

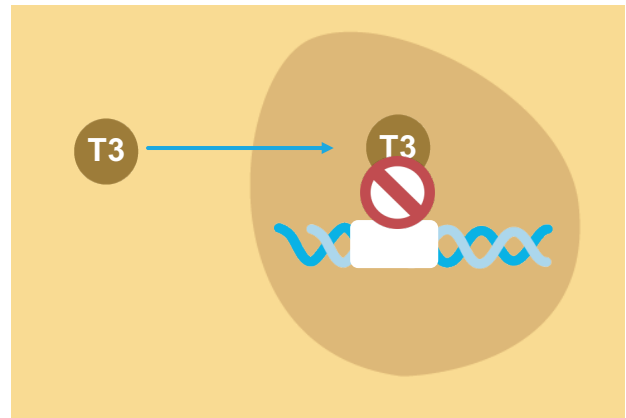
OTHER CAUSES OF ABNORMAL THYROID LAB VALUES

Managing thyroid hormone resistance

Hormone resistance is rare, but most cases are due to thyroid hormone receptor mutations. These mutations are inherited in an autosomal dominant fashion and typically inhibit signaling via the T3 receptor.

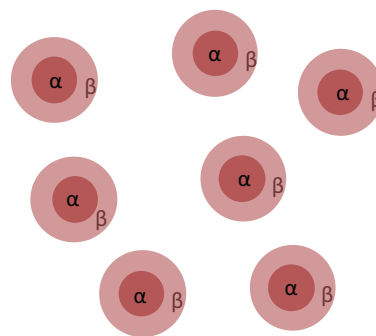
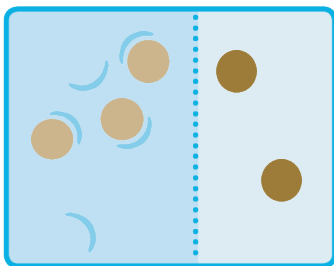
Patients are generally asymptomatic, and present with a goiter on exam.

Diagnosis is made incidentally when thyroid labs are checked for other reasons and show HIGH TSH with HIGH thyroid hormone levels.



It is important to confirm the diagnosis with additional testing:

- Measure hormone levels via equilibrium dialysis to ensure no lab interference.
- Measure alpha-subunit, which will be normal with TH resistance but elevated with TSH-secreting adenoma.
- Confirm diagnosis with genetic testing.



No treatment is needed, as higher levels of thyroid hormone are able to compensate for the decreased signaling, but it is important to recognize the diagnosis to avoid unnecessary treatment.

Further reading

Refetoff S, Weiss RE and Usala SJ. The Syndromes of Resistance to Thyroid Hormone. *Endocrine Reviews*. 1993. 14(3):348–399.