



THYROID AND PREGNANCY

Radioactive Iodine Exposure and Pregnancy

BACKGROUND

Radioactive iodine is a common therapy used in the treatment of thyroid cancer and hyperthyroidism. It is taken up and concentrated by the thyroid cells and the radiation, in turn, kills the cells. Much higher doses are used for the treatment of thyroid cancer than hyperthyroidism. Although generally well tolerated, a number of side effects may occur and there have been concerns about the effect of radioactive iodine on reproductive function and fertility. In this article, the authors reviewed the published medical literature on the effects of radioactive iodine treatment use in thyroid cancer on reproductive function and future pregnancy.

THE FULL ARTICLE TITLE:

Sioka C, Totopoulos A. Effects of I-131 therapy on gonads and pregnancy outcome in patients with thyroid cancer. *Fertil Steril* 2011. 95:1552-9.

SUMMARY OF THE STUDY

A total of 54 studies were selected for this review article. Only studies on the effects of radioactive iodine used for thyroid cancer therapy on male and female reproductive function (testicular and ovarian function), lactation (breastfeeding) and pregnancy outcomes were included. In women, radioactive iodine exposure for thyroid cancer therapy appears to cause short-lived menstrual irregularities in approximately 30% of patients and may be associated with an earlier age of menopause. In men,

decreased sperm counts following radioactive iodine therapy have been observed, but these changes generally resolve. Radioactive iodine exposure does not appear to be associated with an increased risk of miscarriage or abnormal subsequent pregnancies. Information on radioactive iodine and breastfeeding is lacking, but due to the potential for exposure to a baby via breast milk, radioactive iodine treatment should be avoided if a woman is breastfeeding.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

Although radioactive iodine therapy is associated with alterations in reproductive function in both men and women, these changes are usually short-lived. Pregnancies achieved after exposure to radioactive iodine treatment do not appear to be at increased risk for negative outcomes. Nevertheless, it is recommended that pregnancy be avoided for 1 year following radioactive iodine therapy to allow reproductive function to normalize.

— Whitney Woodmansee, MD

ATA THYROID BROCHURE LINKS

Thyroid cancer: http://thyroid.org/patients/patient_brochures/cancer_of_thyroid.html

Radioactive Iodine Therapy: http://thyroid.org/patients/patient_brochures/radioactive.html

Thyroid and Pregnancy: http://thyroid.org/patients/patient_brochures/pregnancy.html

ABBREVIATIONS & DEFINITIONS

Radioactive Iodine (RAI): this plays a valuable role in diagnosing and treating thyroid problems since it is taken up only by the thyroid gland. I-131 is the destructive form used to destroy thyroid tissue in the treatment of thyroid cancer and with an overactive thyroid. I-123 is the non-destructive form that does

not damage the thyroid and is used in scans to take pictures of the thyroid (Thyroid Scan) or to take pictures of the whole body to look for thyroid cancer (Whole Body Scan).

Miscarriage: this occurs when a baby dies in the first few months of a pregnancy, usually before 22 weeks of pregnancy.