

# M5.1 — Baseline Labs Checklist

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## Baseline Labs Checklist — Weight-Loss Peptide Therapy

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**Use:** Before initiating any GLP-1, GIP coagonist, triagonist, amylin analog, or compounded peptide for weight management. **Companion to:** the M5.1 video lesson — Foundational Evaluation **Print:** One page, clinician reference, also handed to patient at intake

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### Why this matters

The weight-loss peptides in M5 work on a specific axis — appetite, satiety, energy balance. They do not correct hypothyroidism, untreated hypogonadism, uncontrolled diabetes, or chronic inflammation. Baseline labs let you (1) calibrate expectations, (2) identify rate-limiters that should be addressed in parallel, and (3) establish a monitoring baseline.

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### The four panels

#### 1. Thyroid

Test	Reference range	Flag if	Why
TSH	0.4 – 4.0 mIU/L	> 4.0 or < 0.4	Hypothyroidism slows everything peptides try to accelerate
Free T4	0.8 – 1.8 ng/dL	< 0.8	Confirms central vs peripheral hypothyroidism
Free T3	2.3 – 4.2 pg/mL	< 2.3	Conversion problem; relevant in caloric restriction

Test	Reference range	Flag if	Why
Anti-TPO antibody	< 35 IU/mL	> 35	Hashimoto's screening; relevant before long-term peptide therapy

**Action if flagged:** Address thyroid status before or in parallel with peptide initiation. Re-check at 3 months on therapy if borderline.

## 2. Sex hormones

Test	Reference range (adults)	Flag if	Why
Total testosterone (men)	300 – 1,000 ng/dL	< 350	Hypogonadism worsens body composition, blunts peptide response
Free testosterone (men)	50 – 200 pg/mL	< 50	Confirms bioavailable fraction
SHBG	10 – 80 nmol/L	< 10 or > 80	Calculates free T accurately
Estradiol (men)	10 – 40 pg/mL	> 40	Aromatization issue; relevant in obesity
Total testosterone (women)	15 – 70 ng/dL	low end	Affects libido, muscle, mood
Estradiol (women, premenopausal, cycle-timed)	follicular 30–100; luteal 70–300 pg/mL	low for cycle phase	Cycle phase context required
Progesterone (women, luteal phase day 21)	> 10 ng/mL	< 10	Luteal sufficiency screen
DHEA-sulfate	80 – 560 µg/dL (age-adjusted)	low for age	Adrenal androgen reserve

**Action if flagged:** Route to hormone optimization (see Doc 5 — Hormone-Optimization Peptide Reference Card) before or alongside weight-loss peptide. Peptide weight loss in a hypogonadal patient often returns disappointing body composition results.

### 3. Metabolic

Test	Reference range	Flag if	Why
Fasting insulin	2 – 20 $\mu$ U/mL	> 10	Insulin resistance signal; HOMA-IR > 2.5 suggests metabolic dysfunction
Hemoglobin A1c	< 5.7%	> 5.7	Pre-diabetes (5.7–6.4) or diabetes ( $\geq$ 6.5); changes peptide choice
Fasting glucose	70 – 99 mg/dL	> 100	Same as HbA1c rationale
Comprehensive metabolic panel (CMP)	per lab	abnormal LFTs, BUN/creatinine, electrolytes	Baseline before therapy; flags renal/hepatic comorbidity
Fasting lipid panel	LDL < 100, HDL > 40 (M) / 50 (F), Trig < 150	abnormal	Cardiovascular risk stratification; relevant for semaglutide/SELECT indication

**Action if flagged:** HbA1c > 6.5 → T2D-labeled peptide (semaglutide/tirzepatide/liraglutide) preferred over off-label. Severe insulin resistance → tirzepatide or retatrutide often more effective. Dyslipidemia + obesity + CVD → semaglutide has the SELECT cardiovascular outcome data.

### 4. Inflammation

Test	Reference range	Flag if	Why
High-sensitivity CRP (hs-CRP)	< 1.0 mg/L low risk · 1–3 average · > 3 high	> 3	Chronic inflammation drives insulin resistance; peptides help but don't fully address
Fibrinogen	200 – 400 mg/dL	> 400	Inflammatory marker; cardiovascular signal

Test	Reference range	Flag if	Why
Ferritin (in absence of iron deficiency)	30 – 200 ng/mL	> 200	Acute-phase reactant; flags inflammation

**Action if flagged:** Address inflammation drivers (sleep, infection, autoimmunity, gut, metabolic) in parallel. Anti-inflammatory peptides (BPC-157, thymosin alpha-1) may be appropriate adjuncts — see Doc 5.

## Optional add-ons by clinical context

If patient presents with...	Add these
Pre-conception or possible pregnancy	β-hCG, prolactin, AMH (if fertility planning)
Sleep complaints	overnight oximetry or referral for polysomnography (OSA screen — relevant for tirzepatide-OSA indication)
Cognitive complaints / brain fog	B12, folate, vitamin D, ferritin
Adrenal/stress complaints	morning cortisol, possibly 4-point salivary cortisol
Cardiometabolic risk	ApoB, Lp(a), LDL particle number, hs-CRP
GI symptoms (before starting GLP-1)	celiac panel (tTG-IgA + total IgA), H. pylori screen if dyspepsia

## Reorder cadence

Marker class	At baseline	3 months	6 months	Annual
Thyroid	✓	✓ if flagged		✓
Sex hormones	✓		✓ if flagged	✓
HbA1c, fasting glucose	✓	✓	✓	✓
Lipids	✓		✓	✓
CMP	✓	✓		✓
Fasting insulin	✓		✓	✓

Marker class	At baseline	3 months	6 months	Annual
hs-CRP	✓		✓	✓

## Documentation in the chart

For every patient initiating weight-loss peptide therapy, the chart should show:

- ☐ Baseline labs drawn within 90 days of initiation
- ☐ Any flagged values addressed or rationale documented for proceeding without addressing
- ☐ Patient educated on which labs will be repeated and when
- ☐ Informed consent on file (see Doc 6)

## References

- ATA Guidelines for the Treatment of Hypothyroidism (Garber et al., 2012; revised 2022)
- Endocrine Society Clinical Practice Guideline — Testosterone Therapy in Men with Hypogonadism (Bhasin et al., 2018)
- ADA Standards of Medical Care in Diabetes (2024)
- AHA/ACC Cardiovascular Risk Assessment Guidelines (2019)
- M5.1 video lesson — Foundational Evaluation