CHEMICALS AND DRUGS THAT INTERFERE WITH THE TWENTY-FOUR HOUR 1-131 THYROID UPTAKE

Iodine Containing Compounds

These drugs all depress the Radioactive Iodine uptake, but vary in degree, depending upon the type of thyroid disease present. In general, the interference is usually longer in the euthyroid patients and much shorter in the presence of hyperthyroidism. The average interval of depression is given below.

Lugol's Solution	4 to 6 weeks
Iodides	4 to 6 weeks
Antitussives (iodide bearing Cough medications)	4 to 6 weeks
Iodine Ointment	4 to 6 weeks
Iodine Tincture (topical)	4 to 6 weeks
Iodine Pulmonary Mist	4 to 12 weeks
Iodoform Topical	4 to 6 weeks
Some Vitamin Preparations	4 to 6 weeks
Entero-Vioform	4 to 6 weeks
Enterosept	4 to 6 weeks

Contrast Media

Diodrast	6 to 18 weeks
Hypaque (IVP)	6 to 12 weeks
Penografin (IVP)	6 to 12 weeks
Dionosil (Aqueous suspension)	8 to 26 weeks
Dionosil (Oily suspension)	One year or more.
Lipiodol	Will almost always interfere with the RAI uptake for 2-10 years.
Ethiodol (used in lymph-Angiography)	Permanent blockage of the thyroid gland.
Pantopaque	Almost always permanently interferes with the RAI uptake.
Telepaque (used in GB series)	3 to 6 months

Other Chemicals and Drugs

1. Antithyroid drug:
   The clearance of these antithyroid drugs is entirely dependent upon the degree of hyperthyroidism that is present. The more hyperthyroid the patient is, the quicker the clearance and turnover of these drugs in the gland, and the shorter the interval of time necessary to get a corrected RAI uptake. The times listed below include the time necessary in a slightly hyperthyroid patient to return to a baseline state after the initial rebound phenomenon has cleared.

Thiouracil	4 to 6 weeks
Propylthiouracil	4 to 6 weeks
Methylthiouracil	4 to 6 weeks
Thiourea	4 to 6 weeks
Tapazole	4 to 6 weeks
Thiocyanate	2 weeks

2. Thyroid medication:

   The length of time that these medications will depress the RAI uptake is dependent upon the degree of hypothyroidism that is present. The more hypothyroid the patient is, the shorter the time interval. The following time intervals are for a medium degree of hypothyroidism.

Desiccated thyroid extract	3 to 6 weeks
Thyroxine	3 to 6 weeks

3. Other drugs that indirectly affect the RAI uptake:

Orinase	2 to 4 weeks
Progesterone	1 week
Andrenocortical Steroids	1 week or less
ACTH	1 week
Pas & Isoiazid	1 week after prolonged use.
Pentothal	1 week
Phenothiazines	1 week
Antihistamines	1 week or less
Amphenone	2 to 3 weeks
Dicumarol	3 days or less
Dinitrophenol	less than a week
Hexylresorcinol	1 to 2 weeks
Mercurhydrin	less than a week

   The above listed compounds are the most generally encountered producing depression of the RAI uptake. Other less known and less used compounds will produce similar involvement and in questions of possible blockage of the gland by

infrequently used compounds, the physician is advised to contact the Nuclear Medicine Physician in the Division of Nuclear Medicine.

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