder of the pregnancy.

If the employee chooses not to declare their pregnancy, they are encouraged to take measures to reduce radiation exposure and have the option to change their mind and declare at any time. The dose limit will remain 5000 mrem and there will be no change in the dosimetry frequency for employees that do not declare a pregnancy.