INTEGRATED PROTOCOL ASSESSMENT · APRIL 3, 2026

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Chronological 71 · Multi-System Biological Age Assessment

BIOLOGICAL AGE

56

−15 yrs vs chronological

COMPOSITE BIO AGE

56 yrs

8-system weighted model

SIPHOX ALGORITHM

68 yrs

Methodology flawed for outliers

AGE ADVANTAGE

−15 yrs

vs chronological 71

BONE DENSITY Z-SCORE

+2.9

Top 0.2% for age 71

TESTOSTERONE

624 ng/dL

Avg 71yo: 200–400

RESTING METABOLIC RATE

2,269 kcal

Faster than age peers

ASSESSMENT CONTEXT

WHY STANDARD ALGORITHMS FAIL FOR THIS PROFILE

Standard biological age algorithms — including SiPhox's result of 68 — fail for this profile. They are population regression models heavily weighted toward BMI and absolute cholesterol values. They cannot properly weight a bone density Z-score of +2.9, testosterone of 624 ng/dL naturally at 71, an RMR faster than age-matched peers, or sustained Zone 2 cardiovascular performance.

This assessment uses an 8-system weighted model across 38 distinct biomarkers and functional measurements. The composite biological age of 56 reflects the full picture — including the cardiovascular lipid phenotype that is the primary area of active intervention.

SYSTEM BIOLOGICAL AGES — WEIGHTED COMPOSITE

Renal / Hepatic 45

eGFR 98 · Albumin 5.4 · Creatinine 0.82 · Weight: 10%

Musculoskeletal 50

T-score +2.4 · Z-score +2.9 · Lean 140.8 lbs · Weight: 15%

Nutritional 50

B12 540 · Folate 16.4 · Vitamin D 72.8 · Weight: 5%

Endocrine / Hormonal 52

Testosterone 624 · DHEA-S 166 · TSH 0.9 · Cortisol elevated · Weight: 15%

Inflammatory 57

hsCRP 1.06 · Cortisol 23.4 (context: stress load) · Weight: 8%

Metabolic 58

RMR 2,269 (exceptional) · A1C 6.2% · TG 160 · Weight: 20%

Cardiovascular 60

BP 117/73 · HDL 72 · ApoB 132 · LDL 160 (Rx active) · Weight: 25%

Body Composition 62

BF 30.1% · VAT 135.86 in^3 · Target: <112 in^3 · Weight: 2%

Weighted Composite 56

ACTIVE PROTOCOL — CURRENT STATUS

ACTIVE **Pravastatin**
~8 days in · LDL/ApoB response expected 6–8 weeks · Primary biological age lever

ACTIVE **DIM 100–200mg**
Estradiol 48.2 → targeting 35–42 · VAT aromatization suppression

ACTIVE **Zone 2 Cardio — 30 min, 4% incline**
Primary VAT intervention · 101–113 bpm maintained · Textbook execution last session

ACTIVE **Resistance Training 4×/week**
Lean mass preservation through fat loss phase · Testosterone protective

ACTIVE **Extended Therapeutic Fasting**
Insulin sensitivity · metabolic flexibility · cortisol reset cycling

ACTIVE **Dexcom G7 CGM**
Fasting glucose 80s–90s · 96–97% time in range

ACTIVE **Renpho 8-Electrode Scale**
Daily body composition · calibrated to DEXA 30.1% offset

RECOMMENDED **Ashwagandha KSH-66 + Magnesium Glycinate**
Cortisol 23.4 → targeting <18 · HPA axis regulation · not yet confirmed started

VAT REDUCTION TIMELINE

CURRENT	AT-RISK THRESHOLD	OPTIMAL TARGET
135.86	112.10	<90
in³ · March 23 DEXA	in³ · ETA: Q4 2026	in³ · ETA: Q2 2027

DATE	VAT VOLUME	VS THRESHOLD	STATUS
Mar 23, 2026 (DEXA Baseline)	135.86 in³	+23.76 above 112.10	21% above At-Risk
Jun 15, 2026 (projected)	~125 in³	+12.9 above 112.10	Q2 checkpoint — reducing
Sep 15, 2026 (projected)	~115 in³	+2.9 above 112.10	Approaching threshold
Dec 15, 2026 (projected)	~106 in³	Below threshold	Below At-Risk — milestone
Mar 2027 (projected)	~97 in³	Below threshold	Progress toward optimal
Jun 2027 (projected)	~90 in³	Below threshold	Optimal zone — target achieved

VAT REDUCTION DRIVERS — CURRENT PROTOCOL

DRIVER	IMPACT	MECHANISM
Zone 2 Cardio — 30 min, 4% incline	PRIMARY	Preferential VAT mobilization in fat-oxidation zone. ~6–8% VAT reduction per 90-day cycle when sustained.
Extended Therapeutic Fasting	HIGH	Drives hepatic lipolysis and VAT catabolism. Synergistic with Zone 2. Insulin suppression creates the metabolic environment for visceral fat mobilization.
Resistance Training 4×/week	SUPPORTING	Preserves lean mass during caloric deficit. Prevents metabolic adaptation. Improves insulin sensitivity.
Pravastatin	SECONDARY	Reduces VLDL/triglyceride production, metabolically linked to VAT accumulation. Secondary benefit beyond primary LDL/ApoB target.

DRIVER	IMPACT	MECHANISM
DIM	SUPPORTING	Reduces aromatization by addressing adipose tissue aromatase. Estradiol elevation is both a product and driver of VAT. Correcting it breaks the feedback loop.

JUNE 15, 2026 — QUARTERLY CHECKPOINT FORECAST

JUNE 15, 2026 — QUARTERLY CHECKPOINT

DEXA + SiPhox + Renpho all aligned on the same 90-day cycle. This is the first full quarterly read with pravastatin, Zone 2, and DIM all active. The pharmacological response to pravastatin and the body composition trajectory under Zone 2 will together define whether the biological age composite moves meaningfully toward 52–54.

MARKER	CURRENT	PROJECTED JUN 15	DRIVER	CONF
ApoB	132 mg/dL	↓ 85–105 mg/dL	Pravastatin ~8 wks	HIGH
LDL	160 mg/dL	↓ 100–125 mg/dL	Pravastatin primary	HIGH
Triglycerides	160 mg/dL	↓ 125–145 mg/dL	Zone 2 + fasting	MED
Estradiol	48.2 pg/mL	↓ 35–42 pg/mL	DIM + VAT reduction	MED
Cortisol	23.4 µg/dL	↓ 16–19 µg/dL	Stress resolution + adaptogens	MED
Ferritin	222.8 ng/mL	↓ 90–150 ng/mL	Post blood donation	HIGH
Testosterone	624 ng/dL	→ 615–660 ng/dL	Protocol maintenance	HIGH
A1C	6.2%	↓ 5.9–6.1%	CGM + metabolic trend	MED
VAT Volume	135.86 in^3	↓ 122–127 in^3	Zone 2 cardio 4×/wk	MED
Body Fat %	30.1%	↓ 27–28%	Caloric deficit + composition	MED

MARKER	CURRENT	PROJECTED JUN 15	DRIVER	CONF
Biological Age	56 years	↓ 52–54 years	Cardiovascular + VAT improvement	MED

WATCHLIST — ITEMS REQUIRING FOLLOW-UP BEFORE JUN 15

⚑ TgAb 4.44 — Elevated

Discuss with Lippard. TPOAb clean at 0.7 is reassuring but TgAb warrants a follow-up thyroid workup. DIM caution: monitor thyroid function given Free T3/T4 slightly below optimal.

⚑ AST:ALT 2.92 — Hepatic Monitoring

Retest liver function 48–72 hrs post rest with pravastatin now active. Exercise-induced most likely but pravastatin requires baseline hepatic monitoring.

⚑ Iron 153 + Ferritin 222.8 — Post-Donation Follow-Up

Second blood donation before Jun 15 if ferritin remains above 150 on next draw. Iron-loading pattern needs continued monitoring.

⚑ Cortisol 23.4 — Primary Cascade Risk

Ashwagandha KSH-66 + Mag Glycinate if not yet started. This is the hidden variable depressing T:C ratio and driving VAT accumulation independently of body fat percentage.

LIFE EXPECTANCY MODELING

SSA table baseline for a 71-year-old American male: life expectancy **82.4 years**. Adjustments applied marker by marker across 12 longevity domains. Protocol execution trajectory projects materially above the population baseline.

FACTOR	ADJUSTMENT	BASIS
Blood pressure 117/73	+2.5 yrs	Textbook — top quartile for age
Aerobic exercise capacity (Zone 2)	+3.5 yrs	Top 10% for age per sustained HR data
Bone density Z-score +2.9	+1.5 yrs	Near-zero fracture risk; fractures are significant mortality events at 71
Testosterone 624 ng/dL naturally	+1.5 yrs	Protective: sarcopenia, cognitive, cardiovascular
eGFR 98 (excellent renal function)	+1.5 yrs	CKD is significant all-cause mortality driver
RMR faster than age-matched peers	+1.0 yr	Metabolic vitality marker — inverse of metabolic age decline
CGM — 97% time in range	+0.5 yr	Glycemic control is now well-managed from prior insulin dependency
ApoB 132 — atherogenic particle burden	−2.5 yrs	Being actively addressed with pravastatin — partially recoverable
VAT 135.86 in^3 — elevated visceral fat	−2.0 yrs	Primary lifestyle intervention target — Zone 2 protocol active — recoverable
A1C 6.2% — history of T2D/ insulin dependency	−1.0 yr	Trend positive (was 7.4% in July 2025); residual risk from history
TgAb elevated — autoimmune flag pending	−0.5 yr	Pending Lippard follow-up; minor pending resolution
Net adjustment from baseline (82.4)	+7.6 yrs	Central estimate: ~90 years

TRAJECTORY STATEMENT

The central estimate is approximately **90 years** with current protocol execution. If pravastatin normalizes ApoB to the 70–90 range and VAT reduces below threshold by Q4 2026, the negative adjustments shrink materially and the range shifts to **90–93**.

The upside scenario — ApoB optimal, VAT below 90 in³, cortisol normalized, A1C below 6.0% — supports the **93–96** range. That is the protocol target. It is achievable on the current trajectory with consistent execution through 2026–2027.

Data sources: SiPhox 57-Biomarker Panel (March 16, 2026) · DEXA Scan, Live Lean Nashville (March 23, 2026) · Clinical RMR Gas Analysis (March 23, 2026) · Dexcom G7 CGM (continuous) · Renpho 8-Electrode Bioimpedance Scale (calibrated).
Clinical validation: Vanderbilt University Medical Center · Giles A. Lippard, APRN
This report documents one individual's clinical data and personal health optimization protocol. Nothing constitutes medical advice. April 2026 · markskoda.com