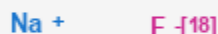




Sodium Fluoride F 18

Revised: August 17, 2020.

CASRN: 22554-99-0



Drug Levels and Effects

Summary of Use during Lactation

Information in this record refers to the use of sodium fluoride F 18 as a diagnostic agent. The manufacturer recommends withholding breastfeeding for 24 hours after a diagnostic dose of 300-450 MBq (8 to 12 mCi); however, this time might be longer than necessary given the minimal amount of fluoride that appears in breastmilk. Twenty-four hours is about 10 half-lives of fluoride F 18 and less than 0.01% of the radioactivity administered will remain in the body. The mother can nurse just before administration of the radiopharmaceutical. If the mother has expressed and saved milk prior to the examination, she can feed it to the infant during the period of nursing interruption.[1,2]

Disclaimer: Information presented in this database is not meant as a substitute for professional judgment. You should consult your healthcare provider for breastfeeding advice related to your particular situation. The U.S. government does not warrant or assume any liability or responsibility for the accuracy or completeness of the information on this Site.

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Mothers concerned about the level of radioactivity in their milk could ask to have it tested at a nuclear medicine facility at their hospital. When the radioactivity is at background levels they may safely resume breastfeeding. A method for measuring milk radioactivity and determining the time when a mother can safely resume breastfeeding has been published.[3]

Drug Levels

F18 is a positron emitter with a principal decay energy of 0.6335 MeV, annihilation photons of 0.511 MeV, and a physical half-life of 1.8 hours and 0.07% of an administered dose appears in breastmilk.[4]

Maternal Levels. A study in one mother who received an oral dose of 25 mg of nonradioactive sodium fluoride found that milk fluoride concentrations closely paralleled maternal serum fluoride concentration at 21 to 32% of maternal serum levels over an 8-hour period. The authors estimated that this represents only 0.2% of the dose given to the mother.[5]

Infant Levels. Relevant published information was not found as of the revision date.

Effects in Breastfed Infants

Relevant published information was not found as of the revision date.

Effects on Lactation and Breastmilk

Relevant published information was not found as of the revision date.

References

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2. Early PJ, Sodee DB. Principles and practice of nuclear medicine. 2nd ed. St Louis Mosby-Year Book, Inc 1995:1380-1.
3. Stabin MG, Breitz HB. Breast milk excretion of radiopharmaceuticals: Mechanisms, findings, and radiation dosimetry. *J Nucl Med.* 2000;41:863–73. PubMed PMID: 10809203.
4. Leide-Svegborn S, Ahlgren L, Johansson L, et al. Excretion of radionuclides in human breast milk after nuclear medicine examinations. Biokinetic and dosimetric data and recommendations on breastfeeding interruption. *Eur J Nucl Med Mol Imaging.* 2016;43:808–21. PubMed PMID: 26732471.
5. Ekstrand J, Spak C-J, Falch J, et al. Distribution of fluoride to human breast milk following intake of high doses of fluoride. *Caries Res.* 1984;18:93–5. PubMed PMID: 6580962.

Substance Identification

Substance Name

Sodium Fluoride F 18

CAS Registry Number

22554-99-0

Drug Class

Breast Feeding

Lactation

Radiopharmaceuticals

Fluoride Radioisotopes

Diagnostic Agents