optml

FIELD GUIDE NO. 02

FOR MEN ON TRT · FIRST 90 DAYS & BEYOND

Testos-terone.

The field manual for your first 90 days on TRT — and the protocols that turn the medication into the body, energy, and clarity you actually wanted from it.

FOR	USE	READ	AN OPTML FIELD GUIDE
TRT Patients	Lifetime Reference	30–40 min	No. 02

A NOTE BEFORE YOU BEGIN

TRT is the most *misunderstood* medication in men's health.

Most clinics dose it badly. Most internet forums get it half-right. Most men spend their first year on TRT either over-managed or under-managed — and the difference between those outcomes is almost entirely education.

This guide does one thing well: **tells you what's happening in your body, when changes show up, and what to do about each of them.** Estradiol, hematocrit, libido fluctuations, the injection logistics nobody explains, the things you're worried about (hair, fertility, acne), and the dose-adjustment framework that turns "this isn't working" into "this is working better than I thought possible."

The first six weeks on TRT are often anticlimactic. The real changes start at week 8 and compound through month four. **The single most common reason men quit TRT is they didn't wait long enough.** Don't be that man.

Keep this guide on your phone. Reference it the moment something new shows up. Most "TRT problems" are protocol decisions, not medication failures — and protocol decisions get made in the first 12 weeks.

IMPORTANT

This guide is education, not medical advice. Your OPTML clinician makes individual care decisions. **When something feels off — message early.** Most TRT issues get solved in one back-and-forth.

CONTENTS

Inside.

Testosterone isn't one effect. It's a cascade.

When testosterone enters your system, it doesn't just "raise testosterone." It cascades into three different downstream hormones, each with its own effects and side effects. Understanding the three pathways turns 90% of "TRT problems" into protocol decisions.

AFFECTED MEN

~40%

of adult men over 45 have clinically low testosterone — and most don't know it

PEAK BENEFITS

12–16wk

most TRT effects fully express. Don't judge results before week 8.

OPTIMAL TOTAL T

800–1100

ng/dL trough target for most men on TRT. The lab range goes lower — your goal shouldn't.

The three pathways.

1 · T → MUSCLE & STRENGTH

Testosterone directly drives **muscle protein synthesis**, recovery, and motor unit recruitment. With training, the muscle response is dramatic. Without training, the response is mostly fat redistribution and water retention.

2 · T → DHT

5-alpha-reductase converts a portion of testosterone to DHT — the more potent androgen. **This is libido, skin, voice, and (if you're genetically predisposed) hair loss acceleration.** Can't be eliminated without losing what makes TRT work.

3 · T → ESTRADIOL

Aromatase converts a portion of testosterone to estradiol — and you **need this.** Estradiol supports joint health, mood, libido, bone density, and cardiovascular function in men. The goal is balance, not low.

> **The most important reframe:** "TRT problems" are almost always one of these three pathways being off — usually estradiol. The medication is rarely the issue. The protocol around the medication is.

What to expect — *week by week.*

TRT is not a stimulant. The changes are real but they unfold on a hormonal timeline — not a daily one. Most men feel **almost nothing for the first 4–6 weeks** and then the changes compound rapidly. Know where you are on the map.

ONBOARD		BUILD				OPTIMIZE		STEADY			LABS
WK 1	WK 2	WK 3	WK 4	WK 5	WK 6	WK 7	WK 8	WK 9	WK 10	WK 11	WK 12

WK	PHASE	WHAT'S NORMAL	WATCH FOR
1–2	ONBOARD	First injections. **Often almost nothing.** Some men feel a sense of well-being. Sleep may improve. Easy to think it's not working.	**Injection site issues**
3–4	BUILD	Subtle changes begin. Energy more stable. Mood lifts. Libido may surge — **this is the honeymoon.** Training feels slightly better.	**High E2 symptoms**
5–6	BUILD	Honeymoon often dips. Libido may drop. Don't panic — this is the body adjusting. Estradiol-driven symptoms (water retention, mood) often peak here.	**Libido crash > 2 wks**
7–8	OPTIMIZE	**This is where it starts.** Real muscle response visible. Mental clarity reliable. Sleep solid. Hematocrit beginning to climb.	**HCT > 50%**
9–11	OPTIMIZE	Full effects compounding. Training response strong. Libido has settled at new baseline (usually higher than pre-TRT).	**Hair, skin, sleep apnea**
12	LABS	**First comprehensive lab re-check.** Total T, free T, E2, HCT, lipids, PSA. Numbers drive any dose adjustment from here.	**All markers**

> **The pattern.** If you're judging TRT before week 8 you're judging too early. If you're not seeing changes by week 12 — that's when something is genuinely off. *Labs at week 12 tell the truth.*

Green. Yellow. Red. Know the difference.

Some symptoms during TRT adjustment are expected, some need attention within a week, some need attention right now. The skill that separates a smooth TRT experience from a frustrating one is knowing which category any new symptom falls into.

THE TRIAGE LEVELS

GREEN
HANDLE YOURSELF
Expected · use the playbook

TARGET
YELLOW
MESSAGE WITHIN 1 WEEK
Persistent or worsening · not urgent

RED
CALL NOW / ER
Severe · immediate care needed

GREEN

- **Mild acne** (weeks 2–8)
- **Libido honeymoon** (weeks 2–4)
- **Libido dip** (weeks 5–8)
- **Increased emotion** / sensitivity
- **Sleep changes** early on
- **Mild injection soreness** 24–48h
- **Light water retention** < 2 weeks
- **Testicular shrinkage** over time

YELLOW

- **Water retention** > 2 weeks (high E2)
- **Libido drop** not resolving by week 10
- **Mood instability** > 2 weeks
- **Breast tissue tenderness** or lumps
- **Snoring** or daytime fatigue (apnea?)
- **Hematocrit climbing** rapidly
- **Severe acne** not improving
- **Joint pain** appearing (low E2?)

RED — CALL NOW

- **Chest pain or pressure**
- **Severe headache + vision changes**
- **Calf swelling or pain** (DVT risk)
- **Severe shortness of breath**
- **Severe testicular pain**
- **Suicidal thoughts** or severe depression
- **Signs of allergic reaction**

The rule. Almost every "yellow" symptom on TRT is either estradiol-related, hematocrit-related, or protocol-related — and almost every one resolves with one conversation with your OPTML clinician. *Don't wait three months to bring up something that's bothering you in week six.*

The number that matters most.

If something feels "off" on TRT and you can't pinpoint why, the answer is almost always estradiol. It's not the medication failing. It's the conversion from T to E2 being out of balance — and balance is what we're after.

THE REFRAME MOST CLINICS GET WRONG

Estradiol is not the enemy. Men **need** estradiol for joint health, mood, libido, bone density, and cardiovascular function. The goal of TRT is not "low E2" — it's **balanced E2.** Clinics that aggressively suppress estradiol with anastrozole make patients miserable and don't even know they did it.

The two failure modes.

HIGH E2 SYMPTOMS

Aromatase converting too much T to E2 — often dose-driven or body-fat-driven.

- **Water retention**, puffy face, bloating
- **Breast tissue tenderness** or lumps
- **Mood swings**, irritability, weepiness
- **Libido drop** or "weird" libido
- **Erectile dysfunction**
- **Fatigue** despite good labs

LOW E2 SYMPTOMS (OVER-MANAGED)

Almost always from too-aggressive AI use. Often *worse* than high E2.

- **Joint pain** — the classic signal
- **Dry skin, dry hair**
- **Libido drop** (different feel than high E2)
- **Lethargy**, low motivation
- **Depression**, flat affect
- **Bone density risk** long-term

The management ladder.

01 **Adjust frequency, not dose.**

Splitting a once-weekly dose into 2–3 smaller injections (or daily subQ) is the #1 way to lower estradiol naturally. Smaller, more frequent doses produce smaller aromatization spikes. Try this before anything else.

02 **Lower the total weekly dose.**

If you're chasing high T numbers and getting hammered by E2 symptoms — your dose is too high for your aromatase profile. Drop 10–20 mg/week and re-evaluate at 4 weeks.

03 **Reduce body fat.**

Aromatase activity is concentrated in fat tissue. Lower body fat = less T-to-E2 conversion. This is the long-term lever and the one that solves the most cases permanently.

04 **Anastrozole — last resort, sparingly.**

If frequency and dose are dialed and symptoms persist, a low-dose AI (0.125–0.25 mg 1–2× weekly) can help.

Never take an AI without symptoms AND confirmatory labs.

Crashing E2 is worse than running it high.

Keep your blood *moving.*

Testosterone stimulates red blood cell production. Mostly this is fine — sometimes it's not. The numbers to watch, and the fixes that handle 95% of cases.

NORMAL RANGE

40–50%

For most adult men. Where you should sit pre-TRT.

ACCEPTABLE ON TRT

<52%

Slight elevation is expected. Below 52% is generally fine with hydration management.

YELLOW ZONE

52–54%

Time to act — hydration, frequency change, or blood donation. Don't wait for higher.

WHY THIS MATTERS

Higher hematocrit = thicker blood = harder for your heart to pump and (at extreme levels) increased clotting risk. **Most TRT-related hematocrit elevations are dehydration-amplified, not actually that high.** Hydration is the first lever, not the last.

The management ladder.

01 **Hydrate aggressively first.**

Many "high HCT" results are partially dehydration. Hit 100+ oz of water daily for 2 weeks, retest. A lot of cases resolve at this step alone.

02 **Switch to smaller, more frequent doses.**

Big once-weekly injections produce bigger HCT spikes. Daily subQ or 2× weekly produces smoother levels — and lower HCT at the same total dose. The single highest-leverage protocol change.

03 **Donate blood.**

The simple, free, immediate fix. A standard whole-blood donation drops HCT by ~3–5 percentage points. Most TRT patients donate every 2–3 months. Many find their cardiovascular markers improve overall.

04 **Reduce the total dose.**

If HCT keeps climbing despite the above, the dose is too high for your physiology. Drop 10–20 mg/week and recheck at 6 weeks.

Donation logistics. Tell the blood bank you're a "therapeutic donation" patient if your HCT is > 52%. They'll accommodate. You can also request a *therapeutic phlebotomy* through your clinician if needed. Either way — don't let HCT drift unaddressed for months.

The honeymoon. The settle. *The new normal.*

TRT affects libido, mood, and sleep on a predictable pattern that's almost universally surprising — especially the libido one. Almost no one warns you about the dip.

The libido arc.

01 **Weeks 2–4: The Honeymoon.**

Libido often surges hard. Erection quality up. Spontaneous arousal. This is the body responding to the first real testosterone in years. Enjoy it — but don't expect it to last at the same intensity.

02 **Weeks 5–8: The Dip.**

Libido often crashes. Sometimes dramatically.

This is where most men panic.

It is the body downregulating receptors and re-establishing balance — not the medication failing. Stay on protocol. Do not change anything yet.

03 **Weeks 9–12: The Settle.**

Libido stabilizes at a new baseline — usually higher than pre-TRT, but not always perfectly linear. By week 12 you'll have your real answer. **If it's still flat at week 12, the conversation with your clinician is about estradiol or frequency.**

MOOD

Most men experience a sustained **mood lift, increased motivation, lower anxiety** by week 8–12. A minority experience irritability or aggression — almost always dose-related and resolved by lowering the dose or splitting it more frequently.

SLEEP

Often improves significantly. Deeper sleep, easier mornings. But: TRT can *worsen* sleep apnea in predisposed men. Increased snoring, daytime fatigue, or your partner mentioning you're "stopping breathing" — get a sleep study.

IF SLEEP APNEA SYMPTOMS APPEAR

Don't adjust TRT yet. **Get a sleep study (home or in-lab).** If you have moderate or severe apnea, treating it (often with CPAP) is more important than tweaking TRT — and it usually improves how TRT feels anyway.

How you inject matters as much as what's in the vial.

Two patients on the exact same weekly dose can have completely different experiences based on injection frequency, route, and technique. This is the part nobody explains and nobody should be guessing on.

IM vs subQ — what the difference is.

INTRAMUSCULAR (IM)

Larger pin (23–25g), deeper injection. Glute, quad, or deltoid. Faster absorption, sharper peak and trough.

- Standard route historically
- More post-injection soreness common
- Bigger peaks (some men prefer the feel)
- Site rotation important

SUBCUTANEOUS (SUBQ) — USUALLY PREFERRED

Smaller pin (29–31g), into the fat layer of the abdomen. Slower release, much smoother levels.

- Less painful, less site soreness
- Smoother hormone levels — fewer mood swings
- Lower hematocrit elevation at same total dose
- Easier for daily or every-other-day dosing

The frequency hierarchy.

SCHEDULE	USE CASE	TRADE-OFFS
Once weekly IM	**Old-school default. Convenience.**	Biggest peak-trough swings. More likely to feel mood/libido cycling. **Not generally recommended.**
Twice weekly IM/SubQ	**Most common modern protocol**	Smoother. Good balance of convenience and stability. A solid default.
Every other day subQ	**Smoother for E2-sensitive men**	Slightly more handling, much smoother levels. Often the answer for men with E2 issues.
Daily subQ	**The gold standard for most men**	Most stable levels. Lowest E2 conversion at same dose. Lowest HCT. Most "set it and forget it." A 10-second daily routine.

Technique tips that matter. Pre-warm the syringe in your hand for 2–3 minutes (oil flows easier, less sting). Inject slowly — 10+ seconds for 0.5 mL. Rotate sites — never the same spot twice in a row. If a site is sore, skip it for two cycles. *Massage the area briefly after to prevent lumps.*

The things *you're worried about.*

Hair loss, skin, fertility, testicular size — these are the four concerns that come up most in the first month. Each has an honest, practical answer.

HAIR LOSS

TRT raises DHT, which can **accelerate** male pattern baldness — only in men genetically predisposed to it.

- If you weren't going bald, TRT won't make you bald
- If you were, TRT can speed it up
- Options: finasteride 1mg/day, dutasteride, topical anti-androgens
- Honest trade-off — discuss with your clinician early

ACNE & SKIN CHANGES

Common in weeks 2–8 as DHT and oil production rise. Usually resolves as the body adjusts.

- Wash face/back/chest daily
- Don't touch your face
- OTC: salicylic acid, benzoyl peroxide
- Persistent severe acne → dermatologist or dose adjustment

FERTILITY

TRT shuts down endogenous testosterone production — **and sperm production with it.** Critical to understand before starting.

- Want kids now or future? hCG protocol (250 IU 2–3× weekly) maintains testicular function
- Or: switch to enclomiphene — raises endogenous T, preserves fertility
- Have this conversation with your OPTML clinician *before* starting if relevant

TESTICULAR SIZE

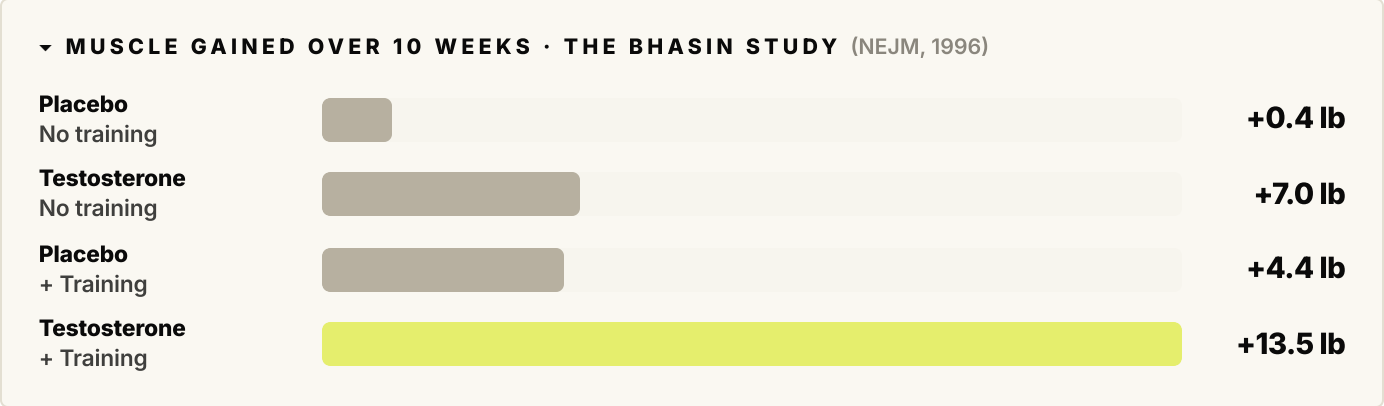
Expect **~20–30% reduction** in size over the first 3–6 months on TRT alone. Cosmetic concern for some, irrelevant for others.

- Returns with hCG co-administration
- Returns slowly after stopping TRT
- No effect on TRT outcomes — purely cosmetic/psychological

> **The honest reframe on these four.** None of them are emergencies. All of them have established management options. The men who do best are the ones who decide their priorities *before* starting TRT — and adjust the protocol around them, instead of being surprised six weeks in.

TRT is an amplifier. Train into it.

A man on TRT who doesn't train ends up softer, fatter, and more frustrated than when he started. A man on TRT who trains seriously ends up unrecognizable in twelve months. The medication is the multiplier. The training is the input.



TRT alone built 7 lb of muscle. Training alone built 4 lb. **TRT + training built 13.5 lb — nearly 2× either one alone.** This is what "amplifier" means in practice.

THE TRAINING PRESCRIPTION

OPTML Training System Vol. 2 — 4 days a week, full body — is the floor for men on TRT. If you're on Vol. 1, bridge up to Vol. 2 within the first 8 weeks of TRT. TRT recovery is dramatically better than pre-TRT — your body can handle the volume. Most men feel actively under-trained on Vol. 1 by week 8.

When Vol. 2 is comfortable and you have schedule for 5 sessions a week — graduate to Vol. 3. The amplifier handles it.

Eat for the work. *Sleep like a professional.*

TRT raises your body's anabolic potential. Food and sleep determine whether you actually cash that potential in — or whether the medication is doing 50% of its job while you're carrying the other 50% with grocery store snacks and 5 hours of broken sleep.

The food protocol.

PROTEIN FLOOR

1 g per lb of goal bodyweight, every day. A 180-lb goal weight = 180 g of protein daily. Below this, you don't build the muscle TRT is offering you the chance to build. Above this, no extra benefit — just expensive urine.

CALORIES

Maintenance calories or a **small surplus** (200–400 above maintenance) if your priority is muscle gain. Don't cut hard on TRT — you'll undercut recovery and waste the anabolic environment.

The sleep protocol.

7–8 hours, every night. TRT recovery happens in deep sleep. Skip it and the medication underperforms by 30–50%. This is not optional — it's the single most-undervalued lever men on TRT have.

01 **Same bedtime, same wake time.**

Within a 30-minute window every night, including weekends. Inconsistency costs you 20% of your sleep efficiency before you even get into bed.

02 **Cool, dark, quiet.**

65–68°F. Blackout curtains or sleep mask. White noise if your environment isn't quiet. Boring advice that works.

03 **If you're snoring or your partner says you stop breathing — get tested.**

Sleep apnea risk rises on TRT for predisposed men. Untreated apnea makes everything else fail — including the TRT.

This is the most common silent destroyer of TRT outcomes.

> **The 4-variable formula.** TRT + Training + Protein + Sleep. Hit all four and you'll get the body you wanted from the medication. Skip any one and the result is mediocre — and you'll blame the wrong variable.

Hold. Lower. Raise. Change frequency.

Most men don't need their dose changed. They need their *protocol* changed. Frequency, route, or supporting variables — those are the levers most TRT problems respond to. Dose changes are a last move, not a first.

DECISION	WHEN TO CHOOSE IT	WHAT IT LOOKS LIKE
Hold & wait	**You're in weeks 5–8. Symptoms are normal-but-uncomfortable. Labs not yet due.**	Don't change anything yet. Wait for the week 12 labs. Most "problems" resolve before you re-check.
Change frequency	**High E2 symptoms, high HCT, mood swings, libido cycling. The most common right answer.**	Split your weekly dose into 2–3 injections, or move to daily subQ. Same total dose, smoother delivery.
Change route	**Sore from IM. Wanting smoother levels.**	Switch IM to subQ. Smaller pin, less pain, better levels for most men.
Lower the dose	**HCT keeps climbing, E2 keeps climbing, OR labs show supraphysiological T at trough.**	Drop 10–20 mg/week. Recheck at 6 weeks. Don't chase higher numbers if the body is telling you no.
Raise the dose	**Week 12+ labs show trough T < 600 ng/dL and symptoms persist.**	Increase 10–20 mg/week. Recheck at 6 weeks. Only after frequency and route are optimized.
Pause / reset	**Severe symptoms, clinical concern, or trying to restart endogenous production.**	Clinician-led. Sometimes a short break + restart at a different protocol is the right call.

> **The script for messaging your clinician.** "I'm on [dose] of [testosterone ester], injecting [frequency] [route]. I'm experiencing [symptoms] that started [when]. My most recent labs were [values]. I've been doing [training, food, sleep, water]. I'm wondering if we should [adjust frequency / lower dose / etc.]." *Specific is faster than vague.*

The right TRT dose is the smallest one that produces the symptoms you want at the labs you want. Bigger is not better. Smoother is better.

The symptoms that can't wait.

Almost every TRT issue resolves with patience, hydration, or a protocol tweak. A small number do not. This is the final reference page — the one you screenshot and keep on your phone.

CALL URGENT CARE OR 911 — DO NOT WAIT

- **Chest pain or pressure** — especially with shortness of breath. Possible cardiac event.
- **Severe headache + vision changes** — possible stroke or severe hypertension.
- **Calf swelling or pain** in one leg — possible deep vein thrombosis.
- **Severe shortness of breath** — possible pulmonary embolism.
- **Severe testicular pain** — possible torsion or infection.
- **Suicidal thoughts** or severe depression — get help today.
- **Allergic reaction** signs — hives, facial swelling, difficulty breathing.
- **Severe injection site reaction** — hot, spreading redness, fever.

Yellow — message your OPTML clinician within a week.

- **Persistent water retention** > 2 weeks
- **Libido drop** not resolving by week 10
- **Breast tissue tenderness** or visible changes
- **Severe acne** not responding to OTC care
- **Hematocrit climbing** rapidly
- **Snoring** or daytime fatigue (apnea check)
- **Mood instability** > 2 weeks
- **Joint pain** appearing (possible low E2)
- **Erectile dysfunction** not present pre-TRT
- **You're considering quitting** — talk first

> TRT done right is the difference between living and just aging. Your OPTML clinician has seen every situation in this document many times. **Message early. Message often. That's what we're here for.**

— The OPTML Team

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AN OPTML FIELD GUIDE

No. 02 · Testosterone (TRT)

FOR OPTML PATIENTS

FREE TOOLS · OPTML.HEALTH

Keep optimizing.

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SCAN TO OPEN

The OPTML Method

optml.health/method

SCAN TO FIND

Training sets

optml.health/training-volume-calculator.html

SCAN TO FIND

Daily calories

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THE NEXT STEP

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