

Total T₄ Testing Guide: Canine Hypothyroidism

Dynamic range

0.5–10.0 µg/dL
(6.4–128.7 nmol/L)

Catalyst Total T₄ results

| | | |
|-------------|---------------|--------------------|
| Low | <1.0 µg/dL | (<13.0 nmol/L) |
| Low Normal | 1.0–2.0 µg/dL | (13.0–26.0 nmol/L) |
| Normal | 1.0–4.0 µg/dL | (13.0–51.0 nmol/L) |
| High | >4.0 µg/dL | (>51.0 nmol/L) |
| Therapeutic | 2.1–5.4 µg/dL | (27.0–69.0 nmol/L) |

Canine screening

- Dogs with low total T₄ (T₄) and evidence of nonthyroidal illness (NTI) should have the NTI addressed.
- Dogs with T₄ results in the low normal range may be hypothyroid.

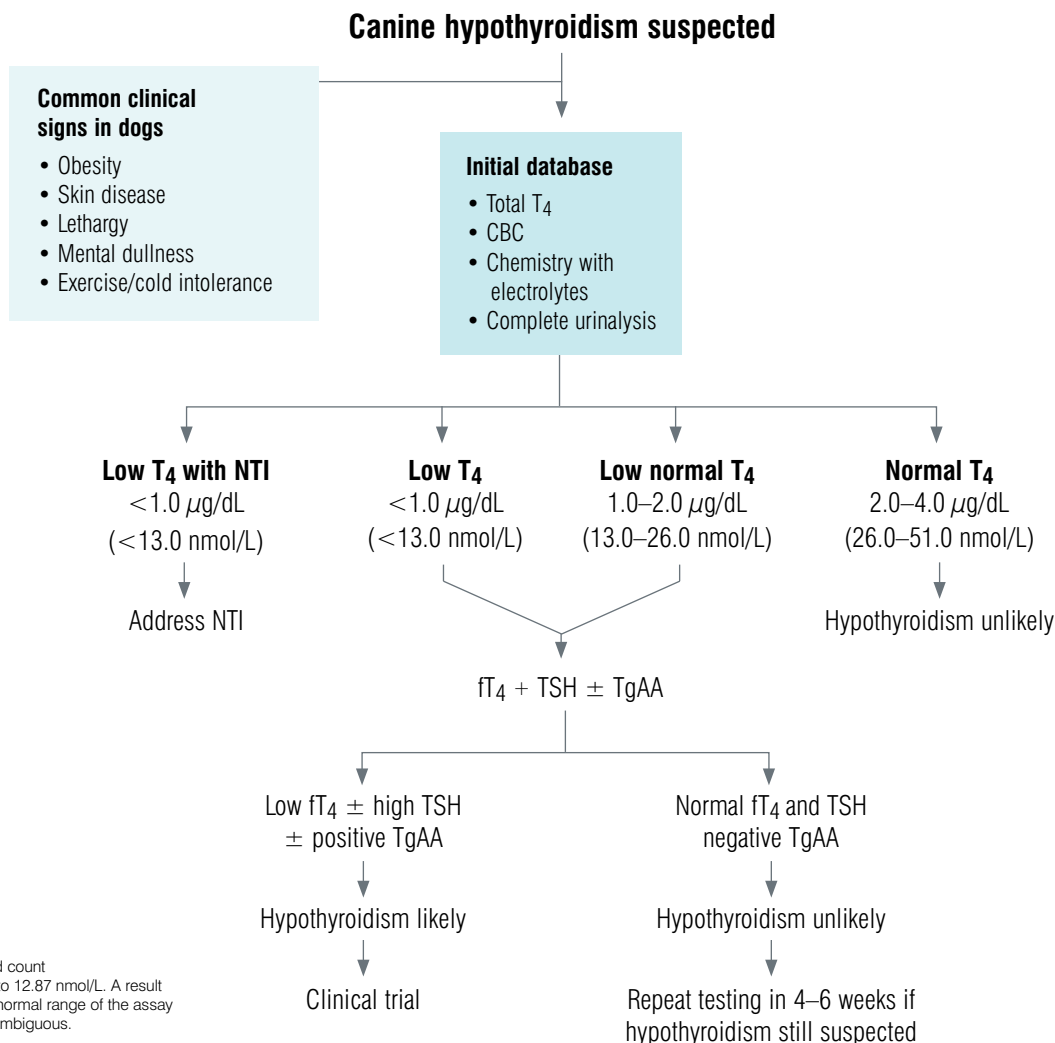
In dogs with low or low normal T₄ results and with consistent clinical signs, consider one or more of the following to aid in confirming hypothyroidism:

- Free T₄ (fT₄)
- Endogenous thyroid-stimulating hormone (TSH)
- Possible thyroglobulin autoantibodies (TgAA)

Hypothyroidism therapeutic monitoring

For dogs on thyroid supplement, acceptable 4–6-hour post-pill T₄ values will generally fall in the upper end of the reference interval or slightly above.

Algorithm



CBC = Complete blood count

Note: 1 µg/dL is equal to 12.87 nmol/L. A result that falls within the low normal range of the assay should be considered ambiguous.

Total T₄ Testing Guide: Feline Hyperthyroidism

Dynamic range

0.5–20.0 µg/dL
(6.4–257.4 nmol/L)

Catalyst Total T₄ results

| | | |
|--------------------------------------|---------------|--------------------|
| Subnormal | <0.8 µg/dL | (<10.0 nmol/L) |
| Normal | 0.8–4.7 µg/dL | (10.0–60.0 nmol/L) |
| Gray zone in old or symptomatic cats | 2.3–4.7 µg/dL | (30.0–60.0 nmol/L) |
| Consistent with hyperthyroidism | >4.7 µg/dL | (>60.0 nmol/L) |

Feline screening

Cats with consistent clinical signs and total T₄ (T₄) values in the borderline high range (gray zone) may have early hyperthyroidism with a concurrent nonthyroidal illness (NTI).

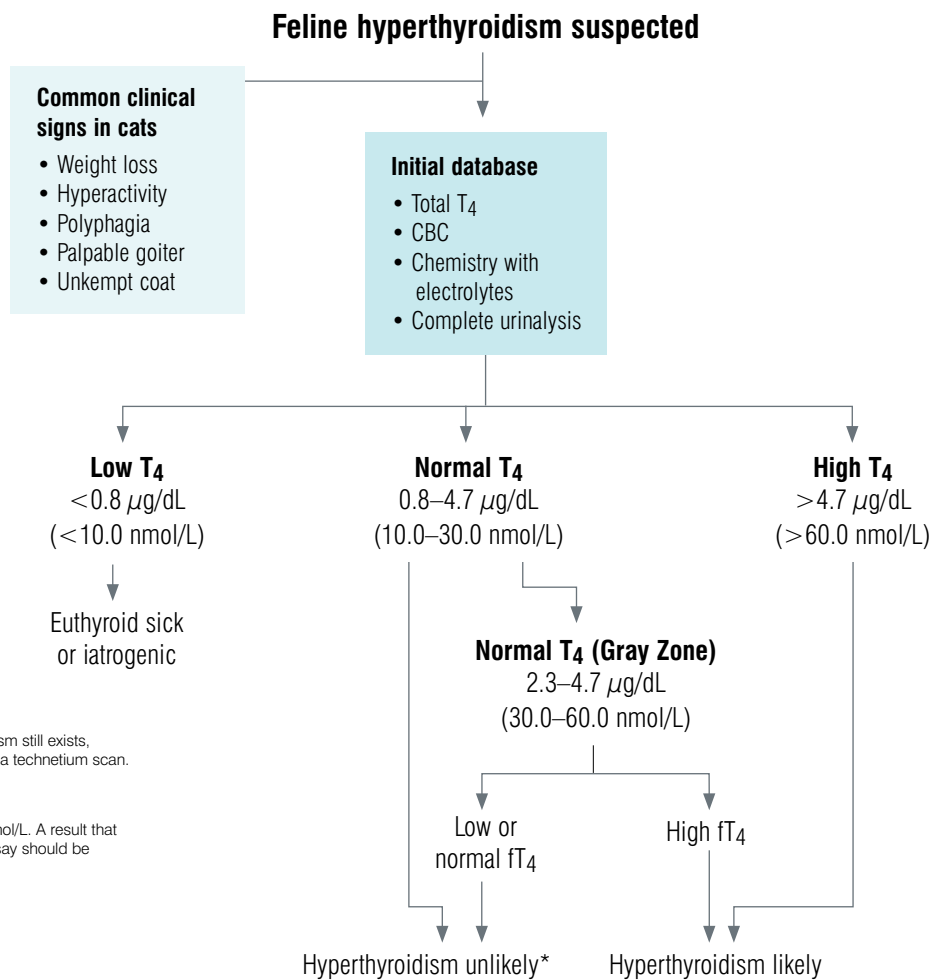
In these cases, consider the following to aid in confirming the diagnosis:

- Free T₄ (fT₄)
- T₃ suppression test
- Radionuclide thyroid imaging

Hyperthyroidism therapeutic monitoring

Following treatment with methimazole (or similar), T₄ values will generally fall within the lower to midportion of the reference interval.

Algorithm



*If strong suspicion of hyperthyroidism still exists, consider retesting in 4–6 weeks or a technetium scan.

CBC = Complete blood count

Note: 1 µg/dL is equal to 12.87 nmol/L. A result that falls within the gray zone of the assay should be considered ambiguous.