



STARTER GUIDE

Thyroid Hormone

STARTER CHEAT SHEET

Know your symptoms. Know your labs. Know what to ask for.



HOW YOUR THYROID TALKS TO YOUR BODY



HYPOTHYROIDISM

Underactive thyroid · everything runs slow

- Fatigue that sleep doesn't fix
- Weight gain or can't lose weight
- Always cold; cold hands & feet
- Constipation
- Dry skin, brittle nails
- Hair thinning; outer eyebrows thinning
- Brain fog, poor memory
- Low mood, depression
- Heavy or irregular periods
- Trouble getting pregnant
- Muscle aches, joint stiffness
- Puffy face, hoarse voice
- Slow heart rate, high cholesterol
- Low libido

HYPERTHYROIDISM

Overactive thyroid · everything runs fast

- Anxiety, irritability, feeling on edge
- Racing or pounding heart
- Always hot; heavy sweating
- Weight loss despite a big appetite
- Shaky hands (tremor)
- Trouble sleeping
- Frequent or loose bowel movements
- Light or missed periods
- Weak thighs & upper arms
- Hair thinning
- "Wired but tired" fatigue
- Gritty, bulging eyes (Graves')
- Swelling at the base of the neck (goiter)



Did you know? Hashimoto's can swing between BOTH columns, especially early on, as the inflamed thyroid leaks stored hormone before slowing down.

BEFORE YOUR BLOOD DRAW

Ask for a FULL panel: TSH, Free T4, Free T3, Reverse T3, TPO & Tg antibodies

Pause biotin (hair/skin/nail vitamins) 2–3 days before; it can skew results

Pregnant? Pregnancy uses trimester-specific ranges

Test in the morning and take thyroid medication **AFTER** your draw

Recently sick? Illness can temporarily shift thyroid labs

Use the same lab each time so trends are comparable



YOUR THYROID LABS, DECODED

Part 1 · Thyroid hormone levels: what each lab shows and what to consider

Optimal the range we aim for **Standard** typical lab range (varies by lab)

TSH

The brain's "gas pedal" signal telling your thyroid to work.

Optimal 0.5–2.0 mIU/L

Standard ~0.45–4.5

↑ IF HIGH

May mean: underactive thyroid (often Hashimoto's), iodine deficiency, medication dose too low.

Consider: Free T4, Free T3 & antibodies; review meds (lithium, amiodarone); recheck in 6–8 weeks.

↓ IF LOW

May mean: overactive thyroid (Graves', nodules), early thyroiditis, too much medication; rarely a pituitary issue.

Consider: Free T4/T3, TRAb/TSI; review dose; rule out biotin.

FREE T4

The main hormone your thyroid makes: the "storage" form.

Optimal 1.0–1.5 ng/dL

Standard ~0.8–1.8

↑ IF HIGH

May mean: overactive thyroid, thyroiditis, too much T4 medication, or dose taken before the draw.

Consider: take meds after the draw; pair with TSH, Free T3 & antibodies.

↓ IF LOW

May mean: underactive thyroid. If TSH is NOT high, a possible pituitary (central) cause.

Consider: antibodies; iodine, iron & selenium status; pituitary work-up if TSH is low/normal.

FREE T3

The active hormone: drives metabolism, energy, warmth and mood.

Optimal 3.0–4.0 pg/mL

Standard ~2.3–4.2

↑ IF HIGH

May mean: overactive thyroid (Graves'), or T3 medication (liothyronine, NDT) taken before the draw.

Consider: medication timing; TSH and TRAb/TSI.

↓ IF LOW

May mean: poor T4→T3 conversion from stress, under-eating, illness, inflammation, or low selenium, zinc or iron.

Consider: Reverse T3, nutrient labs, cortisol, sleep, eating enough.

REVERSE T3

The inactive "brake." Your body makes more under stress.

Optimal 10–15 ng/dL

Standard ~9.2–24.1

↑ IF HIGH

May mean: chronic stress or high cortisol, dieting, illness, inflammation, low iron or selenium, high T4 dose.

Consider: compare with Free T3; address stress, nutrition & sleep.

↓ IF LOW

May mean: rarely a concern on its own.

Consider: read alongside Free T3 and TSH.

TOTAL T4 & T3

Bound + free hormone combined. Free levels tell you more.

Optimal: mid-range

T4 ~4.5–12 µg/dL · T3 ~80–200 ng/dL

↑ IF HIGH

May mean: overactive thyroid; or estrogen, birth control or pregnancy raising binding proteins.

Consider: rely on Free T4 & Free T3.

↓ IF LOW

May mean: underactive thyroid; or low binding proteins (steroids, liver or kidney disease, severe illness).

Consider: rely on Free T4 & Free T3.



YOUR THYROID LABS, DECODED

Part 2 · Antibodies, patterns and thyroid co-factors

TPO ANTIBODIES (TPOAB)

Immune attack on the enzyme that makes thyroid hormone.

Optimal: negative

Standard <34 IU/mL*

↑ IF HIGH / POSITIVE

May mean: Hashimoto's (most common); also seen in Graves'. Can show up years before TSH changes.

Consider: trend over time; vitamin D, selenium, gut health, celiac screen; recheck TSH every 6–12 months; tell your provider if planning pregnancy.

THYROGLOBULIN ANTIBODIES (TGAB)

Immune attack on thyroglobulin, the protein used to build thyroid hormone.

Optimal: negative

Standard <4 IU/mL*

↑ IF HIGH / POSITIVE

May mean: Hashimoto's (sometimes the ONLY positive antibody) or Graves'.

Consider: always test alongside TPOAb; it can interfere with thyroglobulin testing after thyroid cancer.

TSH RECEPTOR ANTIBODIES (TRAb / TSI)

Antibodies that switch the thyroid ON: the hallmark of Graves'.

Optimal: negative

TRAb <1.75 IU/L · TSI <140%*

↑ IF HIGH / POSITIVE

May mean: Graves' disease; can cross the placenta in pregnancy.

Consider: check when TSH is low; endocrinology referral; watch for eye symptoms.

THYROGLOBULIN (Tg)

A protein made only by thyroid tissue. Used to monitor after thyroid cancer, not to screen.

Standard ~1.5–38 ng/mL*

↑ IF HIGH

May mean: goiter, nodules, thyroiditis, overactive thyroid; after cancer treatment, possible recurrence.

↓ If low: expected after the thyroid is removed.

READING THE PATTERN

↑ high · ↓ low · N in range · + positive

TSH	Free T4	Free T3	Antibodies	What it may point to
↑	↓	N or ↓	often +	Underactive thyroid (hypothyroidism)
↑	N	N	often +	Subclinical hypothyroidism
N	N	N	+	Early Hashimoto's: "normal" labs, active autoimmunity
N	N	↓ (rT3 ↑)	varies	Poor T4 → T3 conversion (stress, illness, nutrients)
↓	↑	↑	TRAb/TSI +	Overactive thyroid (e.g., Graves')
↓	N	N	varies	Subclinical hyperthyroidism
↓ or N	↓	↓	negative	Pituitary (central) issue

THYROID CO-FACTORS WORTH CHECKING

Ferritin 70–100+ ng/mL

Vitamin D (25-OH) 50–80 ng/mL

RBC Magnesium 5.5–6.5 mg/dL

Selenium

Zinc

Iodine (urine)

*Reference ranges vary by lab and testing method. Optimal ranges reflect Clarity for You Wellness's functional-medicine approach and are not diagnostic. For education only; always review your results with your healthcare provider.