



DNA Comprehensive Health Summary

Prepared for: XY



Preface: About This Report

Source: This document is a summary of the key points from the *Comprehensive DNA Health Report by Superhuman / Gene by Gene*. It has been generated automatically and subsequently checked by a member of Superhuman's medical team.

Important Context: Your genetics are only one piece of the puzzle—a starting point. While this report outlines your genetic *predispositions* (your blueprint), how these genes actually express themselves depends heavily on your lifestyle, environment, stress levels, and current health status (epigenetics).

Before Taking Action: Before interpreting these results and implementing specific interventions—especially supplementation—you should perform the relevant blood work or functional analysis. This is crucial to confirm your *current* biological status and adapt these recommendations to what your body actually needs right now, rather than relying on genetics alone.



SECTION 1: YOUR GENETIC STRENGTHS

These are the areas where your body is naturally efficient and resilient.



Nutrient Metabolism & Digestion

- **Omega-3 Super-Converter:** You are efficient at converting plant-based Omega-3s (walnuts, flax) into the usable forms (EPA/DHA) your body needs.
 - *Practical term:* You can get away with eating more seeds and nuts (like walnuts/flax) for your Omega-3s, whereas others *must* rely almost exclusively on fish oil.
- **Iron Stomach:** Your "non-secretor" genotype gives you natural resistance to stomach bugs like Norovirus, Rotavirus, and *H. Pylori*.
 - *Practical term:* You are the person least likely to get sick when a stomach bug sweeps through the office or household.
- **Vitamin Retention:** You are genetically wired to maintain healthy levels of **Vitamin B6** and absorb **Vitamin C** very well.
 - *Practical term:* You likely don't need high-dose B6 or Vitamin C supplements unless you are under extreme stress or sick; your body holds onto what you eat very well.
- **Fat Burner:** You burn saturated fats efficiently and are less likely to gain weight from them compared to the average person.
 - *Practical term:* A steak or butter in your diet is less likely to show up on your waistline than it would for others, provided you don't overdo the total calories.
- **Tolerances:** You are likely lactose tolerant, clear alcohol well, and handle histamines in food without issues.



- *Practical term:* You can likely enjoy dairy, a glass of wine, or aged cheeses without the immediate bloating, flushing, or headaches that sensitive people get.



DNA Damage, Protection & Repair

- **Cellular Repair:** You have enhanced DNA repair mechanisms for the colon, lungs, and pancreas.
 - *Practical term:* Your body is quicker at "fixing" the daily wear-and-tear damage to cells in these organs, offering you some natural long-term protection.
- **Processed Meat Resilience:** You have a reduced genetic risk for colon issues related to processed meat consumption.
 - *Practical term:* While still not "healthy," an occasional hot dog or deli meat sandwich is less risky for your long-term colon health than it is for most people.
- **Longevity Gene:** You have normal activity of the SIRT1 "longevity gene," supporting healthy aging.
 - *Practical term:* Your body's internal "aging clock" ticks at a normal, healthy rate, supporting a good lifespan if you maintain a healthy lifestyle.



Methylation

- **Folate & B12 Efficiency:** You have "wild-type" (normal/good) genes for the main folate cycle. You process folic acid and Vitamin B12 effectively.
 - *Practical term:* Your body's "detox and repair" cycle runs smoothly on standard amounts of B12 and folate; you don't generally need the expensive, specialized "methylated" vitamins many others do.



Hormone Support

- **Testosterone Support:** Your genetics naturally support improved testosterone levels.
 - *Practical term:* You may find it easier to build muscle and maintain energy/drive compared to men with lower genetic potential for testosterone.
- **Vitamin D:** You are likely to maintain Vitamin D levels within a normal range.
 - *Practical term:* You probably don't need massive doses of Vitamin D to keep your levels up, provided you get some regular sun exposure.



Mental Health & Cognitive Performance

- **The "Strategist" Mind:** You carry the COMT AA genotype (often called the "Warrior/Strategist"). This gives you higher fluid intelligence, better focus, and increased creativity.
 - *Practical term:* You likely thrive in complex tasks requiring deep focus and strategy, "locking in" to problems better than most.
- **Memory:** You have variations linked to strong episodic memory (recalling events).
 - *Practical term:* You are likely the one in your friend group who remembers the specific details of a vacation or event from years ago.
- **Brain Protection:** You have the ApoE 3/3 genotype, which lowers the risk of Alzheimer's compared to the riskier ApoE4 type.
 - *Practical term:* Your genetic baseline for brain aging is stable; you don't have the high-risk "Alzheimer's gene" that requires strict preventative keto diets.



Immune Support & Inflammation

- **Antioxidant Defense:** Your genes support good selenium status (vital for thyroid and skin) and protect against heavy metals.
 - *Practical term:* Your body naturally defends itself better against environmental pollutants and keeps your thyroid and skin healthier with less effort.
- **Smoke Defense:** You have reduced sensitivity to eye damage from smoke.
 - *Practical term:* Your eyes are less likely to get irritated or damaged if you are around campfires or smoky environments.

Detoxification

- **Specific Toxin Clearance:** Your liver is efficient at detoxifying specific compounds found in cigarette smoke and benzene.
 - *Practical term:* Your liver is a bit of a "workhorse" for certain common pollutants, clearing them out faster than average.
- **Statin Safety:** You have a lower genetic risk of muscle pain if you ever need to take statin drugs.
 - *Practical term:* If a doctor ever prescribes cholesterol meds, you are less likely to suffer the common side effect of muscle aches.

Cardiovascular Health & Exercise

- **Power Athlete:** You have the ACTN3 "Power" genotype. Your muscles are built for explosive speed, sprinting, and weight lifting.
 - *Practical term:* You will see faster results and feel better doing "burst" workouts (sprints, heavy lifting) rather than long, slow jogs.
- **Heart Resilience:** You have genetically lower triglyceride levels and a reduced risk of tendon injuries.
 - *Practical term:* You are naturally less prone to high blood fats and less likely to snap a tendon during sports.

SECTION 2: YOUR GENETIC WEAKNESSES

These are vulnerabilities where your body needs extra support through diet and lifestyle.

Nutrient Metabolism & Digestion

- **No "Carrot-to-Vitamin A":** Your body cannot convert beta-carotene (plants) into Vitamin A efficiently.
 - *Practical term:* Eating carrots and sweet potatoes won't help your eyes or skin much; you need eggs, liver, or fish oil to get the Vitamin A you actually use.
- **Gut Bacteria:** You naturally have lower levels of beneficial *bifidobacteria*, making you prone to throat infections and Candida.
 - *Practical term:* You might be that person who gets a scratchy throat or thrush easily; taking a probiotic daily is more important for you than for others.



- **Fat & Sugar Spike:** While you burn fat well, eating *too much* saturated fat causes your blood sugar to spike.
 - *Practical term:* If you eat a very fatty meal (like a ribeye with butter), your blood sugar might stay high for hours, making you feel tired or "crashed" later.
- **Stress Gut:** Stress goes "straight to your stomach," likely triggering IBS or digestive upsets.
 - *Practical term:* When you are anxious or under deadline, you likely get stomach cramps, bloating, or run to the bathroom; calming your mind is the key to fixing your stomach.

DNA Damage, Protection & Repair

- **Prostate Vulnerability:** Your cells need extra protection.
 - *Practical term:* You need to be proactive about prostate health earlier than most; eating parsley and celery isn't just a garnish for you, it's medicine.
- **Thyroid & Skin Defense:** You need extra Selenium, Zinc, and Vitamin C to protect these tissues from chemical toxicity.
 - *Practical term:* Your skin might look "tired" or dull faster if you don't get enough of these nutrients, especially if you live in a polluted city.

Methylation

- **MTHFR Block:** You have the MTHFR 1298 variant, reducing methylation efficiency by ~40%.
 - *Practical term:* Your body's chemical "assembly line" runs a bit slow; if you don't eat enough leafy greens (folate), you might feel sluggish or "foggy" more easily.
- **Choline Hog:** Your liver uses up Choline very quickly.
 - *Practical term:* If you don't eat eggs or liver regularly, your liver can get "fatty" or sluggish even if you aren't drinking alcohol.
- **Arsenic Detox:** You are poor at clearing arsenic (common in rice/water).
 - *Practical term:* You shouldn't eat rice every day, and you definitely need to filter your tap water, as your body hoards this toxin instead of flushing it.

Hormone Support

- **Estrogen Buildup:** You clear the final stage of estrogen slowly.
 - *Practical term:* You might experience "estrogen dominance" symptoms like mood swings or water retention if you don't eat enough fiber to "sweep" hormones out of your gut.
- **Late Night Eating:** Your melatonin gene interferes with insulin.
 - *Practical term:* A midnight snack is a disaster for your metabolism; eating the same food at 8 PM vs 8 AM will make you gain more fat at night.

Mental Health & Cognitive Performance

- **Stress Linger:** Because you are a "Strategist" (COMT AA), you clear stress hormones slowly. Stress/anxiety "sticks" to you longer than others.
 - *Practical term:* Once you get stressed or angry, it takes you a long time to "cool down" and relax; you can't just "shake it off" instantly.
- **Low "Bliss":** You break down anandamide (the bliss molecule) too fast, which can increase anxiety.



- *Practical term:* You might naturally lean towards anxiety or feeling "on edge" unless you do something (like heavy exercise) to force your brain to release endorphins.
- **Head Injuries:** You have a gene linked to slower recovery from concussions.
 - *Practical term:* If you play contact sports, be extra careful; a bump on the head that takes a friend 3 days to recover from might take you 3 weeks.



Immune Support & Inflammation

- **Mitochondrial Sensitivity:** Your cells' power plants are sensitive to toxins.
 - *Practical term:* You likely feel "wiped out" by pollution, bad food, or chemicals faster than your friends; your energy production is easily disrupted.
- **Smoke Sensitivity:** You lack the GSTM1 gene (a "null" result), meaning you cannot clean up smoke toxins well.
 - *Practical term:* Secondhand smoke is incredibly toxic to you; never stand near the smoker at a party, as your body has zero tools to clear that poison.



Detoxification

- **Charred Meat Risk:** You create carcinogens when eating fried/charred meat.
 - *Practical term:* Avoid the black "char" on BBQ meat; for you, that tasty burnt crust is essentially delivering a dose of carcinogens directly to your cells.
- **Slow Fume Clearing:** You are a "slow acetylator" (NAT2), meaning car exhaust and cigarette smoke linger in your system much longer.
 - *Practical term:* City smog or traffic fumes stay in your blood longer, doing more damage; try to exercise in clean air/parks, not next to busy roads.



Cardiovascular Health & Exercise

- **Cold Intolerance:** Your "Power" muscle type does not handle cold weather well.
 - *Practical term:* You are not built for "Polar Plunges" or winter running without layers; your muscles will seize up and perform poorly in the cold.
- **Clotting Risk:** You have the Factor V Leiden variant, slightly increasing blood clot risk.
 - *Practical term:* On long flights (6+ hours), you *must* get up and walk around or wear compression socks to prevent a DVT (blood clot).



SECTION 3: YOUR GENETIC GROCERY LIST

Prioritize these foods to target your specific genetic needs.



Vitamins & Minerals

- **Vitamin A (Crucial):** Liver, pastured eggs, cod liver oil, eel, sockeye salmon.
- **Magnesium:** Sprouted pumpkin seeds, hemp seeds, chia seeds, spinach, mineral water.
- **Zinc & Selenium:** Oysters, Brazil nuts (for selenium), red meat, shellfish.
- **Copper:** Cashews, dark chocolate, shiitake mushrooms, sunflower seeds.
- **Manganese:** Mussels, hazelnuts, pecans, wild blueberries, clams.



- **Boron:** Prunes, avocados, raisins, peaches.



Plant Compounds & Fiber

- **Cruciferous (Detox):** Brussels sprouts, mustard greens, kale, watercress, red cabbage, broccoli, Bok Choy. *(Helps your missing GSTM1 gene).*
- **Apigenin (Prostate):** Celery, parsley, chamomile tea.
- **Eye Health (Lutein):** Cooked spinach/kale, goji berries, asparagus, eggs.
- **Prebiotics (Gut):** Leeks, garlic, onions, asparagus, bananas, artichokes.
- **Probiotics:** Kombucha, sauerkraut, kefir, yogurt.



Proteins & Special Nutrients

- **Choline (Liver Support):** Egg yolks (runny is best), liver.
- **Glycine (Tissue Repair):** Bone broth, collagen powder, meat on the bone (ribs, drumsticks).
- **Betaine:** Spinach, shrimp, beets.



SECTION 4: PERSONALIZED BLOOD WORK

Ask your doctor to check these specific markers to ensure your genes aren't pulling you out of balance.

1.  **Blood Sugar Panel:** Check **Fasting Glucose** and **HbA1c**. *(Reason: Your genetic sensitivity to saturated fat spikes glucose).*
2.  **Vitamin B6:** Check plasma levels. *(Reason: To confirm your retention is functioning as expected).*
3.  **Arsenic:** If you consume rice or well water, consider testing arsenic levels. *(Reason: You are genetically poor at detoxing this).*
4.  **Homocysteine:** Monitor this to ensure your MTHFR and Choline pathways are working well.
5.  **Vitamin D:** Confirm levels are optimized.



SECTION 5: ACTION SUMMARY

3 key action points for your main lifestyle pillars.



Diet

1. **Animal Vitamin A & Choline:** Stop relying on plants for Vitamin A. Include eggs (yolks) and liver/cod liver oil weekly to bypass your conversion block and protect your liver.
2. **Marinate & Avoid Char:** Never eat "naked" charred meat. Always marinate meat before grilling and cut off burnt parts to avoid the carcinogens your body cannot detoxify.
3. **Early Dinner:** Strictly avoid late-night eating. Your melatonin gene clashes with insulin, so push your dinner earlier to avoid fat gain and blood sugar spikes.



Exercise

1. **Lift Heavy & Sprint:** Your genes are built for **power**, not marathons. Focus on weightlifting, HIIT, and sprinting to get the best hormonal and structural response.
2. **Active Recovery for Stress:** Because stress "lingers" in your system (COMT gene), use exercise as medicine. When stressed, do a workout to physically "burn off" the adrenaline.
3. **Protect Your Head:** Be hyper-aware of concussion risks in contact sports. Wear a helmet and avoid unnecessary risks, as your brain takes much longer to heal from impact.

Sleep

1. **Cool Down Time:** Since your "Strategist" brain stays active, you need a longer "wind-down" routine (no screens, dim lights) 60 mins before bed to lower adrenaline.
2. **Magnesium Before Bed:** Take Magnesium Glycinate or Bisglycinate at night. This supports your COMT gene in clearing stress hormones and helps you relax for sleep.
3. **Strict Dark/Light Cycles:** Your circadian rhythm is sensitive. Get bright morning light immediately upon waking and block blue light at night to help your melatonin production.

Lifestyle

1. **Filter Your Water:** Install a high-quality water filter (like Reverse Osmosis) to remove Arsenic and Lead. Your body is genetically poor at detoxing these specific heavy metals.
2. **Avoid Smoke & Smog:** You have zero genetic defense (Null GSTM1) against smoke toxins. Strictly avoid secondhand smoke and try not to live/exercise right next to busy highways.
3. **Gut Support:** Take a daily probiotic or eat fermented foods (kefir/sauerkraut). Your natural "non-secretor" status leaves your gut defense weak, so you must manually boost your good bacteria.

SECTION 6: TARGETED SUPPLEMENTATION STRATEGY

MEDICAL DISCLAIMER

Consult a Physician Before Starting: The recommendations below are based on your genetic predispositions (genotype) but do not account for your current health status (phenotype), existing medications, or liver/kidney function. **Supplements are Powerful:** High doses of "natural" vitamins can be toxic or interact with drugs. Always consult your doctor or a functional medicine practitioner before adding these to your regimen.

1. ESSENTIAL NUTRIENT GAPS

These correct specific genetic "bottlenecks" where your body cannot convert or absorb nutrients efficiently.



A. Pre-Formed Vitamin A (Retinol)

- **The Science:** You have the **BCMO1** variant, meaning your enzyme that converts Beta-Carotene (plants) to Vitamin A is roughly 69% less effective. You cannot rely on carrots or greens for Vitamin A. You need the animal form (Retinol).
- **Why You Need It:** Vitamin A is critical for your immune system (barrier integrity), testosterone synthesis, and night vision.
- **Recommended Form:** **Cod Liver Oil** (Best natural source) or **Retinyl Palmitate**. Avoid "Beta-Carotene" supplements.
- **Dosing & Frequency:**
 - **Cod Liver Oil:** 1 Teaspoon daily (providing ~3,000–5,000 IU of Vitamin A).
 - **Capsules:** 2,500 – 5,000 IU daily with a fatty meal.
-  **Mandatory Prerequisite Testing:**
 - **Test: Serum Retinol (Vitamin A).**
 - **Why:** Vitamin A is fat-soluble and can accumulate to toxic levels. Confirm you are actually low before supplementing long-term.

B. Bioavailable Methylation Complex

- **The Science:** You have the **MTHFR 1298** variant and potentially high Choline needs (PEMT). This reduces your methylation efficiency, which is vital for DNA repair, neurotransmitter production, and detox.
- **Why You Need It:** To keep homocysteine low (heart health) and support stable energy/mood.
- **Recommended Form:** **L-5-Methyltetrahydrofolate (5-MTHF)** and **P-5-P (Pyridoxal-5-Phosphate)**. *Strictly avoid "Folic Acid" and cheap B6 (Pyridoxine HCl).*
- **Dosing & Frequency:**
 - **Methylfolate:** 400 mcg daily.
 - **Vitamin B6 (P-5-P):** 15–25 mg daily.
 - **Vitamin B12 (Methylcobalamin):** 500 mcg daily.
 - *(Often found together in a "Homocysteine Support" or "Methyl-Complex" formula).*
-  **Mandatory Prerequisite Testing:**
 - **Test: Homocysteine and Serum B12/Folate.**
 - **Why:** If your Homocysteine is already optimal (<7-8 µmol/L), you do **not** need to supplement; diet is likely sufficient.

C. Phosphatidylcholine

- **The Science:** Your **PEMT** gene makes it hard for your liver to create Choline, which is needed to export fat out of the liver and build cell membranes.
- **Why You Need It:** To prevent "Non-Alcoholic Fatty Liver," support gallbladder function, and improve cognitive focus (acetylcholine).
- **Recommended Form:** **Phosphatidylcholine** or **Krill Oil** (which contains choline in phospholipid form).
- **Dosing & Frequency:**
 - 500–800 mg daily with food.
-  **Mandatory Prerequisite Testing:**
 - **Test: Liver Enzymes (ALT/AST) and Lipid Panel.**
 - **Why:** Elevated liver enzymes or high triglycerides often signal that this pathway is struggling.



2. STRESS & NEUROTRANSMITTER SUPPORT

These support your "Warrior/Strategist" brain type (COMT) which is prone to lingering stress.

D. Magnesium Bisglycinate

- **The Science:** Your **COMT** gene is slow, meaning catecholamines (adrenaline/dopamine) hang around longer. Magnesium is the essential co-factor required for the COMT enzyme to function and clear these stress hormones.
- **Why You Need It:** To improve sleep quality, reduce anxiety, and help your brain "turn off" at night.
- **Recommended Form:** **Magnesium Bisglycinate** or **Threonate** (crosses blood-brain barrier). *Avoid Magnesium Oxide (poor absorption).*
- **Dosing & Frequency:**
 - 200–400 mg taken 1 hour before bed.
-  **Mandatory Prerequisite Testing:**
 - **Test: RBC Magnesium** (Red Blood Cell Mag).
 - **Why:** Serum magnesium is often normal even when cellular stores are depleted. RBC Mag is the accurate marker.

3. GUT & DETOXIFICATION DEFENSE

These target your specific "Non-Secretor" immune weakness and GSTM1 detox block.

E. Targeted Probiotics (*Bifidobacteria*)

- **The Science:** As a **FUT2 Non-Secretor**, you do not secrete the sugars into your gut mucus that feed beneficial bacteria. You likely have naturally low levels of *Bifidobacteria*.
- **Why You Need It:** To prevent dysbiosis, Candida overgrowth, and frequent throat/gut infections.
- **Recommended Form:** A probiotic strain specifically high in **Bifidobacterium** species (e.g., *B. longum*, *B. bifidum*).
- **Dosing & Frequency:**
 - 10–20 Billion CFU daily. Cycle on/off (e.g., 3 months on, 1 month off) to prevent dependency.
-  **Mandatory Prerequisite Testing:**
 - **Test: GI-MAP / Comprehensive Stool Analysis.**
 - **Why:** Blindly taking probiotics can sometimes cause SIBO. Ideally, confirm low *Bifidobacteria* levels first.

F. Sulforaphane (*Broccoli Sprout Extract*)

- **The Science:** You have the **GSTM1 Null** genotype, meaning you completely lack the primary gene for clearing environmental toxins (smoke, exhaust, charred meat carcinogens).
- **Why You Need It:** Sulforaphane is the most potent natural activator of the Nrf2 pathway, which manually turns on your backup detox systems to compensate for the missing gene.
- **Recommended Form:** **Sulforaphane Glucosinolate** (from broccoli seeds/sprouts) or **Avmacol**.
- **Dosing & Frequency:**
 - Standardized to yield 10–20 mg of Sulforaphane daily.
-  **Mandatory Prerequisite Testing:**



- **Test:** None specifically required, but monitoring **GGT** (liver enzyme) can show if your detox burden is high.

4. CELLULAR PROTECTION

Targeting your Arsenic/Thyroid weakness.

G. Selenium

- **The Science:** You have reduced efficiency in clearing **Arsenic** and protecting the **Thyroid**. Selenium is the "antidote" that binds to arsenic to help excrete it and protects the thyroid from oxidative damage.
- **Why You Need It:** To protect your thyroid and lower the risk of heavy metal toxicity.
- **Recommended Form:** **Selenomethionine** or simply eating 2–3 Brazil Nuts daily.
- **Dosing & Frequency:**
 - 100–200 mcg daily. *Do not exceed 200 mcg long-term.*
-  **Mandatory Prerequisite Testing:**
 - **Test:** **RBC Selenium** or **Hair Mineral Analysis**.
 - **Why:** Selenium has a narrow therapeutic window; toxicity (selenosis) is real. Confirm levels are not already high before supplementing.