INTELLIGENT AGING

Jeremy Sova: 5-Year Case Study (2020 to 2025)

Jeremy Sova is Chief Intelligent Aging Officer at Castle Rock Regenerative Healthcare. These are his own measurements, shared with his permission. Individual results, not typical, and not a claim that any service treats, prevents or reverses any condition.

HIS OWN MEASURED RESULTS

16 yrs
Lower bio-age estimate

49.3
VO_2 Max

0.92x
Pace of Aging

10.8%
Body Fat

Level 3
Visceral Fat

TRANSFORMATION SUMMARY

His Biological Age Score: 16 Years Lower

His own measurements on the tests he took, 2020 to 2025. Individual results, not typical, and not a claim that any service treats, prevents or reverses any condition.



Bio-Age

62

46



Weight

200 lbs

170 lbs



Body Fat

18.8%

11%



Pace of Aging

1.38x

0.92x

- Bio-Age: 62 → 46
- Weight: 200 → 170 lbs
- Body Fat: 18.8% → 11%
- Pace of Aging: 1.38x → 0.92x
- Visceral Fat: 5 → 3
- hs-CRP: 0.9 mg/L
- VO_2 Max: 49.3 (Elite)

01

PATIENT HISTORY

History of Systemic Trauma

Decades of mechanical injury established a baseline of chronic pain and disability.



Baseline · Pre-Optimization

Decades of Mechanical Injury

"The 1996 operating surgeons predicted severe back pain issues by his 40s. Proved correct in 2013."

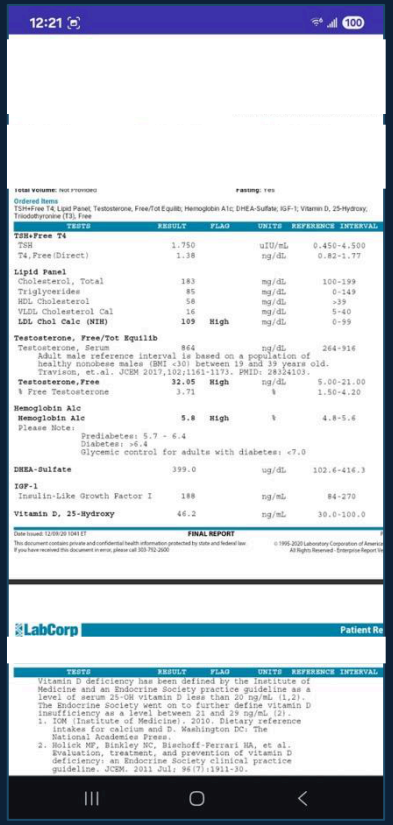
1996	Broken Femur / Rod Placement
2013 to 15	Spinal Disc Herniations (L4 to S1)
2018	Terrain Park Jump / Left-Side Paralysis
2020	Grade 3 Iliolumbar Ligament Tear

02

THE STARTING POINT

2020: Metabolic Crisis

Despite apparent fitness, labs revealed prediabetic markers and concerning lipid drift.


12:21

Ordered Items
T3,Free T4, Lipid Panel, Testosterone, Free/Tot Equilib, Hemoglobin A1c, DHEA-Sulfate, IGF-1, Vitamin D, 25-Hydroxy, Triiodothyronine (T3), Free

TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL
TSH+Free T4				
TSH	1.750		uIU/mL	0.450-4.500
T4,Free(Direct)	1.38		ng/dL	0.82-1.77
Lipid Panel				
Cholesterol, Total	183		mg/dL	100-199
Triglycerides	85		mg/dL	0-149
HDL Cholesterol	56		mg/dL	>39
VLDL Cholesterol Cal	16		mg/dL	5-40
LDL Chol Calc (NIH)	**109**	**High**	mg/dL	0-99
Testosterone, Free/Tot Equilib				
Testosterone, Serum	864		ng/dL	264-916
Adult male reference interval is based on a population of healthy nonobese males (BMI <30) between 19 and 39 years old. Travison, et.al. JCEM 2017,102;1161-1173. PMID: 28324103.				
Testosterone,Free	**32.05**	**High**	ng/dL	5.00-21.00
% Free Testosterone	3.71		%	1.50-4.20
Hemoglobin A1c				
Hemoglobin A1c	**5.8**	**High**	%	4.8-5.6
Please Note: Prediabetes: 5.7 - 6.4 Diabetes: >6.4 Glycemic control for adults with diabetes: <7.0				
DHEA-Sulfate	399.0		ug/dL	102.6-416.3
IGF-1				
Insulin-Like Growth Factor I	188		ng/mL	84-270
Vitamin D, 25-Hydroxy	46.2		ng/mL	30.0-100.0

Date Issued: 12/09/20 1041 ET — FINAL REPORT

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LabCorp — Patient Re

TESTS	RESULT	FLAG	UNITS	REFERENCE INTERVAL

Vitamin D deficiency has been defined by the Institute of Medicine and an Endocrine Society practice guideline as a level of serum 25-OH vitamin D less than 20 ng/mL (1,2). The Endocrine Society went on to further define vitamin D insufficiency as a level between 21 and 29 ng/mL (2).

1. IOM (Institute of Medicine). 2010. Dietary reference intakes for calcium and D. Washington DC: The National Academies Press.
2. Holick MF, Binkley NC, Bischoff-Ferrari HA, et al. Evaluation, treatment, and prevention of vitamin D deficiency: an Endocrine Society clinical practice guideline. JCEM. 2011 Jul; 96(7):1911-30.

LabCorp Panel · 2020

DIAGNOSTICS · 2020

Initial Vitals, Age 42

Despite fitness activity, baseline labs revealed metabolic dysfunction requiring urgent intervention.

HbA1c	5.8%	PREDIABETES	Elevated glycemic average, vascular risk
Total Cholesterol	183 mg/dL	BORDERLINE	Lipid drift initiating
LDL Cholesterol	109 mg/dL	ELEVATED	Atherogenic particle load increasing
Testosterone (Free)	HIGH FLAG	ABNORMAL	Hormonal imbalance detected

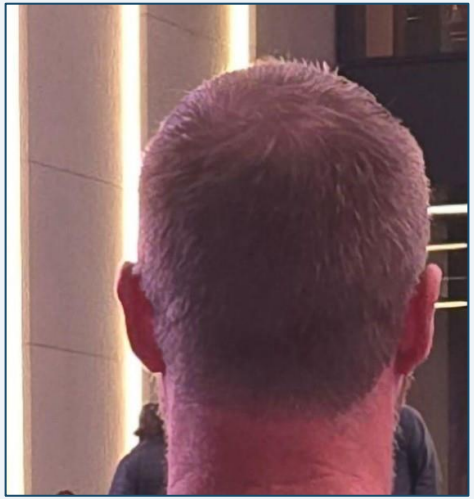
His Hair, 2020 to 2025

At age 42, he noticed crown thinning. These are his own photos from 2020 and 2025. Many things affect hair. This is his own experience, not typical, and not a claim that any service treats or regrows hair.

2020 · AGE 42



2025 · AGE 47

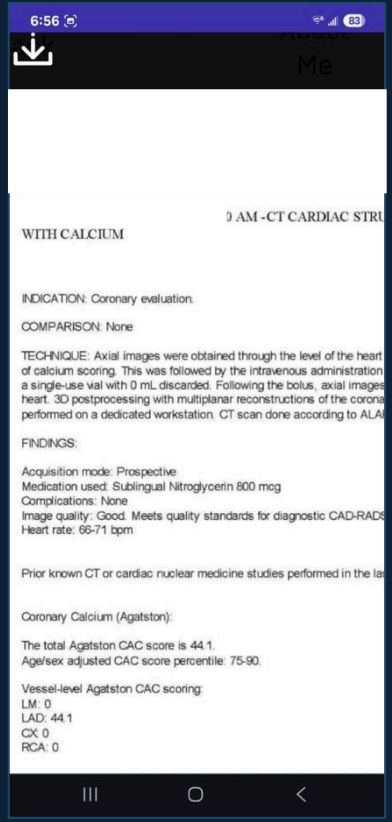


03

THE TURNING POINT

2023:
The Turning Point

Advanced imaging revealed calcium buildup in the Left Anterior Descending (LAD) heart artery. Further inflammation testing revealed Rheumatoid Arthritis (RA).



) AM -CT CARDIAC STRU

WITH CALCIUM

INDICATION: Coronary evaluation.

COMPARISON: None

TECHNIQUE: Axial images were obtained through the level of the heart
of calcium scoring. This was followed by the intravenous administration
a single-use vial with 0 mL discarded. Following the bolus, axial images
heart. 3D postprocessing with multiplanar reconstructions of the corona
performed on a dedicated workstation. CT scan done according to ALA

FINDINGS:

Acquisition mode: Prospective
Medication used: Sublingual Nitroglycerin 800 mcg
Complications: None
Image quality: Good. Meets quality standards for diagnostic CAD-RADS
Heart rate: 66-71 bpm

Prior known CT or cardiac nuclear medicine studies performed in the la

Coronary Calcium (Agatston):

The total Agatston CAC score is 44.1.
Age/sex adjusted CAC score percentile: 75-90.

Vessel-level Agatston CAC scoring:
LM: 0
LAD: 44.1
CX: 0
RCA: 0

Coronary CT (Agatston) · 2023

The Aging Gap Revealed

CAC SCORE

44.1

75th to 90th percentile for age/sex

- Early-Stage Heart Disease
- Genetic RA Antibodies Detected
- Accelerated Systemic Inflammation

BIOLOGICAL AGE · 2023

62

Chronological Age: 45

Aging at 1.38× chronological rate

17 years older biologically than actual age

Mitochondrial Intelligence

SpectraCell deep-dive mapped the Krebs Cycle to identify exactly where ATP production was failing at a cellular level. He made his energy-cycle results a main focus of his plan.



Krebs Cycle Mapping

Pinpointed ATP production failures in the citric acid cycle using SpectraCell Laboratories analysis



Methylation Analysis

Looked at gene-regulation (methylation) patterns to follow over time



Micronutrient Deficits

Vit A, K2, Zinc, Magnesium, Antioxidants, all mapped and targeted for strategic replenishment

Biohacking Metabolism

Eliminating Glycemic Spikes

Using Stelo CGM to identify invisible glucose spikes, HbA1c fell from 5.8% (prediabetes) to 5.3%, stable glucose became his main focus for heart health.

107 mg/dL Avg Glucose	**88%** Time in Range
5 → 3 Visceral Fat	**5.8% → 5.3%** HbA1c Improvement

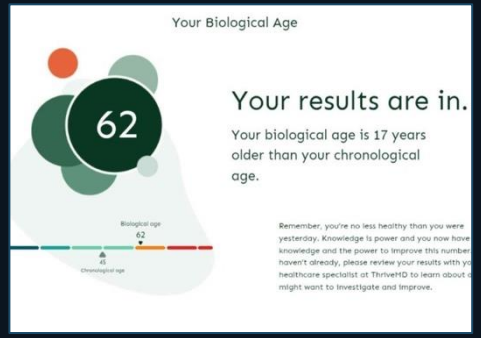
VASCULAR MARKERS

ApoB	**43 mg/dL**	*Newborn-range lipid levels*
Lp(a)	**< 10 nmol/L**	*Low reading, largely set by genetics*
hs-CRP	**0.9 mg/L**	*Low-range reading*
Lp-PLA2	**76**	*Measured in 2025*

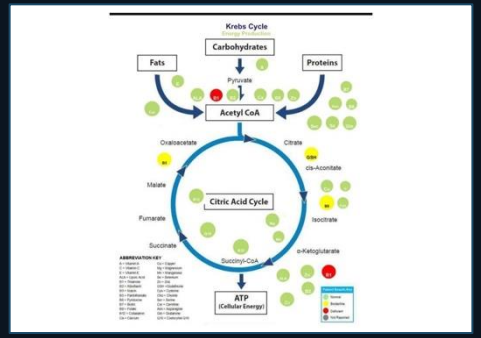
DOCUMENTED RESULTS · 190+ BIOMARKERS TRACKED

His Lab Reports

Biological Age · 2023



Krebs Cycle · 2025 (Optimized)



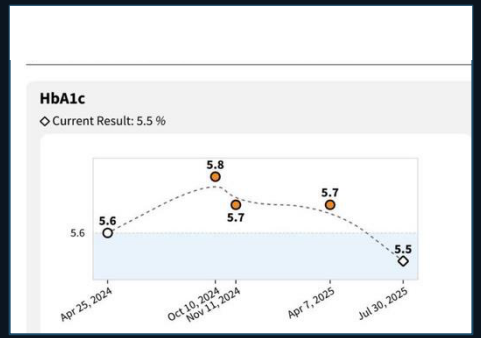
Micronutrient Status



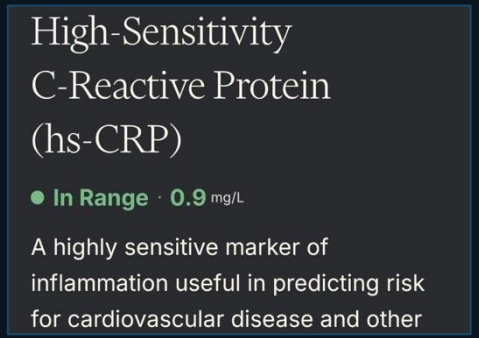
Stelo CGM · Jul 7 → Jul 31



Lipid & Cardiac Panel



hs-CRP · Inflammation



04

THE PROTOCOL

The Optimization Stack

The services and therapies he used, chosen with his provider and tracked against his own numbers.



The Ultimate Regenerative Stack



100 HBOT Dives

Pressurized 2.0 ATA oxygen sessions, as elective wellness and recovery sessions



HOCATT + Cryo

Multi-modality ozone sauna combined with -170°C cryotherapy for recovery



Red Light Therapy

10-wavelength photobiomodulation for mitochondrial & skin support



Stem Cell Therapy + Therapeutic Plasma Exchange

The stem cell and plasma exchange part of his plan, with physician oversight



IV Hydration

Bi-monthly custom IV vitamin & mineral hydration tailored to bloodwork



Rapamycin, Peptides & NAD+

Prescribed rapamycin, custom peptides and NAD+ & Glutathione as dietary supplements (InstaMed sublingual strips)

05

THE RESULTS

2025:
Peak Metrics

A bio-age score 16 years lower, measured on the tests he took.
Individual results, not typical, and not a treatment claim.





Therapeutic Plasma Exchange (TPE)

2025: Peak Body & Performance Metrics

169.4 lbs	10.8%	86.4 lbs	Level 3
Weight	Body Fat	Muscle Mass	Visceral Fat
↓ 30 lbs	↓ 8 pts	preserved	↓ from 5

BIOLOGICAL AGE

62 → 45.9

2023 — 2025

PERFORMANCE VERIFICATION

VO_2 Max	49.3
Pace of Aging	0.92x
RHR Improvement	−12 BPM
Goal by 2027	Bio-Age < 40

Begin Your Transformation

Schedule a free 30-minute consultation to design the protocol that fits your life and goals.

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JEREMY SOVA

Intelligent Aging
Expert Biohacker



Chief Intelligent Aging Officer at CRRH.
His own results; not typical; not a treatment claim.

FAMILY & VETERAN-OWNED