

THYROID UPTAKE SCAN IODINE I-123

******Please report site-specific normal uptake values as part of the protocol especially if measuring uptake at different times (not every site currently do 6 and 24 hrs).**

Indications

- Graves Disease
- Subacute and Chronic Thyroiditis
- Evaluation of palpable nodules
- Evaluation of an abnormal gland to palpation, but without definite nodules
- Evaluation of patients who had irradiation of head and neck in childhood with or without palpable nodules.
- Evaluation of ectopic thyroid tissue, e/g/ struma ovarii(image over pelvis) and lingual thyroid. (image upper jaw and neck)

Conflicting Exams and Medications

- Radiographic procedures using IV Contrast media (e.g., IV pyelogram, CT scan with contrast (WAIT 4 Weeks Post Contrast)
- Other radiographic procedures using iodine contrast media (e.g., myelogram, oral cholecystogram)
- Exogenous T₃ T₄ (Liothyronine, levothyroxine)
- Thyroid-blocking agents as propylthiouracil, perchlorate and methimazole)
- Oral iodides in medications containing iodine (e.g. kelp preparations, vitamins, Lugol's solution
- If Patient is pregnant or lactating consider using ^{99m}TcO₄⁻

Exam Time

Administration to imaging time 3 to 24 hours
Imaging time 1 hour
Normal Administered Activity
200 to 600 µCi (7.4 to 25 MBq)
For 5 yr. old child, 3 to 10 µCi/kg (0.1 to 0.3 MBq/kg)

Patient Preparation

- Must be off thyroid Hormones
- Antithyroid drugs should be withheld 2-4 Days
- T4 therapy should be withheld 4-6 weeks.
- T3 should be held 2 weeks.
- Patient needs be on a low iodine diet for 7-14 days before exam.
- NPO overnight before exam.

Patient Positioning Supine, Neck Extended

Radiopharmaceutical and Dose Iodine- 123 (₁₂₃ 1) – Oral Administration

NUCLEAR MEDICINE PROTOCOLS



Acquisition Protocol (6 and 24 hour) Before the patient receives the capsule, place the capsule in the neck phantom and position the camera over the capsule in the neck phantom, bringing the camera to a standard position of approx 5 cm. Acquire counts for 1 min., record the counts.

Procedure

6 hour after ingestion of radiopharmaceutical

Acquire 5 min (300sec) ANT Image centered in field of view.

Mark chin and SSN with a point marker.

If marker overlaps thyroid, then take another 5 min. ANT Image without the marker.

Acquire 5 minute RAO and LAO oblique images at 35 degrees, with thyroid centered in the field of view.

Iodine uptake is normally measured at 24 hours, although rarely, it is also measured at 6 hours. It is measured with a sodium iodide probe.

Patient's thyroid should be palpated by physician

PLEASE REPORT SITE SPECIFIC UPTAKE VALUES Not all sites do these at 6 and 24 hours. This is very helpful information for the Radiologist.