REPORT ID

AG-2026-1234567890

COMBINED EDITION

AURAGEN

UNDERSTAND · ALIGN · THRIVE

Your genetic wellness blueprint.

PROFILE	REPORT DATE	TRAITS ANALYSED	DATA SOURCES	GENETIC MARKERS
Warrior	May 2026	55+	23andMe / Ancestry	380+

BEFORE YOU BEGIN

A note on your results

Report purpose & limitations

This report reflects genetic **tendencies** based on your DNA — not certainties. Genetics is one part of a much larger picture that includes lifestyle, environment, and personal health history. These insights are designed to inform and empower, never to alarm.

Recommendations assume you are in general good health, free from recurring illness, and not on medications affecting exercise or diet. If these assumptions do not apply, please consult your physician before acting on any recommendation.

AuraGen does not provide medical advice or diagnostics. This report is for general wellness purposes only. For clinical concerns, always consult a qualified medical professional.

About this Combined Edition

This report integrates findings from your **AuraGen** genetic analysis (April 2026) and your **PathwayFit® / NutriPATH Pathology** report (Nov 2015, Pathway Genomics). Where both sources analysed the same trait, results are consolidated. Additional PathwayFit-only traits — eating behaviours, metabolic health, body & weight factors — are included as supplementary sections.

All RSids, gene names, and scientific descriptions are preserved in full.

Source key: AURAGEN PATHWAYFIT BOTH

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SECTION 01

Results at a glance

A visual overview of all wellness dimensions analysed in this combined report — your personal genetic blueprint.

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FITNESS

Key Findings

- Excellent aerobic capacity (VO2 max)
- Increased flexibility — yoga is ideal
- High protein weight-loss response
- Favorable insulin sensitivity with exercise
- Enhanced endurance training benefit
- Enhanced muscle power (ACTN3)
- Slower exercise recovery — rest matters
- Moderate tendency to gain weight
- Slow caffeine metabolizer — limit 1–2 cups/day
- Strength training less beneficial (INSIG2)
- Higher injury likelihood — warm up always

- Gluten sensitivity markers present (HLA-DQ2/DQ8)
- Lactose intolerance likely (MCM6)
- Above-average genetic risk: LDL, HDL & triglycerides

Micronutrient Absorption Profile

Vitamin A	Need More
Vitamin B12	Need More
Vitamin D	Need More
Vitamin K	Need More
Calcium	Significantly Low
Magnesium	Need More
Vitamin B6 & B9	Optimize Intake
Iron & Zinc	Need More
Vitamin B2 (Riboflavin)	Stay Balanced
Vitamin C	Stay Balanced
Vitamin E	Normal
Antioxidants	Need More

SECTION 02

Your diet & exercise plan

Based on your combined genetic profile, the following macronutrient balance and training structure supports your metabolism, energy levels, and weight management tendencies.

BOTH

Recommended Diet: Low-Carbohydrate

45%
CARBOHYDRATES

35%
PROTEIN

20%
FATS

Why Low-Carb? Your genetics suggest a moderate carbohydrate sensitivity and a strong response to high-protein diets. Protein-rich meals keep you fuller longer and support lean mass retention. Complex carbs are your friend; simple sugars and refined grains less so. Your FTO variant (rs9939609) confirms meaningful weight management benefits from protein-rich eating. Your genotypes at ADIPOQ (rs17300539), APOA2 (rs5082), FTO (rs9939609), KCTD10 (rs10850219), LIPC (rs1800588), MMAB (rs2241201), and PPARG (rs1801282) all support a low-carbohydrate dietary approach.

Fat quality matters. For polyunsaturated fats your genotype (PPARG rs1801282 C/C) shows increased benefit — eat more polyunsaturated fats (fish, flaxseed, walnuts, nuts) relative to saturated fats. Response to monounsaturated fats is neutral for body weight, though substituting some saturated fat with olive oil and avocado remains generally beneficial. Omega-6/Omega-3 levels are typical (FADS1 rs174547 T/T — typical blood levels).

Low-Carb Key Foods: Leafy greens, bright vegetables, eggs, fish, legumes, Greek yogurt, nuts, olive oil, avocado. Limit: refined grains, starchy vegetables, added sugars, fruit juice. Avoid: trans and hydrogenated fats.

ADIPOQ rs17300539 APOA2 rs5082 FTO rs9939609 KCTD10 rs10850219 LIPC rs1800588 MMAB rs2241201 PPARG rs1801282 FADS1 rs174547

Exercise Plan

TRAINING TYPE	FREQUENCY	DURATION	INTENSITY	APPROACH
Cardiovascular	3–4× / week	20–40 min	Medium Borg 5/10	Brisk walking, jogging, cycling, swimming — endurance focus (LIPC, LPL, PPARD variants support enhanced endurance benefit)
Strength	2–3× / week	45–60 min	70–80% 1RM 8–12 reps × 2–3 sets	Interval training — explosive alternated with moderate strength. Note: INSIG2 rs7566605 (C/G) suggests strength training may be less beneficial for fat loss; moderate resistance training still recommended for overall health
Flexibility	2–3× / week	2–3 min	Full range of motion	Static & active stretches during warm-down. Collagen gene variants (ACTN3 rs1815739, COL5A1 rs12722) support enhanced flexibility — yoga is a natural fit
Warm-up	Every session	10–15 min	Low	Mandatory — higher injury likelihood (COL5A1 rs12722, MCT1 rs1049434, MMP3 rs3025058). Omega-3 foods support tendon repair

SECTION 03

Nutrition results

How your genes influence the way you process, store, and respond to different foods. 12 traits analysed · 8 favourable · 4 areas to support. BOTH

Tendency to Gain Weight

Moderate

Genes regulating metabolic rate, energy expenditure, and caloric storage.

Low — High

You have a moderate genetic tendency to store calories. Consistent movement paired with balanced energy intake is your most effective long-term strategy. FTO variants are confirmed across both reports. You can lower your chances by leading a physically active lifestyle.

NEGR1 rs2815752 FTO rs9939609 MC4R rs17782313 BDNF rs6265 LEP rs7799039 ADIPOQ rs1501299; rs266729 ADRB1 rs1801253 ADRB2 rs1042713; rs1042714 ETV5 rs7647305 GNPDA2 rs10938397 MAF rs1424233 MTCH2 rs10838738 NPC1 rs1805081 PCSK1 rs6234; rs6235 SEC16B rs10913469 SH2B1 rs7498665 TMEM18 rs6548238 UCP2 rs659366 UCP3 rs1800849

Tendency to Overeat

Moderate

Genetic influence on hunger hormones — leptin, ghrelin, neuropeptides.

Low — High

Mindful eating and high-fibre, high-protein snacks help. Your genes respond well to fullness signals when given time to register. Eat slowly to allow satiety signals to reach the brain.

MC4R rs17782313 DRD2 rs1800497 FTO rs9939609 CLOCK rs1801260 TAS2R38 rs713598; rs1726866; rs10246939

Tendency to Prefer Sweet Foods

Low

Variation in sweet taste receptor sensitivity on the tongue.

Low — High

You're less likely to over-consume sugary foods. Still watch environmental triggers which can override genetic predispositions. PathwayFit confirms typical sweet tooth (SLC2A2/GLUT2 rs5400 C/C).

TAS1R2 rs35874116 TAS1R3 rs307355; rs35744813 GLUT2 / SLC2A2 rs5400 TAS2R38 rs713598; rs1726866; rs10246939

Protein Intake & Weight Loss

High Response

Genetic tendency to lose weight more effectively on a high-protein diet.

Low — High

Your FTO variant suggests meaningful weight management benefits from protein-rich eating. Think eggs, fish, legumes,

Greek yogurt. Confirmed across both AuraGen and PathwayFit datasets.

FTO rs9939609

Tendency to Prefer Fatty Foods

Assessed

Fat taste receptor sensitivity — CD36 gene variants.

CD36 variants influence fat taste perception. Choose healthy unsaturated fats (olive oil, avocado, nuts, fish) and avoid trans and saturated fats where possible.

CD36 rs1761667 CD36 rs3211938

Tendency to Prefer Bitter Foods

Taster

TAS2R38 variations linked to bitter taste sensitivity.

You carry variants associated with enhanced bitter taste sensitivity. You may find vegetables like broccoli, Brussels sprouts, cabbage, and kale taste more bitter. Try recipes that mask bitter flavours without adding excess calories. Tasters may also have an increased preference for salty foods — watch salt intake.

TAS2R38 rs713598 C/C TAS2R38 rs1726866 C/C TAS2R38 rs10246939

Tendency to Regain Weight

More Likely

ADIPOQ, PPARG, TFAP2B variants associated with weight regain after loss.

You may have difficulty keeping weight off after losing weight. After weight loss, maintain a healthy diet, exercise, and nutrition plan. Long-term consistency is key. PathwayFit confirms via ADIPOQ rs17300539 G/G.

BDNF rs6265 PPARG rs1801282 TFAP2B rs987237 ADIPOQ rs17300539 G/G

SECTION 04 · PATHWAYFIT

Eating behaviour traits

Genetic influences on hunger, satiety, snacking, and food desire. PATHWAYFIT

Snacking

Typical

Leptin receptor (LEPR) variants associated with snacking behaviour.

Your genotype is not associated with extreme snacking behaviour. Choose healthy, balanced snacks when needed.

LEPR rs2025804 A/G ★★★☆

Hunger

Increased

NMB gene variation associated with increased hunger susceptibility.

People with your genotype (T/T) are more likely to exhibit high levels of susceptibility to hunger. Keep healthy snacks available throughout the day, and eat slowly to allow satiety signals to register.

NMB rs1051168 T/T ★☆☆☆

Satiety — Feeling Full

Typical

FTO gene variant rs9939609 associated with satiety signals.

People with your genotype (A/T) tend to feel full after a meal. Maintain high-fibre, balanced meals to support this.

FTO rs9939609 A/T ★★★☆

Eating Disinhibition

Less Likely

TAS2R38 variation associated with tendency to eat more in response to triggers (emotional stress, social cues).

Your genotype (C/C) is not associated with increased susceptibility for eating disinhibition — a favourable result.

TAS2R38 rs1726866 C/C ★★★☆

Food Desire / Reinforcement

Typical

ANKK1/DRD2 dopamine receptor variant linked to food reinforcement value.

Your genotype (C/C) is not associated with an increased desire or willingness to put forth extra effort to obtain food — typical food reinforcement levels.

ANKK1 / DRD2 rs1800497 C/C ★★★☆

SECTION 05

Food reactions & intolerances

Genetic markers associated with how your body responds to specific foods and substances.

BOTH

Gluten Sensitivity

Elevated Risk

HLA haplotype markers associated with gluten tolerance variation (celiac disease risk alleles).

You carry HLA markers linked to increased gluten sensitivity risk. This does not confirm celiac disease — please consult your physician before eliminating gluten from your diet. Testing for anti-tTG antibodies is recommended.

HLA-DQ2.2(M1) haplotype HLA-DQ2.2(M2) haplotype HLA-DQ2.2(M3) haplotype HLA-DQ2.5 haplotype HLA-DQ8 haplotype

Lactose Intolerance

Likely Intolerant

MCM6 gene variant regulating lactase production in adulthood.

Your MCM6 variant suggests lactose intolerance. Try lactose-free alternatives, fermented dairy (yogurt, kefir, hard cheeses), and non-dairy calcium sources (almonds, sesame, broccoli, fortified foods). PathwayFit notes MCM6 rs4988235 T/C — less likely to be fully intolerant, but monitoring recommended.

MCM6 rs4988235 T/C ★★★☆

Caffeine Metabolism

Slow Metabolizer

CYP1A2 liver enzyme variant determining caffeine clearance rate. PathwayFit reports Fast Metabolizer (CYP1A2 rs762551 A/A). AuraGen reports Slow Metabolizer.

Conflicting result — note: AuraGen (rs762551) and PathwayFit may be evaluating different variants or haplotypes in the CYP1A2 gene. The AuraGen guidance of limiting to 1–2 cups/day is the more cautious recommendation. Higher caffeine intake may elevate cardiovascular risk. Green tea is a good alternative. Discuss with your physician.

CYP1A2 rs762551 AHR rs4410790 ABCG2 rs2231142 BDNF rs6265 CYP1A1 rs4646903 EFCAB5 rs2470893 GCKR rs780094 MLXIPL rs3812316

Alcohol Flush

Less Likely

ALDH2 gene encoding aldehyde dehydrogenase 2 enzyme critical for alcohol metabolism.

People with your genotype (ALDH2 rs671 G/G) are less likely to experience alcohol flush reaction.

ALDH2 rs671 G/G ★★★★

Sweet Taste Sensitivity

Typical

TAS1R3 sweet taste receptor gene.

You are likely to have typical sensitivity to the sweet taste of sugar (TAS1R3 rs35744813 G/G).

TAS1R3 rs35744813 G/G ★★★☆

Riboflavin & Blood Pressure Response

Assessed

MTHFR C677T variant influencing riboflavin-homocysteine relationship.

Your MTHFR genotype (rs1801133 C/T) means riboflavin levels have a relatively small impact on homocysteine — Stay Balanced. However, your C/T genotype does indicate you should Optimize Intake of folate and B12 (see Vitamins section).

MTHFR rs1801133 C/T MTHFR rs1801131

Salt Intake & Blood Pressure Sensitivity

Assessed

ACE, AGT, CYP11B2, NPPA variants linked to blood pressure and salt sensitivity.

These variants may influence blood pressure response to salt intake. Monitor sodium consumption and keep it within recommended limits.

ACE rs4340 (I/D proxy) AGT rs699 CYP11B2 rs1799998 NPPA rs5063

SECTION 06

Vitamins & minerals

Your genetic variants influence how efficiently your body absorbs and metabolises key micronutrients. 16 traits · 74 markers. BOTH

Vitamin A

Optimize Intake

Moderately low conversion of carotenoids (beta-carotene) to retinol. BCMO1 variants impair beta-carotene-to-retinol conversion efficiency.

Include carrots, sweet potato, leafy greens daily. Also consider preformed vitamin A from fortified milk, breakfast cereals, or multivitamins containing retinyl palmitate or retinyl acetate. Both AuraGen and PathwayFit confirm this finding (BCMO1 rs12934922 A/T and rs7501331 T/T).

BCMO1 rs12934922 A/T BCMO1 rs7501331 T/T CYP26B1 rs2241057 PKD1L2 rs12934922; rs7501331 ★★★☆

Vitamin B6

Optimize Intake

NBPF3 / ALPL variant associated with faster clearance of B6 from bloodstream. Recommended daily intake: 1.3–1.7 mg.

People with your genotype (NBPF3 rs4654748 C/C) are more likely to have lower blood levels of vitamin B6. Eat whole grains, fish, nuts, meat, dark green leafy vegetables, legumes, poultry, and eggs. Confirmed by both reports.

NBPF3 rs4654748 C/C ALPL1 rs4654748 ★★★★

Vitamin B9 — Folate / Folic Acid

Optimize Intake

MTHFR C677T variant associated with lowered folate and elevated homocysteine. Recommended daily intake: 400 µg (600 µg if pregnant).

Your MTHFR genotype (rs1801133 C/T) means you are more likely to have lower blood levels of folate and higher homocysteine. Eat green leafy vegetables (chard, kale), beans, lentils, fruits, and fortified grains. Elevated homocysteine is a cardiovascular risk factor.

MTHFR rs1801133 C/T MTHFR rs1801131 MYT1L rs3783648 ★★★☆

Vitamin B12

Optimize Intake

FUT2, TCN1, RASIP1 variants linked to B12 absorption in the gut. Recommended daily intake: 2.4 µg.

People with your genotype (FUT2 rs601338; rs602662 G/G) are more likely to have lower blood levels of vitamin B12 due to reduced gut absorption. Prioritize fish, seafood, meat, poultry, eggs, milk products. Consider periodic serum B12 testing, especially if vegetarian or vegan.

RASIP1	rs526934	TCN1	rs526934	FUT2	rs601338; rs602662 G/G	CUBN	rs1801222

★★★★

Vitamin B2 (Riboflavin)

Stay Balanced

MTHFR variant influences riboflavin-homocysteine interaction.

In people with your genotype (MTHFR C/T), riboflavin levels have a relatively small impact on homocysteine levels. Maintain a healthy diet with milk, cheese, green leafy vegetables, legumes, and lean meats.

MTHFR	rs1801133 C/T

★★★☆

Vitamin C

Stay Balanced

SLC23A1 transport protein gene variant associated with circulating vitamin C levels.

Your genotype (SLC23A1 rs33972313 G/G) is not associated with lower blood levels of vitamin C. Maintain a healthy diet rich in citrus, red peppers, strawberries, and watermelon.

SLC23A1	rs33972313 G/G	SLC23A1	rs4257763

★★★★

Vitamin D

Need More

VDR, CYP2R1, GC gene variants affecting vitamin D synthesis and transport. Recommended daily intake: 600 IU.

AuraGen: Inefficient synthesis — prioritise sun, fatty fish, and fortified foods; consider serum testing. PathwayFit: GC rs2282679 T/T = Stay Balanced (vitamin D transport not impaired). Overall recommendation: monitor vitamin D levels, as sunlight exposure and diet are also key determinants.

VDR	rs2228570; rs1544410; rs731236	CYP2R1	rs10741657	GC	rs7041; rs4588	CYP27B1	rs10877012	NADSYN1	rs12785878

Vitamin E

Normal

CD36, ZPR1, CYP4F2 variants affecting vitamin E (alpha-tocopherol) levels. Recommended daily intake: 15 mg.

Normal vitamin E metabolism. PathwayFit: Your genotype (INTERGENIC rs12272004 A/C) is associated with increased alpha-tocopherol — good news for long-term health. Maintain intake through sunflower seeds, olive oil, spinach, avocados.

CD362	rs2108622	ZPR1	rs964184	CYP4F2	rs2108622	SCARB1	rs5888	TTPA	rs6994076	INTERGENIC	rs12272004 A/C

Vitamin K

Need More

VKORC1, GGCX, CYP4F2 variants affecting vitamin K metabolism.

Moderately low vitamin K. Include Brussels sprouts, cabbage, spring onions, and leafy greens regularly in your diet.

VKORC1	rs9923231	GGCX	rs699664	CYP4F2	rs2108622

Calcium

Significantly Low

CYP24A1, CASR, GCKR variants. Target intake: 1,300 mg/day.

Genetic tendency for significantly low calcium absorption. Aim for 1,300 mg/day through almonds, sesame seeds, broccoli, fortified plant milks, and non-dairy sources (given likely lactose intolerance). CASR, CYP24A1, GCKR, and WDR81 are confirmed calcium metabolism loci in both reports.

CYP24A1	rs6013897	CASR	rs1801725; rs1042636	GCKR	rs780094	DGKD	rs838717	DGKH	rs9455500	GATA3	rs10912801
WDR81	rs6421827	CARS	rs1126259								

Magnesium

Need More

SHROOM3, TRPM6, CASR variants affecting magnesium metabolism.

Moderately low magnesium. Eat dark leafy greens, nuts, fish, avocados, and whole grains regularly.

SHROOM3	rs17319721	TRPM6	rs11144134	CASR	rs1801725; rs1042636	DCDC5	rs3740393	HOXD9	rs7970580	LUZP2	rs6584273
MDS1	rs2887399	MUC1	rs4072037								

Iron

Need More

TF, SLC17A1, TMPRSS6 variants affecting iron absorption.

Moderately low iron absorption. Eat spinach, lentils, beef, pumpkin seeds, and broccoli. Pairing iron-rich foods with vitamin C improves absorption. Consider periodic serum ferritin testing.

TF	rs3811647	SLC17A1	rs1183201	TMPRSS6	rs855791	TFR2	rs7385804

Zinc

Need More

MT1A, CA1, NBDY variants affecting zinc metabolism.

Moderately low zinc. Include flaxseeds, kidney beans, pumpkin seeds, watermelon seeds, and beef regularly.

MT1A	rs11076161	CA1	rs4984242	NBDY	rs2120019	IL6	rs1800795

Antioxidants

Need More

NAT1, PON1, GPX1, SOD2 variants affecting antioxidant capacity.

Require more antioxidants. Include purple grapes, blueberries, nuts, leafy greens, and whole grains. These foods support your body's natural antioxidant defences.

NAT1	rs4986782	PON1	rs662; rs854560	GPX1	rs1050450	SOD2	rs4880	CAT	rs1001179	XRCC1	rs25487

Choline, Copper & Phosphate

Assessed

Additional micronutrient metabolism markers.

MTHFD1 rs2236225 (Choline) PEMT rs12325817 (Choline) SELENBP1 rs17559550 (Copper) SMIM1 rs1175550 (Copper) CASR rs1801725 (Phosphate) TKT rs4654748 (Phosphate)

SECTION 07

Fitness results

Your genetic profile across endurance, power, recovery, and structural performance markers. 16 traits · 151 markers. BOTH

Endurance

Good

ACE, ACTN3, PPARGC1A, NOS3, and 40+ loci. PathwayFit: Enhanced Benefit (LIPC rs1800588 C/C · LPL rs328 C/C · PPARD rs2016520 A/A).

Suited to sustained medium-intensity activity: jogging, cycling, swimming. Endurance training yields enhanced health benefits for your genotype.

Aerobic Capacity (VO2 max)

Excellent

ADRB2, GABPB1, PPARA, PPARGC1A (rs8192678 G/A), VEGFA. PathwayFit: Typical VO2max (PPARGC1A rs8192678 G/A).

High oxygen uptake potential. Aerobic training yields strong gains. VO2max can always be improved with consistent endurance training.

Heart Capacity

Excellent

CREB1 rs2253206 · KIF5B rs2290997 · NOS3 rs1799983; rs2070744 · NPY rs16139

Strong cardiac output genetics. Your heart is built for sustained effort.

Lung Capacity

Average

ADRB1 rs1801253 · APOE rs7412; rs429358 · NRF1 rs2402970; rs6949152

Build gradually. Aerobic training increases lung capacity over time.

Power Performance

Good

ACTN3 rs1815739 · ADRB2 rs1042713; rs1042714 · EPAS1 rs1867785; rs11689011 · AMPD1 rs17602729 + 40 more.

Well-suited to HIIT, sprinting, and strength intervals.

Muscle Power (Sprinter Gene)

Enhanced

ACTN3 rs1815739 C/T — functional ACTN3 protein in fast-twitch muscle fibres.

You carry the functional ACTN3 protein associated with enhanced sprinting and power sports performance. Confirmed by both reports. About 80% of people carry at least one functional copy.

Flexibility

Increased

ACTN3 rs1815739 · COL5A1 rs12722

Collagen gene variants support enhanced range of motion. Yoga is a natural fit.

Likelihood of Injury

Higher

COL5A1 rs12722 · MCT1 rs1049434 · MMP3 rs3025058

Prioritise warm-ups and controlled motion. Omega-3 foods support tendon repair. PathwayFit: Typical Achilles tendinopathy risk (MMP3 rs679620 A/G).

Exercise Recovery

Slower

SOD2 rs4880 · TNF rs1800629

Allow longer rest between sessions. Turmeric (curcumin) and PUFAs (omega-3) support recovery. Don't underestimate rest days.

Insulin Sensitivity with Exercise

Favorable

LIPC rs1800588 C/C — enhanced insulin sensitivity benefit from exercise.

Exercise significantly improves your insulin sensitivity — stay consistent. Confirmed by both AuraGen and PathwayFit (LIPC rs1800588).

Hand Grip Strength

Good

ACTG1 rs2032649 · GBF1 rs2273555 · KANSL1 rs80103986 · LRPPRC rs10186876 · PEX14 rs6687430 · SLC8A1 rs2110927 · SYT1 rs10861798 · TGFA rs2166975 · HOXB3 rs4072928 · ERP27 rs7744813

Good muscular fitness baseline. Resistance training will build further.

Strength Training Response

Less Beneficial

INSIG2 rs7566605 C/G — associated with increased fat volume after resistance training.

Strength training may be less beneficial for fat loss with your genotype. Moderate resistance training is still recommended for overall health, bone density, and metabolic benefits.

HDL Response to Exercise

Normal Benefit

PPARD rs2016520 A/A

Typical increase in HDL (good) cholesterol in response to a 20-week endurance training programme. Exercise still improves HDL — keep moving.

Exercise Motivation

Assessed

BDNF rs6265

BDNF variants influence exercise motivation. Schedule exercise consistently and find social accountability to support routine adherence.

Tendon & Ligament Strength

Assessed

COL1A1 and COL5A1 collagen gene variants affect tendon and ligament resilience. Higher injury likelihood noted — always warm up, incorporate eccentric loading exercises, and consume omega-3s to support connective tissue.

COL1A1	rs1800012	COL5A1	rs12722	GDF5	rs143383	MMP3	rs3025058	CILP	rs2073711

SECTION 08 · PATHWAYFIT

Body, weight & metabolic health

Genetic predispositions for obesity, metabolism, cholesterol, triglycerides, and blood sugar — for context and physician monitoring. PATHWAYFIT

Obesity Risk

Average

FTO rs9939609 A/T · MC4R rs17782313 T/T

Average genetic predisposition for being overweight. You can mitigate risks through diet, regular exercise, and stress reduction. Remember genetics does not determine inevitable outcomes.

★★★★

Weight Loss Regain

More Likely to Regain

ADIPOQ rs17300539 G/G

You may have difficulty keeping weight off after losing weight. Maintain a consistent diet and exercise plan long-term.

★★☆☆

Metabolism (Resting Rate)

Normal

LEPR rs8179183 G/G

Normal resting metabolic rate. Exercise is the primary lever to increase metabolism over time.

Adiponectin Levels

Possibly Low

ADIPOQ rs17366568 A/G

Your genotype is associated with lower adiponectin levels. Losing weight (if applicable) may help increase adiponectin. Your physician can test adiponectin levels.

Metabolic Health Factors — Physician Monitoring Recommended

Elevated LDL Cholesterol

Above Average Risk

10 genetic markers from Framingham Heart Study GWAS (N>19,000).

You share a genetic profile with individuals exhibiting borderline-high LDL levels. **Regular physician cholesterol monitoring is recommended.** Limit saturated fats, avoid trans fats, and increase fibre and omega-3 intake.

ABCG8 rs6544713 C/T APOB rs515135 G/A CELSR2 rs12740374 G/G HMGCR rs3846663 C/T HNF1A rs2650000 A/C INTERGENIC rs1501908 G/G LDLR rs6511720 G/G MAFB rs6102059 C/T NCAN rs10401969 T/T PCSK9 rs11206510 T/T ★★★★

Decreased HDL Cholesterol

Above Average Risk

14 genetic markers from Framingham Heart Study GWAS. HDL can be improved through aerobic exercise and a healthy diet.

ABCA1 rs1883025 G/G ANGPTL4 rs2967605 G/G CETP rs247616 C/C FADS1 rs174547 T/T GALNT2 rs4846914 A/G HNF4A rs1800961 C/C KCTD10 rs2338104 C/C LCAT rs2271293 A/G LIPC rs10468017 C/C LIPG rs4939883 T/T LPL rs12678919 A/A PLTP rs7679 C/T TTC39B rs471364 A/A ZNF259 rs964184 C/G ★★★★

Elevated Triglycerides

Above Average Risk

11 genetic markers. Manage through maintaining healthy weight, reducing saturated fat and sugar, and increasing omega-3 consumption.

ANGPTL3 rs10889353 A/C APOB rs7557067 A/A FADS1 rs174547 T/T GCKR rs1260326 C/T LPL rs12678919 A/A MLXIPL rs714052 T/T NCAN rs17216525 C/C PLTP rs7679 C/T TRIB1 rs2954029 A/A XKR6 rs7819412 A/A ZNF259 rs964184 C/G

★★★★

Elevated Blood Sugar

Average

13 genetic markers from GWAS of >100,000 individuals. Average genetic predisposition.

ADCY5	rs11708067 A/A	ADRA2A	rs10885122 G/G	CRY2	rs11605924 A/C	FADS1	rs174550 T/T	G6PC2	rs560887 G/G	GCK	rs4607517 A/G	GCKR	rs780094 G/A
GLIS3	rs7034200 A/C	MADD	rs7944584 A/T	MTNR1B	rs10830963 C/C	PROX1	rs340874 C/C	SLC2A2	rs11920090 T/T	TCF7L2	rs7903146 C/C	★★★★	

SECTION 09

Scientific references & notes

Key peer-reviewed studies informing the gene-trait mappings in this combined report.

AuraGen References

1. Semenova, E.A., Hall, E.C.R. & Ahmetov, I.I. "Genes and Athletic Performance: The 2023 Update." *Genes (MDPI)*, 14(6), 1235. doi:10.3390/genes14061235
2. Ahmetov, I.I. et al. "GWAS identifies three novel genetic markers associated with elite endurance performance." *Biology of Sport*, 32(1), 3-9 (2015). doi:10.5604/20831862.1127285
3. Voisin, S. et al. "EPAS1 (HIF2A) gene variants are associated with sprint/power athletic performance." *BMC Genomics*, 15, 1069 (2014). doi:10.1186/1471-2164-15-1069
4. Wilkinson, J.M. et al. "Large-scale GWAS identifies multiple loci for hand grip strength." *Nature Communications*, 8, 16015 (2017). doi:10.1038/ncomms16015
5. Speliotes, E.K. et al. "Association analyses of 249,796 individuals reveal 18 new loci associated with BMI." *Nature Genetics*, 42, 937-948 (2010). doi:10.1038/ng.686
6. Corella, D. & Ordovas, J.M. "Nutrigenomics in cardiovascular medicine." *Circ: Cardiovascular Genetics*, 2(6), 637-651 (2009).
7. Keller, K.L. et al. "CD36 gene polymorphisms are associated with fat taste sensitivity." *Obesity*, 20(5), 1066-1073 (2012).
8. Leung, W.C. et al. "Two common SNPs in BCMO1 predict beta-carotene to retinol conversion efficiency." *FASEB Journal*, 23(4), 1041-1053 (2009).
9. Hazra, A. et al. "Common variants of FUT2 are associated with plasma vitamin B12 levels." *Nature Genetics*, 40, 1160-1162 (2008).
10. Meyer, T.E. et al. "GWAS of serum magnesium, potassium, and sodium concentrations." *PLoS Genetics*, 6(8), e1001045 (2010).
11. Kapur, K. et al. "Genome-wide meta-analysis for serum calcium." *PLoS Genetics*, 6(7), e1001035 (2010).
12. Cornelis, M.C. et al. "Genome-wide meta-analysis identifies regions on 7p21 (AHR) and 15q24 (CYP1A2) for caffeine intake." *PLoS Genetics*, 7(4), e1002033 (2011).
13. Tanaka, T. et al. "GWAS of vitamin B6, B12, folate, and homocysteine blood concentrations." *American Journal of Human Genetics*, 84(4), 477-482 (2009).

PathwayFit® / NutriPATH Pathology References (selected)

Ordovas JM et al. *Circulation* 106, 2315-21 (2002) · Junyent M et al. *AJCN* 90, 686-94 (2009) · Sonestedt E et al. *AJCN* 90, 1418-25 (2009) · Corella D et al. *Arch Int Med* 169, 1897-906 (2009) · Warodomwichit D et al. *Obesity* 17, 510-7 (2009) · Memisoglu A et al. *HMG* 12, 2923-9 (2003) · Kathiresan S et al. *Nature Genetics* 41, 56-65 (2009) · Dupuis J et al. *Nature Genetics* 42, 105-16 (2010) · Epstein LH et al. *Behavioral Neuroscience* 121, 877-86 (2007) · de Krom M et al. *Diabetes* 56, 276-80 (2007) · Bouchard L et al. *AJCN* 80, 1478-86 (2004) · Frayling TM et al. *Science* 316, 889-94 (2007) · Dotson CD et al. *Appetite* 54, 93-9 (2010) · Eny KM et al. *Physiological Genomics* 33, 355-60 (2008) · Sachse C et al. *BJCP* 47, 445-9 (1999) · Kim UK et al. *Science* 299, 1221-5 (2003) · Enattah NS et al. *Nature Genetics* 30, 233-7 (2002) · Powers HJ. *AJCN* 77, 1352-60 (2003) · Yang QH et al. *AJCN* 88, 232-46 (2008) · Leung WC et al. *FASEB Journal* 23, 1041-53 (2009) · Timpson NJ et al. *AJCN* 92, 375-82 (2010) · Wang TJ et al. *Lancet* 376, 180-8 (2010) · Ferrucci L et al. *AJHG* 84, 123-33 (2009) · Garenc C et al. *J Appl Physiol* 91, 1334-40 (2001) · Teran-Garcia M et al. *Diabetes* 54, 2251-5 (2005) · Hautala AJ et al. *AJPH* 292, H2498-505 (2007) · Orkunoglu-Suer FE et al. *BMC Med Genet* 9, 117 (2008) · Lucia A et al. *J Appl Physiol* 99, 344-8 (2005) · Yang N et al. *AJHG* 73, 627-31 (2003) · Raleigh SM et al. *BJSM* 43, 514-20 (2009) · Vimaleswaran KS et al. *AJCN* 90, 425-8 (2009) · Rankinen T et al. *Hypertension* 50, 1120-5 (2007) · Loos RJ et al. *Nature Genetics* 40, 768-75 (2008) · Goyenechea E et al. *Horm Metab Res* 41, 55-61 (2009) · Heid IM et al. *Atherosclerosis* 208, 412-20 (2010) · Renström F et al. *Diabetes* 60, 345-54 (2011).

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