

## Radioactive Iodine

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Radioactive Iodine (RAI) is a common therapy for hyperthyroidism. However hyperthyroidism recurs or persists in 15-18% of patients after RAI. (Lingudu et al., 2014)

Thyroid function outcome (hyperthyroidism or euthyroidism/hypothyroidism) was verified retrospectively at least 1 year after RIT and was compared with presenting clinical characteristics and pre-RIT parameters in 167 patients with GD treated with I-iodide. After RIT, 83 patients (49.7%) became euthyroid, 64 patients (38.3%) became hypothyroid and 20 (12.0%) remained hyperthyroid. (Liu et al., 2014) (Cepkova et al., 2014)

Several case reports describe thyroid storm following radioactive iodine treatment in pediatrics. (Rohrs et al., 2014) (1972) (Freeman et al., 1969) (Hayek, 1978) (McDermott et al., 1983)

One study found that is safe to administer I-131 to patients who are severely hyperthyroid without fear of thyroid storm, provided beta blockade drugs are used to control the signs and symptoms. (Vijayakumar et al., 2006)

### Iodide

The administration of 600 microg inactive iodide for three days during radioiodine therapy in patients with Graves' hyperthyroidism and an unexpectedly short half-life of <3 or 4 days was a safe and effective alternative to the administration of a second radioiodine capsule. (Dietlein et al., 2007)

Administration of (127)I after (131)I treatment can lead to an increase in its effective half-life. This will also increase the absorbed energy dose in thyroid tissue, thereby improving therapeutic outcome without administration of a higher or second dose of (131)I. This may minimize whole-body exposure to radiation and reduces the cost of treatment. (Rogowski et al., 2011)

### Lithium

RAI therapy combined with lithium showed a trend towards higher cure rate, safe and time to cure was less than RAI alone. Hence RAI combined with lithium is a better option in the management of hyperthyroidism than RAI alone. (Lingudu et al., 2014)

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