Comprehensive Health Report

Biomarkers | Conditions | Supplement Protocol | Daily Tracker

Patient: Jim Gurtner | DOB: 11/6/1961 | Age: 64 | Vegan
Generated: May 08, 2026

DISCLAIMER: This document is for personal informational purposes only. It is not medical advice. Review all findings with qualified healthcare providers.

Biomarkers (79 markers)

All current biomarker values with reference ranges, optimal targets, and status. Grouped by category.

Autoimmune

ANA Screen Negative Optimal

Antinuclear antibodies. Negative rules out lupus and other systemic autoimmune diseases.

Rheumatoid Factor <10 Optimal

Optimal: 0 - 14 IU/mL

Autoimmune joint marker. Negative - rheumatoid arthritis ruled out.

Anti-Intrinsic Factor Ab Negative Optimal

Negative rules out pernicious anemia as cause of low B12.

Anti-Parietal Cell Ab Negative Optimal

Negative rules out autoimmune gastritis.

Gastrin 23 Optimal

Optimal: 0 - 100 pg/mL

Stomach acid regulation hormone. Normal at 23 rules out Zollinger-Ellison and confirms normal gastric acid.

CBC

WBC 3.7 Critical

Optimal: 4.5 - 11 K/uL

White blood cells - immune defense. Below range at 3.7. Part of pancytopenia pattern from impaired bone marrow DNA synthesis.

RBC 4.42 Warning

Optimal: 4.5 - 5.5 M/uL

Red blood cells. Low-normal and declining. Bone marrow needs folate/B12 for rapid cell division.

Hemoglobin 14.4 Good

Optimal: 13.5 - 17.5 g/dL

Oxygen-carrying protein in RBCs. Normal but declining from 15.3 to 14.4.

Hematocrit 42.7 Good

Optimal: 39.4 - 51.1 %

Percentage of blood that is red blood cells. Normal range but declining trend.

Platelets 151 Warning

Optimal: 200 - 400 K/uL

Blood clotting cells. Low-normal at 151 and declining. Part of pancytopenia pattern.

MCV 96.6 Good

Optimal: 80 - 90 fL

Mean cell volume. Was macrocytic (102) in 2018 indicating B12/folate deficiency. Improved with methylation protocol.

MCH 32.6 Good

Optimal: 27 - 31 pg

Mean cell hemoglobin. Upper normal, consistent with mild macrocytic tendency.

RDW 12.6 Good

Optimal: 11 - 12.5 %

Red cell distribution width. Measures variation in RBC size. Improved toward optimal.

Neutrophils (Abs) 1676 Warning

Optimal: 2000 - 7000 cells/uL

Primary immune defense cells. Low-normal at 1676. Borderline neutropenia.

Lymphocytes (Abs) 1528 Good

Optimal: 1000 - 3500 cells/uL

Adaptive immune cells. Within normal range.

CIRS

C4a >2830 Critical

Optimal: 0 - 2830 ng/mL

Innate immune activation marker. Was VERY HIGH in 2018. NOT retested since - URGENT retest needed.

MMP-9 668 Critical

Optimal: 0 - 332 ng/mL

Blood-brain barrier integrity marker. Was 2x normal in 2018, indicating BBB compromise. NOT retested.

VEGF 11 Critical

Optimal: 31 - 86 pg/mL

CRITICALLY LOW at 11 (normal 31-86). Means Jim cannot grow new blood vessels or collateral circulation. Dire for cardiac risk with family hx. NOT retested.

MSH 30 Warning

Optimal: 35 - 81 pg/mL

Master regulatory hormone. Low MSH = impaired immune regulation, sleep disruption, chronic pain. NOT retested since 2018.

Cardiovascular

hs-CRP 0.3 Optimal

Optimal: 0 - 0.35 mg/L

High-sensitivity inflammatory marker. Below 0.35 is optimal per AHA. Tracks systemic inflammation driving CIRS, atherosclerosis, and tinnitus.

Homocysteine 8.5 Good

Optimal: 6 - 8 umol/L

Toxic amino acid that damages blood vessels. MTHFR 677++ impairs recycling by 70%. Was 39.1 in 2018 - now well controlled.

Total Cholesterol 191 Good

Optimal: 150 - 200 mg/dL

Total serum cholesterol. Within normal range.

LDL Cholesterol 106 Warning

Optimal: 0 - 100 mg/dL

Primary atherogenic lipoprotein. Slightly above 100 target. ApoB is the more accurate marker.

HDL Cholesterol 62 Good

Optimal: 60 - 100 mg/dL

Protective cholesterol. Major improvement from 45 to 62 reflects dietary/supplement protocol working.

Triglycerides 125 Good

Optimal: 0 - 100 mg/dL

Marker of carbohydrate metabolism and cardiovascular risk. Within range but above functional optimal.

ApoB 91 Warning

Optimal: 0 - 80 mg/dL

Best single marker for atherosclerotic risk. Counts actual atherogenic particles. Slightly above 80 optimal for Jim's risk profile.

Lp(a) <10 Optimal

Optimal: 0 - 75 nmol/L

Genetically determined cardiac risk factor. Cannot be modified by lifestyle. Jim's is optimally low.

NT-proBNP 87 Optimal

Optimal: 0 - 125 pg/mL

Cardiac strain marker. Normal at 87 rules out active heart failure. But 30% of stage B HF patients have normal NT-proBNP - echo still needed.

Non-HDL Cholesterol 129 Good

Optimal: 0 - 130 mg/dL

All atherogenic cholesterol combined. Just under the 130 threshold.

Chol/HDL Ratio 3.1 Optimal

Optimal: 0 - 3.5 ratio

Ratio of total cholesterol to HDL. Below 3.5 is optimal. Major improvement.

LDL Particle Number 1763 Critical

Optimal: 0 - 1138 nmol/L

Total count of LDL particles. HIGH at 1763 (optimal <1138). More predictive than LDL-C alone.

LDL Small 288 Critical

Optimal: 0 - 142 nmol/L

Small dense LDL particles penetrate arterial walls more easily. HIGH - most dangerous LDL subtype.

OmegaCheck (EPA+DPA+DHA) 3.9 Critical

Optimal: 5.4 - 12 % by wt

Total omega-3 index. LOW at 3.9% (optimal >5.4%). Indicates omega-3 supplementation dose may need to increase.

Leptin 1.3 Critical

Optimal: 2 - 9 ng/mL

Very low leptin is a classic Shoemaker CIRS hallmark confirming hypothalamic neuroinflammation. Controls satiety, metabolism, and immune function.

Hormones

DHEA-S 40 Critical

Optimal: 150 - 200 mcg/dL

Crashed 67% from peak. Classic CIRS pattern - pregnenolone steal shunts precursors to cortisol. Linked to immune dysfunction, cardiovascular mortality, cognitive decline.

Testosterone Total 442 Warning

Optimal: 500 - 827 ng/dL

Below 500 target but improving from 275 baseline. Downstream from pregnenolone/DHEA insufficiency.

Free Testosterone 99.1 Good

Optimal: 70 - 155 pg/mL

Bioavailable testosterone. Mid-range - adequate for tissue effects.

Pregnenolone 41 Warning

Optimal: 50 - 150 ng/dL

The "mother hormone" - precursor to ALL steroid hormones. Low at 41 means insufficient raw material for DHEA, testosterone, cortisol.

FSH 17.6 Warning

Optimal: 1.4 - 10 mIU/mL

Elevated FSH indicates the pituitary is working harder to signal the testes. Consistent with primary testicular decline.

LH 4.5 Good

Optimal: 1.6 - 10 mIU/mL

Pituitary hormone for testosterone production. Normal - not elevated like FSH (discordance suggests mixed signals).

Cortisol AM 10.0 Good

Optimal: 10 - 20 mcg/dL

Morning cortisol. Improved from 7.9 to 10.0 (at lower optimal boundary). Adrenal function recovering.

Estradiol <30 Optimal

Optimal: 0 - 39 pg/mL

Male estrogen level. Normal - no excessive aromatization from DHEA supplementation.

SHBG 31 Good

Optimal: 25 - 50 nmol/L

Sex hormone binding globulin. Low-normal allows more free testosterone availability.

Prolactin 5.9 Optimal

Optimal: 2 - 15 ng/mL

Pituitary hormone. Normal rules out prolactinoma.

PSA Total 1.1 Optimal

Optimal: 0 - 4 ng/mL

Prostate marker. Safe at 1.1. Important to monitor with DHEA supplementation.

Iron

Iron, Total 107 Good

Optimal: 50 - 170 mcg/dL

Serum iron level. Normalized from elevated 135 to healthy 107.

Iron Saturation % 39% Good

Optimal: 20 - 45 %

Key hemochromatosis marker. Improved from 53% (high) to 39% (normal). Iron management strategies are working.

Ferritin 28 Warning

Optimal: 50 - 80 ng/mL

Iron storage protein. Paradoxically LOW for hemochromatosis at 28. Iron management + low RBC production may have overshot. Target 50-80.

TIBC 271 Good

Optimal: 250 - 370 mcg/dL

Total iron binding capacity. Normal range indicates adequate transport protein.

Lead (venous) <1.0 Optimal

Optimal: 0 - 3.5 mcg/dL

Heavy metal screening. Excellent - no lead exposure detected.

Mercury <5 Optimal

Optimal: 0 - 5 mcg/L

Heavy metal screening. Within safe range.

Kidney

eGFR 70 Critical

Optimal: 90 - 120 mL/min

Kidney filtration rate. Declined from 97 to 70 in 6 years (4.5/yr vs normal 0.7-1.0/yr). Stage 2 CKD. Needs nephrology referral.

Creatinine 1.17 Good

Optimal: 0.7 - 1.2 mg/dL

Kidney waste product. Rising from 0.84 to 1.17. May partly reflect increased muscle mass, but needs monitoring.

BUN 14 Good

Optimal: 7 - 20 mg/dL

Blood urea nitrogen. Normal kidney waste clearance.

Potassium 5.5 Critical

Optimal: 3.5 - 5 mmol/L

HIGH at 5.5. At eGFR 70, suggests tubular dysfunction. >5.5 carries arrhythmia risk. Plant-based diet naturally high in potassium.

Sodium 139 Good

Optimal: 135 - 145 mmol/L

Electrolyte balance. Normal.

Calcium 9.6 Good

Optimal: 8.6 - 10 mg/dL

Serum calcium. Normal range.

CO2 (Bicarbonate) 28 Good

Optimal: 22 - 29 mmol/L

Acid-base balance indicator. Normal range.

Liver

GGT 12 Optimal

Optimal: 3 - 30 U/L

Sensitive liver and bile duct marker. Excellent - no liver stress.

AST 25 Optimal

Optimal: 10 - 30 U/L

Liver enzyme. Normal range, no liver damage.

ALT 23 Optimal

Optimal: 9 - 30 U/L

Liver-specific enzyme. Normal. Important with hemochromatosis - no iron liver damage.

Bilirubin Total 0.6 Optimal

Optimal: 0.2 - 1 mg/dL

Bile pigment from RBC breakdown. Normal - healthy liver clearance.

Albumin 4.4 Optimal

Optimal: 4 - 5 g/dL

Protein made by liver. Healthy liver synthetic function and nutritional status.

Alk Phosphatase 94 Good

Optimal: 35 - 115 U/L

Liver/bone enzyme. Within range.

Metabolic

Glucose 83 Optimal

Optimal: 70 - 90 mg/dL

Fasting blood sugar. Excellent metabolic control.

HbA1c 5.2 Optimal

Optimal: 4 - 5.4 %

3-month blood sugar average. Consistently excellent across all tests.

Fasting Insulin 4.4 Optimal

Optimal: 0 - 5 uIU/mL

Insulin resistance marker. Below 5 is optimal. No metabolic syndrome.

Uric Acid 5.8 Good

Optimal: 4 - 6 mg/dL

High uric acid can damage kidneys and cause gout. Good improvement from 6.4 to 5.8.

Thyroid

TSH 1.67 Optimal

Optimal: 1 - 2 mIU/L

Thyroid function marker. Steadily improving toward optimal 1-2 range.

Free T4 1.1 Good

Optimal: 0.9 - 1.7 ng/dL

Active thyroid hormone. Within normal range.

Free T3 3.4 Good

Optimal: 3 - 4 pg/mL

Most active thyroid hormone. Mid-range and stable.

Thyroglobulin Ab <2 Optimal

Optimal: 0 - 2 IU/mL

Autoimmune thyroid marker. Negative - no Hashimoto's.

TPO Antibodies <1 Optimal

Optimal: 0 - 9 IU/mL

Autoimmune thyroid marker. Negative.

Vitamins

Vitamin D 50 Good

Optimal: 50 - 80 ng/mL

At lower edge of 50-80 target. Highly variable history - crashed to 33 after stopping 10K IU. Need consistent 5K IU + sunlight.

Vitamin B12 416 Warning

Optimal: 600 - 1100 pg/mL

Declining from 659 to 416 despite supplementation. MMA is normal (92), suggesting tissue B12 is adequate but serum is low. Plant-based diet provides zero dietary B12.

MMA (serum) 92 Optimal

Optimal: 69 - 250 nmol/L

Methylmalonic acid - functional B12 marker. Normal at 92 means tissue B12 is adequate despite low serum B12.

MMA (urine) 0.6 Optimal

Optimal: 0.3 - 2.2 mmol/mol

Urine MMA confirms adequate B12 at tissue level. Rules out functional deficiency.

Zinc 75 Good

Optimal: 70 - 120 mcg/dL

Essential mineral for immune function, wound healing, and gut integrity. Adequate.

RBC Magnesium 5.1 Good

Optimal: 4.2 - 6 mg/dL

Intracellular magnesium - much more accurate than serum. Good level supports cardiac and nervous system function.

Conditions & Action Plans

WBC 3.7 LOW, RBC 4.42 low-normal, PLT 151 borderline. Bone marrow production impaired by MTHFR.

Enzyme function reduced 70%. Affects DNA repair, detox, neurotransmitters, and homocysteine recycling.

Confirmed compound heterozygote. Iron saturation improved 53%?39%. Ferritin paradoxically low at 28.

HLA 4/3/53 multisusceptible. CIRS markers not tested since 2018. Driving hormonal collapse and DHEA-S crash.

eGFR declined from 97 (2020) to 70 (2026). Rate of 4.5 mL/min/year = 4-5x faster than normal aging.

System-wide steroid hormone failure. DHEA-S 40 (critical), Testosterone 442, Pregnenolone 41, Leptin 1.3.

Many markers excellent. ApoB 91 slightly elevated. Father died cardiomyopathy at 63. Jim is 64.

2020 GI-MAP showed major dysbiosis. April 2026 testing ruled out autoimmune gastritis. Persistent burping suggests ongoing H. pylori, SIBO, or hypochlorhydria.

Supplement Protocol (29 supplements)

All supplements are vegan. Organized by protocol phase.

Core Protocol

Methylcobalamin (Vitamin B12) - 5,000 mcg sublingual

Timing: Wake up, 30 min before food

What: The active, methylated form of vitamin B12. Unlike cyanocobalamin (cheap synthetic form), methylcobalamin is directly usable by the body without conversion.

Why: B12 is declining (was 659, now 416) despite previous supplementation. MTHFR 677++ requires the methylated form. Plant-based/vegan diet provides ZERO dietary B12. Sublingual delivery bypasses the digestive tract.

Dose: Standard RDA is only 2.4 mcg, but with MTHFR 677++, functional B12 deficiency can occur at levels below 500-550 pg/mL. The 5,000 mcg dose ensures adequate tissue saturation even with impaired conversion.

WARNING: Dissolve completely under tongue for sublingual absorption.

Thorne Methyl-Guard Plus - 3 capsules

Timing: With breakfast

What: All-in-one methylation support: Methylfolate (5-MTHF) 5mg + Methylcobalamin (B12) 3mg + P5P (active B6) 45mg + Riboflavin (B2) 90mg + TMG (Betaine) 1.8g.

Why: This is the cornerstone of MTHFR 677++ management. Each ingredient addresses a specific step in the methylation cycle. Methylfolate bypasses the 70%-broken MTHFR enzyme. P5P handles the transsulfuration pathway and metabolizes oxalates (OAT showed 4x normal). Riboflavin is a cofactor for residual MTHFR activity. TMG provides an entirely separate pathway to recycle homocysteine via the BHMT enzyme.

Dose: Matched to clinical studies showing this combination reduced homocysteine by 48.3% in MTHFR 677++ carriers. Jim's homocysteine dropped from 39.1 to 8.5 on this regimen.

WARNING: Never substitute with products containing folic acid (synthetic form).

CoQ10 (Ubiquinone) - 300mg/day

Timing: 200mg breakfast, 100mg lunch (with fat)

What: Coenzyme Q10 is found in every cell and is essential for mitochondrial energy production. Also a powerful antioxidant.

Why: HFE hemochromatosis patients have CoQ10 levels approximately 40-50% lower than normal (Musci et al., Biochimica et Biophysica Acta). The mechanism: excess iron via the Fenton reaction generates free radicals that consume CoQ10 faster than the body can produce it. Jim's father died of cardiomyopathy at 63.

Dose: Matches the Q-SYMBIO trial protocol exactly: 100mg three times daily (adapted to 200mg + 100mg for Jim's 2-meal schedule).

WARNING: Must take WITH fat for absorption. Ubiquinone specifically (not ubiquinol) for cardiac mortality evidence.

Vitamin D3 + K2 - 5,000 IU D3 + 100mcg K2 (MK-7)

Timing: With breakfast (fat-soluble)

What: Vitamin D3 is a hormone-like vitamin essential for immune function, bone health, and mood. K2 (MK-7) directs calcium to bones and teeth rather than arteries.

Why: Vitamin D crashed to 33 after stopping 10,000 IU. Current level is 50 (at lower end of 50-80 target). K2 is CRITICAL given Jim's years of homocysteine at 39.1 which damaged blood vessel walls. ALSO: get 20-30 minutes of direct sunlight daily.

Dose: 5,000 IU maintains levels; may need 10,000 IU if levels drop again. K2 at 100mcg MK-7 for

arterial calcium prevention.

WARNING: Fat-soluble - requires dietary fat for absorption. Get 20-30 min sunlight daily.

Vegan Omega-3 (Algae DHA/EPA) - 2 capsules/day

Timing: 1 breakfast, 1 lunch (with fat)

What: DHA and EPA essential fatty acids derived from algae (bypasses the 5-10% ALA conversion bottleneck of plant-based diets).

Why: OmegaCheck was LOW at 3.9% (optimal >5.4%). DHA is the primary structural component of brain and nerve tissue. EPA reduces inflammatory cytokines. Omega-3s reduce ApoB and triglycerides.

Dose: 2 capsules provides approximately 500mg DHA + 250mg EPA. May need to INCREASE dose given low OmegaCheck.

WARNING: Take with fat for absorption. Consider doubling dose given low OmegaCheck.

Calcium Citrate - 900mg/day

Timing: 450mg breakfast, 450mg lunch

What: Calcium in citrate form (the most absorbable form that does not require stomach acid).

Why: TWO critical reasons: 1) Iron absorption blocker for HFE hemochromatosis. 2) Oxalate binder - Jim's OAT showed oxalic acid at 247 (nearly 4x normal).

Dose: 450mg per meal is the established dose for significant iron absorption reduction.

WARNING: MUST take with food for iron-blocking effect. Separate from magnesium.

Liposomal Vitamin C - 500mg MAX

Timing: Mid-morning ONLY (empty stomach)

What: Vitamin C encapsulated in liposomes for enhanced absorption.

Why: OAT test showed vitamin C at 1.6 (depleted). Essential for collagen synthesis, immune function, and antioxidant defense.

Dose: 500mg max per hemochromatosis guidelines.

WARNING: BETWEEN MEALS ONLY. Never with food. Increases iron absorption 300%.

Magnesium Glycinate - 400mg

Timing: Bedtime

What: Magnesium bound to glycine for high absorption with calming, sleep-promoting properties.

Why: Jim requires 400-800mg for cardiac palpitation control. MTHFR 677++ increases magnesium demand. Glycine promotes sleep.

Dose: 400mg is the established therapeutic dose for cardiac palpitation management and sleep support.

WARNING: Take at bedtime, separated from calcium.

Activated Charcoal - 560mg (2 capsules)

Timing: Bedtime (2+ hrs after food/supps)

What: Highly porous carbon that binds toxins in the gut for elimination.

Why: With HLA 4/3/53 multisusceptible genotype, Jim's body CANNOT clear biotoxins naturally. NON-NEGOTIABLE in the Shoemaker CIRS protocol.

Dose: 560mg provides adequate binding capacity for daily mycotoxin elimination.

WARNING: MUST be 2+ hours after ALL food, supplements, and medications.

Nattokinase - 10,800 FU/day

Timing: 7,200 FU breakfast, 3,600 FU lunch

What: A fibrinolytic enzyme from natto (fermented soybeans) that breaks down fibrin and inhibits platelet aggregation.

Why: Natural antiplatelet and anti-atherosclerotic activity. Supports posterior circulation to the inner ear.

Dose: 10,800 FU/day matches the Chen et al. study. INEFFECTIVE at 3,600 FU/day.

WARNING: STOP 2 weeks before any surgery. Do NOT combine with prescription blood thinners.

NAC (N-Acetyl Cysteine) - 1,200mg/day

Timing: 600mg mid-morning, 600mg mid-afternoon (empty stomach)

What: The direct precursor to glutathione, the body's master antioxidant.

Why: Jim's OAT test showed NAC was UNDETECTABLE and glutathione was near depletion. SOD2++ genetics impair antioxidant defense. NAC destroys bacterial biofilms.

Dose: 600mg twice daily for steady glutathione precursor levels.

WARNING: Better absorbed away from food.

Liposomal Glutathione - 500mg

Timing: Mid-afternoon (empty stomach)

What: Glutathione encapsulated in liposomes for direct absorption.

Why: Direct supplementation for SOD2++ genetics and near-depleted glutathione. Mobilizes stored mycotoxins.

Dose: 500mg provides adequate supplementation alongside NAC-driven production.

WARNING: MUST be followed by activated charcoal at bedtime.

DHEA - 10mg/day

Timing: 5mg breakfast, 5mg lunch

What: Dehydroepiandrosterone - a hormone produced by the adrenal glands.

Why: DHEA-S crashed from 121 to 40 (67% decline). His history proves responsiveness: rose to 239 on supplementation.

Dose: 10mg conservative starting dose. Titrate up if insufficient response after 8-12 weeks.

WARNING: Monitor DHEA-S and PSA every 6-8 weeks.

Pregnenolone - 20mg/day

Timing: 10mg breakfast, 10mg lunch

What: The "mother hormone" - precursor to ALL steroid hormones.

Why: Level is 41 (low; target >50). This is the upstream supply problem causing the entire hormonal cascade to fail.

Dose: 20mg moderate replacement dose.

WARNING: Split dosing for stable blood levels.

Lion's Mane Mushroom - 1,000mg

Timing: With breakfast

What: Edible medicinal mushroom containing hericenones and erinacines.

Why: Stimulates Nerve Growth Factor (NGF) - supports cochlear nerve repair for tinnitus recovery.

Dose: 1,000mg fruiting body extract provides therapeutic levels.

WARNING: FRUITING BODY extract only (not mycelium-on-grain).

Curcumin (Meriva Phytosome) - 1,000mg

Timing: With lunch (with fat)

What: Active compound in turmeric in enhanced Meriva phytosome form.

Why: One of the most studied NF-kB inhibitors. NF-kB drives the gut dysbiosis ? inflammation ? tinnitus cascade.

Dose: 1,000mg Meriva = 29x better absorption than standard curcumin.

WARNING: Meriva phytosome form required.

Quercetin - 500mg

Timing: With lunch

What: A plant flavonoid with mast cell-stabilizing and anti-inflammatory properties.

Why: More effective than cromolyn at blocking mast cell cytokine release. Inhibits NF-kB signaling.
Dose: 500mg matches clinical trial dosing.
WARNING: Phytosome form for better absorption.

Ginkgo Biloba - 240mg

Timing: With lunch
What: Standardized extract from Ginkgo biloba leaves.
Why: Improves microcirculation to the inner ear. Promotes myelination in Schwann cells.
Dose: 240mg specifically - superior to 120mg for tinnitus outcomes.
WARNING: Use standardized EGb 761 extract.

D-Ribose - 10g/day

Timing: 5g breakfast, 5g lunch (in water/smoothie)
What: A simple sugar that is the structural backbone of ATP.
Why: Rate-limiting factor for ATP synthesis in heart and skeletal muscle.
Dose: 10g/day matches therapeutic dose. 87.8-99.8% GI absorption.
WARNING: Can lower blood sugar in some people.

L-Carnitine (ALCAR) - 1,000mg

Timing: With lunch
What: Acetyl-L-carnitine shuttles fatty acids into mitochondria. Crosses the blood-brain barrier.
Why: Cardiac energy support. ALCAR form provides neuroprotective benefits.
Dose: 1,000mg standard therapeutic dose.
WARNING: None significant at this dose.

Melatonin - 3mg

Timing: Bedtime
What: Pineal gland hormone regulating sleep. Also a potent brain antioxidant.
Why: Correlation between low melatonin and tinnitus. Sleep is when myelin repair occurs.
Dose: 3mg moderate dose for sleep without grogginess.
WARNING: Take at bedtime only.

Gut Healing

Mastic Gum - 2,000mg/day

Timing: 1,000mg pre-breakfast, 1,000mg pre-lunch (empty stomach)
What: Resin from the mastic tree, used 2,500+ years for gut health.
Why: Anti-H. pylori activity. Combined with other antimicrobials achieves 92.2% eradication.
Dose: 1,000mg before each meal for maximum gastric contact.
WARNING: Empty stomach 30 min before food.

DGL (Deglycyrrhizinated Licorice) - 400mg

Timing: Pre-breakfast (empty stomach)
What: Licorice root extract with glycyrrhizin removed.
Why: Promotes protective mucus production in the stomach lining.
Dose: 400mg before breakfast provides a protective coating.
WARNING: Chew thoroughly for best effect.

S. boulardii - Per label

Timing: With lunch (away from antimicrobials)
What: Saccharomyces boulardii - a beneficial yeast that survives stomach acid.
Why: Specifically antagonizes Clostridia species (Jim's were 20x overgrown).
Dose: Standard probiotic dosing per manufacturer.

WARNING: Take away from antimicrobials.

Black Seed Oil (Nigella sativa) - 1 tsp twice daily

Timing: With meals
What: Cold-pressed oil from black cumin seeds. Active compound thymoquinone.
Why: Anti-H. pylori activity including against antibiotic-resistant strains.
Dose: 1 teaspoon twice daily provides therapeutic thymoquinone.
WARNING: May have a strong taste.

Zinc Carnosine (PepZin GI) - 75mg

Timing: With lunch
What: Patented complex of zinc and carnosine for sustained gastric release.
Why: Protects and actively heals gastric mucosa. Modest anti-H. pylori activity.
Dose: 75mg is the standard therapeutic dose.
WARNING: None significant at this dose.

Broccoli Sprouts - 70-100g daily

Timing: With meals
What: Young broccoli plants containing 20-100x more sulforaphane than mature broccoli.
Why: Potent anti-H. pylori compound that works against ANTIBIOTIC-RESISTANT strains. Boosts glutathione via Nrf2.
Dose: 70-100g provides therapeutic sulforaphane levels. Pennies per serving when home-grown.
WARNING: Home-grown is far superior to supplements.

Betaine HCl + Pepsin - 650mg (1 cap)

Timing: Start of breakfast + lunch
What: Synthetic stomach acid (betaine HCl) + pepsin (the digestive enzyme that activates with stomach acid). Replaces what aging stomach lining and chronic H. pylori suppress.
Why: PERSISTENT BURPING is a primary symptom of low stomach acid (hypochlorhydria). H. pylori suppresses HCl production. Without enough acid, food ferments instead of digesting -> gas builds and pushes upward as belching. This is a clean swap for apple cider vinegar in capsule form.
Dose: Start with 1 capsule (650mg) at the start of each big meal (breakfast + lunch). If no warming sensation in chest after 3 days, increase to 2 capsules. Stop the moment warmth is felt - that means therapeutic threshold reached.
WARNING: STOP if warming/burning sensation in chest. Do NOT take if on PPI/H2 blockers, NSAIDs, or if peptic ulcer is suspected. Always with food (never empty stomach).

Ginger Root Extract - 500mg

Timing: After lunch
What: Concentrated ginger root extract (gingerols, shogaols). Natural prokinetic - speeds gastric emptying.
Why: Faster gastric emptying = less time for food to ferment in the stomach = less gas pushing upward = less burping. Works regardless of root cause (H. pylori, SIBO, hypochlorhydria all benefit). Anti-nausea bonus. Vegan, capsule form.
Dose: 500mg post-lunch (his largest meal). Optionally add 500mg post-breakfast if symptoms persist after 2 weeks.
WARNING: May enhance blood-thinning effect of Nattokinase - monitor for bruising. Stop 2 weeks before any surgery.