

PERSONALISED TREATMENT PLAN

Optimising recovery, performance & cognitive function.

A 6–8 week protocol toward a 100K ultra.

PATIENT

John Doe

DOB 8 Sep 1991 · Male · 35

PRACTITIONER

Dr Mark Lewis

B.Pharm, B.BiomedSci, MD

CONSULTATION

20 April 2026

Initial · Telehealth

REVIEW CYCLE

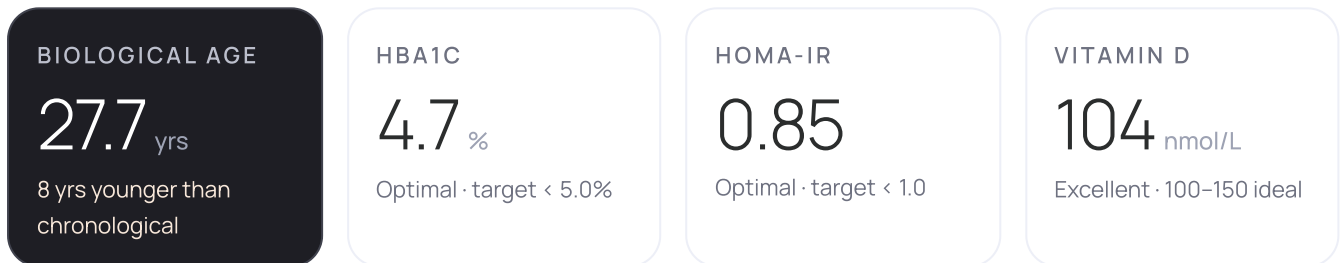
6–8 weeks

End of peptide cycle

AT A GLANCE

A remarkably solid foundation – with three narrow optimisations.

John, your blood work shows excellent metabolic function, pristine liver and kidney health, and a biological age testing 8 years younger than your chronological age. Three areas – sleep, micronutrients, and hormones – are the focused targets for this cycle.



YOUR STRENGTHS

● 5 markers excellent

- ✓ **Metabolic health is exceptional** – perfect fasting glucose, low insulin, ideal insulin sensitivity.
- ✓ **Liver & kidney function pristine** – strong foundation for peptide therapy and increased load.
- ✓ **Thyroid completely balanced** – T3/T4/TSH all in functional optimal ranges.
- ✓ **Vitamin D excellent** – supports immune, bone health, and recovery.

OPTIMISATIONS

● Action this cycle

- **Sleep – 5–6 hrs is the bottleneck.** Targeting 7.5–8 hrs will lift testosterone 15–25% in 6–8 weeks.
- **Zinc & magnesium deficient.** Both directly suppress testosterone and recovery; correctable with supplementation.
- **Iron stores at risk** as training volume doubles. Pre-emptive supplementation now prevents deficit later.

The single most impactful change you can make is prioritising 7–8 hours of sleep nightly. Everything else – peptides, supplements, training periodisation – works dramatically better on that foundation.

NAVIGATE

Contents.

Six sections – start with the summary, then dive into the area most relevant to you. Each tier is colour-coded so you can find it quickly.

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01

SECTION 01 – DIAGNOSTICS

Your results at a glance.

Six panels covering 24 markers from your April 2026 blood work. Each test is paired with what it means for you, your training, and your 100K event preparation – not just whether it sits inside a reference range.

PANEL 01

Metabolic health

● Excellent

Your metabolic health is one of your greatest strengths. Excellent insulin sensitivity means your body uses carbohydrates efficiently – critical fuel during ultra-endurance events. Maintain it through sleep, alcohol restraint, and adequate carbs around training.

TEST	YOUR RESULT	STATUS	WHAT THIS MEANS
HbA1c	4.7 %	Optimal	Average blood sugar over 3 months. Target < 5.0% – yours indicates very low diabetes risk.
Fasting Insulin	4 mU/L	Optimal	Low fasting insulin – cells are highly insulin-sensitive, no overproduction to manage blood sugar.
HOMA-IR Score	0.85	Optimal	Insulin resistance score – target < 1.0. Confirms very low risk of metabolic syndrome.
Fasting Glucose	4.8 mmol/L	Optimal	Within optimal range (4.0–5.4 mmol/L) – excellent fasting blood sugar regulation.

Why this matters for the 100K. Insulin sensitivity directly determines how efficiently you use carbohydrate fuel during long efforts. Yours is exceptional – protect it with adequate carbs around training and minimal alcohol during the build-up.

PANEL 02

Hormones

● Suboptimal · sleep-related

The picture tells a clear story: pituitary signalling is normal, oestradiol is perfect, but inadequate sleep is suppressing testosterone and growth hormone. Entirely reversible — expect 20–30% testosterone gains in 8–12 weeks with 7–8 hrs sleep, weight training, and zinc correction.

TEST	YOUR RESULT	STATUS	WHAT THIS MEANS
Testosterone	16.8 nmol/L	Below optimal	Functional optimal 20–30 nmol/L for your age. Driven primarily by inadequate sleep.
Free Testosterone	350.3 pmol/L	Borderline low	Optimal 400–600 pmol/L. Bioavailable form — drives muscle building, recovery, libido.
IGF-1	23 nmol/L	Lower side	Functional optimal 25–35. Reflects growth hormone secretion which peaks in deep sleep.
Oestradiol	100 pmol/L	Perfect	Optimal 100–120. Crucial for bone, sleep, immune, recovery and cardiovascular health.
LH / FSH	4 / 3 IU/L	Normal	Pituitary signalling is intact — confirms low testosterone is not glandular dysfunction.
SHBG · Prolactin	31 · 86 nmol · mIU	Normal	Binding protein and prolactin both ideal — neither is suppressing free testosterone.

PANEL 03

Blood count & immune function

- Monitor iron stores

Currently adequate, but at risk as training ramps up. Endurance athletes lose iron through foot-strike haemolysis, GI microbleeding, and increased red blood cell production. Smaller red cell size + mid-range ferritin signal pre-emptive iron support is warranted.

TEST	YOUR RESULT	STATUS	WHAT THIS MEANS
Ferritin	151 µg/L	Adequate · monitor	Optimal 100–200 for male athletes. Likely to drop as volume increases – pre-emptive iron is warranted.
MCV (Red cell size)	81 fL	Lower side	Range 79–99 fL. Can indicate early iron deficiency or thalassemia trait.
Haemoglobin	146 g/L	Normal	Adequate oxygen-carrying capacity for endurance training; needs monitoring as volume rises.
Red Blood Cell Count	$5.2 \times 10^{12}/L$	Normal	Combined with normal Hb, indicates adequate oxygen delivery to tissues.
White Blood Cell Count	$4.4 \times 10^9/L$	Normal	No significant infection or immune deficiency; overall immune cell count healthy.
Lymphocyte Ratio	43.2%	Mildly elevated	Normal 20–40%. Suggests recent viral activation, compounded by inadequate sleep and stress.

PANEL 04 · INFLAMMATION & TISSUE DAMAGE

Mild ongoing muscle breakdown – recovery between sessions is incomplete.

- Mild training stress

HS-CRP

Mildly elevated

1.35 mg/L

Functional optimal < 1.0. Low-grade inflammation from training, sleep deficit, possibly alcohol.

CREATINE KINASE

Mildly elevated

247 U/L

Normal < 294. Muscle breakdown enzyme – common in athletes; worth monitoring.

PANEL 05

Micronutrients

- Deficiencies – address now

Two deficiencies must be corrected before increasing training volume. Low zinc directly suppresses testosterone and tissue repair – non-negotiable to fix. Magnesium is adequate for sedentary life but insufficient for 8–10 weekly sessions; sweat losses will deplete it rapidly.

TEST	YOUR RESULT	STATUS	WHAT THIS MEANS
Zinc	10.7 $\mu\text{mol/L}$	Low	Optimal > 13. Essential for testosterone, immune function, tissue repair.
Magnesium	0.84 mmol/L	Suboptimal	Training optimal > 0.90. Critical for ATP, muscle, sleep.
Vitamin D	104 nmol/L	Excellent	Optimal 100–150. Supports immune, bone, T production, recovery.

PANEL 06

Thyroid, liver & kidney function

- Optimal across the board

Thyroid balanced with efficient T4 \rightarrow T3 conversion. Pristine liver and kidney function – a strong base for peptide therapy and increased training load.

TEST	YOUR RESULT	STATUS	WHAT THIS MEANS
TSH	1.8 mIU/L	Optimal	Functional ideal 1.0–2.5. Pituitary signalling appropriately.
Free T3	5.6 pmol/L	Excellent	Functional optimal 5.0–6.5. Drives metabolism & energy.
Free T4	15 pmol/L	Optimal	Mid-range storage form converting well to T3.
ALT · AST · GGT	26 · 22 · 19 U/L	Optimal	Liver enzymes optimal – strong base for peptide therapy.
Creatinine · eGFR	91 $\mu\text{mol/L}$ · >90	Optimal	Kidneys functioning at full capacity.

SECTION 02

Six goals for this cycle.

Ranked by impact on your 100K event preparation. Goal 1 – sleep – multiplies the effectiveness of every other intervention.

01 Optimise sleep architecture to a consistent 7–8 hrs nightly

Improve deep-sleep phases to lift growth hormone secretion and testosterone production. **Highest priority – multiplies every other intervention.**

02 Correct micronutrient deficiencies – zinc, magnesium, iron

Support testosterone production, energy metabolism, immune function, and oxygen-carrying capacity before training volume increases.

03 Prevent overuse injuries during training ramp-up (4× → 8–10× weekly)

Targeted peptide therapy, tissue adaptation support, and resolution of chronic psoas / lower back dysfunction.

04 Enhance recovery capacity between sessions

Sustainable training-volume increase without excessive inflammation, incomplete muscle repair, or immune suppression.

05 Improve cellular energy & cognitive function via NAD+ optimisation

NAD+, 5-amino-1MQ and NMN to address mental fatigue from business demands while supporting physical training.

06 Increase testosterone & IGF-1 into optimal functional ranges

Through sleep, increased resistance training, micronutrient correction, and peptide-enhanced growth hormone response.

How these goals are sequenced. Sleep and micronutrients are the foundation – addressed in weeks 1–2. Peptide cycle runs weeks 1–8. Training volume ramps gradually ($\leq 10\text{--}15\%$ / week). Retest at 6–8 weeks.

01

TIER · FOUNDATION Lifestyle & diet

Highest leverage

Sleep optimisation

Your single most critical factor. At 5–6 hrs nightly you're missing 2–3 hrs of deep sleep where 70% of daily growth hormone secretion occurs, testosterone is produced, muscle is repaired, immune function restored, and metabolic waste cleared from the brain.

NON-NEGOTIABLE TARGETS

- ✓ Minimum 7 hrs nightly – target 7.5–8 hrs consistently.
- ✓ Fixed sleep / wake schedule, including weekends – bed 9:30 pm, up 5:30 am.
- ✓ Replace mattress as discussed – quality directly impairs deep sleep.
- ✓ Bedroom 16–19 °C, complete darkness, no screens or phones.
- ✓ Pre-sleep wind-down from 8:30 pm – reading, gentle stretching or meditation.

EXPECTED IMPROVEMENTS AT 6–8 WEEKS

- **Testosterone** up 15–25%.
- **IGF-1** rises into optimal range.
- **Lymphocyte ratio** normalises.
- **Mental clarity** & cognitive function improve significantly.
- **Recovery** between sessions accelerates.

Alcohol. Even moderate (2–3 drinks) suppresses REM and deep sleep up to 40%, drops overnight testosterone 20–25%, increases inflammation, and impairs muscle protein synthesis. Eliminate or cap at 1–2 drinks weekly during this build-up phase.

Training periodisation & injury prevention

Your previous ITB injury at 30K during the 80K event happened because tendon and ligament adaptation needs significantly more time than cardiovascular adaptation. Cardio improved faster than structural resilience – leading to breakdown.

VOLUME STRATEGY

- Weekly volume \leq **10–15% per week** – connective tissue is the limit.
- Long runs at **conversational Zone 2 pace** (65–75% max HR).

STRENGTH – 2–3× WEEKLY

- Single-leg stability, hip flexor work, glute activation.
- Prevent compensation patterns that led to ITB overload.

Psoas & lower-back management

Your chronic lower back / glute pain radiating to the right shoulder is being driven by psoas dysfunction. The psoas attaches to your lumbar vertebrae – when weak, tight or inhibited, it creates compensation patterns through the entire posterior chain.

DAILY – PRE-RUN ACTIVATION

- Supine marching, dead bugs, psoas lifts – wake the muscle before loading.
- Glute & hip strengthening: clamshells, side-lying abduction, single-leg bridges, Copenhagen planks.

POST-RUN LENGTHENING

- Low-lunge hip-flexor stretch, couch stretch.
- PNF contract-relax to restore length after repetitive hip flexion.
- Consider osteopathic / myofascial work for psoas release.

Nutrition for training volume

PROTEIN – 1.8–2.2 G/KG/DAY

- ~165–205 g daily at your current 93 kg body weight.
- Distribute across 4–5 meals; 30–40 g per meal.
- Prioritise within 2 hrs post-training to maximise recovery.

CARBOHYDRATE PERIODISATION

- **High-carb days** (long runs, doubles): 5–7 g/kg → 465–650 g.
- **Moderate days** (single / lower intensity): 3–4 g/kg → 280–370 g.
- Whole-food sources – sweet potato, white rice, oats, sourdough, fruit.

HYDRATION & ELECTROLYTES

3–4 L

water daily · up to 4–5 L on doubles or hot days

500–700 mg

sodium per hour during runs > 90 min

+ Mg / K

to prevent cramping; particularly important with borderline magnesium

Stress management & cognitive recovery

Chronic cognitive load from running your business is elevating cortisol throughout the day, impairing sleep, suppressing testosterone and reducing recovery capacity.

- **Hard cut-off time** for business tasks (e.g. 6 pm) – protect mental recovery before sleep.
- **Cognitive breaks** every 90 min – 10–15 min outside, off screens.
- **10 min daily** box breathing (4-4-4-4) or meditation – reduces baseline cortisol.
- **Separate physical & cognitive** training – morning cardio without podcasts.

02 TIER · NUTRACEUTICALS

Supplements protocol

6 supplements

A six-supplement stack to correct deficiencies, support training adaptation and reduce inflammation. Take with the timing below – splitting doses prevents GI upset and maintains steady levels.

SUPPLEMENT	DOSE	TIMING	RATIONALE
Magnesium Glycinate	1000 mg	Evening with food	Mg 0.84 mmol/L is suboptimal for 8–10 sessions/wk (target > 0.90). Required for ATP, muscle, sleep. Glycinate is highly absorbable and calming.
Zinc Picolinate	30 mg	Evening, 1 hr pre-bed	Zinc 10.7 µmol/L is low (optimal > 13). Essential for testosterone, immune function, tissue repair. Mildly sedating – supports overnight T.
Maltofer (Iron)	100 mg alt. days	Morning, empty stomach	MCV 81 fL low side; ferritin will drop with volume. Take with vitamin C; alt-day dosing improves absorption. Avoid coffee within 30 min.
Vitamin C	1000 mg	Morning with iron	Converts ferric iron to absorbable ferrous form. Antioxidant – supports immune function during training stress.
Omega-3 (EPA+DHA)	2–3 g	With meals, split	Reduces exercise inflammation, supports cell membrane and brain. Triglyceride form, 3rd-party tested.
B-Complex (activated)	1 cap	Morning with food	Methylated B12 / folate. Supports ATP, nervous system, red blood cell formation.
Electrolyte formula	Per session	Runs > 90 min	500–700 mg sodium/hr + K + Mg. Prevents dehydration, cramping, performance decline.

Retest at 6–8 weeks. We'll check zinc, magnesium, ferritin, MCV, testosterone, and inflammatory markers to confirm optimisation. If ferritin drops below 100 µg/L, iron steps up to 5–7 days/week.

YOUR DAILY SCHEDULE

Supplement timing – at a glance

06:00 · MORNING	Empty stomach · Iron (alternate days) + Vitamin C (orange juice or capsule). Wait 30 min before coffee/tea.
07:30 · BREAKFAST	With food · B-Complex · Omega-3 (1 capsule) · second portion of magnesium glycinate (200–300 mg) if dosing split.
PRE-TRAINING	Long runs > 90 min – electrolyte formula in water bottle (500–700 mg sodium/hr + potassium + magnesium).
19:00 · DINNER	With food · Magnesium glycinate (main dose, 700 mg) · Omega-3 (second capsule).
20:30 · PRE-BED	1 hr before bed · Zinc picolinate. Begin wind-down: dim lights, off screens, reading or light stretching.

Daily checklist

MORNING

- ✓ Iron + Vit C
- ✓ B-Complex
- ✓ Omega-3
- ✓ Psoas activation drills

TRAINING WINDOW

- ✓ Hydration target
- ✓ Electrolytes > 90 min
- ✓ Protein within 2 hrs
- ✓ Post-run lengthening

EVENING

- ✓ Magnesium with dinner
- ✓ Hard work cut-off 6 pm
- ✓ Zinc 1 hr pre-bed
- ✓ In bed by 9:30 pm

Habit anchoring. Pair each supplement with an existing daily action – coffee, breakfast, dinner, brushing teeth – and you'll hit ≥ 90% compliance without thinking about it. Compliance, not the protocol itself, is the difference between a good and a great cycle outcome.

03 TIER · THERAPEUTIC

Peptide therapy & NAD+ optimisation

25–50 day cycle

Strategically timed for your training ramp-up. The cycle enhances tendon, ligament and fascia healing, improves collagen organisation, reduces inflammatory response and may enhance growth hormone receptor sensitivity. Use this window to build training volume while supporting tissue adaptation.

PEPTIDE	DOSE	SCHEDULE	RATIONALE & NOTES
Medication redacted	TBC	TBC	<i>Compliance redaction.</i> Dose and schedule provided in your dashboard and pharmacy paperwork.
Medication redacted	TBC	TBC	<i>Compliance redaction.</i> Dose and schedule provided in your dashboard and pharmacy paperwork.
5-Amino-1MQ	TBC	Morning, with NAD+	NNMT inhibitor – may raise intracellular NAD+ and support fat metabolism, energy and body composition (toward 85 kg while maintaining muscle).
NAD+ (injectable)	100 _{mg}	5×/week · 4 weeks · AM	Coenzyme for ATP, DNA repair and signalling. Inject 5–7 am for daytime energy. Start 50 mg first week to assess tolerance; up to 100 mg if well-tolerated.
NMN (oral)	500 _{mg/day}	Morning · 8–12 weeks	Oral NAD+ precursor – maintenance after the injectable cycle. Empty stomach or light breakfast. Reassess at 8–12 weeks.

SECTION 05 CONTINUED

Cycle coordination – your 12-week timeline

A staged protocol. The first four weeks load NAD+ via injection; weeks 5+ transition to oral NMN for sustained NAD+ status without ongoing injections.

WEEKS 1-4

Medication redacted ·
Medication redacted ·
NAD+ injectable · 5-Amino-1MQ start.

WEEKS 5-7

If extending to 50-day cycle: continue selected medications per direction; transition NAD+ → oral NMN.

WEEKS 8-12

Oral NMN daily · 5-Amino-1MQ continues to 12-week mark if desired. Reassess at follow-up.

Expected benefits

Based on the clinical context and preclinical evidence – note these peptides are compounded and not TGA-registered; large-scale trials have not been completed.

PHYSICAL

- Reduced soreness; faster recovery between sessions.
- Improved tissue resilience during volume ramp-up.
- Reduction in chronic lower back / psoas pain.
- Better energy throughout the day.
- Potential body composition improvements with 5-amino-1MQ.

COGNITIVE

- Enhanced mental clarity, reduced cognitive fatigue.
- Improved focus and mental stamina under business demands.
- Better sleep architecture and consolidation.
- Maintained metabolic markers under training stress.

Safety monitoring

MILD – COMMON

Injection-site reactions – redness, swelling, itching. Usually mild and resolve quickly. If worsening or spreading, cease and contact clinic.

MILD – TRANSIENT

Systemic flushing, nausea, headache (particularly with NAD+). Usually transient. If severe or persistent, reduce dose or cease.

SEVERE – EMERGENCY

Allergic reactions – rash, difficulty breathing, swelling of face or throat. **Cease immediately** and seek emergency medical care.

ANY NEW SYMPTOM

Concerning new symptoms during peptide use should prompt immediate contact with the clinic or your GP.

If you develop any severe, worsening, or unresolved side effects – cease the peptide immediately and present to your GP or emergency department. Contact BioV8 / Limitless for advice on any questions or concerns during the cycle.

At your follow-up we will review

- Sleep quality and duration – consistently 7+ hours?
- Recovery between sessions – how quickly are you bouncing back?
- Lower back / psoas pain – intensity or frequency reduced?
- Cognitive energy – focus, clarity, mental stamina improvements?
- Training progression – successfully at 8-10 sessions/week without injury?
- Any side effects or concerns from peptide protocols?

SECTION 06

Monitoring, follow-up & next steps.

Follow-up appointment in 6–8 weeks (end of peptide cycle), or sooner if concerns arise.

Between now and follow-up

TRACK

- Sleep duration & quality – wearable (WHOOP, Oura, Garmin) recommended.
- Training volume progression and any emerging pain or injury signals.
- Subjective changes in energy, recovery, cognitive function, lower back pain.

CONTACT US IF

- Any concerning side effects from peptides.
- New or worsening pain that interrupts training.
- Sleep targets aren't being met after 2 weeks of consistent practice.

Retest panel at 6–8 weeks

HORMONES & METABOLIC

- **Testosterone, free testosterone, IGF-1** – expect increases with sleep + peptides.
- **Fasting glucose, HbA1c, fasting insulin** – expect maintenance of excellent baseline.

MICRONUTRIENTS & INFLAMMATION

- **Zinc, magnesium, ferritin, MCV** – confirm deficiencies corrected.
- **hs-CRP, creatine kinase** – expect reductions with improved recovery.

Your immediate action checklist

TONIGHT

Target 7+ hrs sleep – in bed by 9:30 pm, fixed wake time, wind-down routine.

THIS WEEK

Order & begin micronutrient supplements. Start daily psoas activation work.

DASHBOARD

Log in to Limitless to review the plan and complete prescription & supplement checkout.

DELIVERY

Peptides & supplements ship to your door. Follow dashboard guidance to start the cycle.

A NOTE FROM DR LEWIS

A strong baseline. A narrow window. A clear plan.

John,

Your results paint a picture of someone in excellent baseline health with a remarkably young biological age, exceptional metabolic function, and strong foundational fitness. The areas requiring attention – sleep duration, micronutrient optimisation, and hormonal support – are all highly responsive to the interventions we've outlined.

You have a narrow window to optimise these factors before ramping training volume. Addressing them now will dramatically reduce injury risk and enhance performance as you build toward your 100K event.

The single most impactful change you can make is prioritising 7–8 hours of sleep nightly. This alone will increase testosterone by 15–25%, improve IGF-1, normalise immune function, enhance recovery, and resolve much of the cognitive fatigue you're experiencing. Everything else is a multiplier on that foundation.

You have the discipline, training history, and physiological foundation to successfully complete this 100K event. The key is patience during the build-up phase – prioritising tissue adaptation over cardiovascular fitness, addressing the psoas dysfunction that contributed to your previous ITB injury, and giving your body the sleep and nutrients it needs to adapt.

I'm excited to see your progress over the coming weeks. Don't hesitate to reach out if any questions or concerns arise during your peptide cycle or training ramp-up.



Mark Lewis

Dr Mark Lewis

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