

GeneSport

Athletic Performance Genetics Analysis · 95+ Genes · Power, Endurance, Recovery, Injury Risk, Nutrition & Mental Performance

PATIENT Sarah Mitchell	DATE OF BIRTH 1986-05-14 (Age 38)	SAMPLE TYPE Buccal (Cheek) Swab	SAMPLE ID GM-GS-2024-02318
REPORT ID GS-2024-90265	COLLECTION DATE 2024-08-05	REPORT DATE 2024-08-12	LABORATORY Gene Matrix CLIA Lab, Chicago, IL
CLIA / NPI 14D2276402 / 1225729312	ORDERING PROVIDER Self-Ordered (DTC)	METHOD Illumina Next-Generation Sequencing	

95+ GENES ANALYZED	6 PERFORMANCE PILLARS	Top 5% POWER-ATHLETE PROFILE	1.5M+ DATA POINTS REFERENCED
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/ Executive Summary

Your GeneSport profile maps your entire performance genome across six pillars. You are a genetic Power Athlete: you carry the ACTN3 577R “sprint gene” associated with fast-twitch muscle fibers — athletes with this variant produce 23% more fast-twitch power output on average — placing you in the top 5% of power athletes. Your IL6 variant indicates an elevated post-exercise inflammatory response requiring structured recovery, and a COL5A1 variant raises tendon injury susceptibility, making a targeted prevention protocol essential.

Athletes with COL5A1 risk variants who follow prevention protocols experience 52% fewer training injuries. Your injury-prevention protocol below is the highest-ROI change you can make this season.

/ Genetic Findings

GENE	VARIANT	GENOTYPE	IMPACT	RECOMMENDATION
ACTN3	R577X (rs1815739)	R/R	POWER ADVANTAGE You carry the “sprint gene” associated with fast-twitch muscle fibers — ideal for explosive, power-based activities. Your genetic ceiling favors sprint, powerlifting, and combat disciplines over high-volume endurance work.	Heavy compound lifting 3–4x per week (squat, deadlift, clean) plus sprint/power intervals 2x weekly (under 30 min each).
COL5A1	rs12722	T/C	INJURY RISK Higher susceptibility to tendon and ligament injuries — structurally more vulnerable connective tissue under repetitive load.	Targeted eccentric strengthening protocol, collagen + vitamin C pre-workout for tendon protection, and conservative load-progression rules.

IL6	rs1800795	G/C	SLOW RECOVERY Elevated inflammatory response post-exercise — your body demands a longer recovery window than average after hard sessions.	Anti-inflammatory nutrition protocol (omega-3, tart cherry, curcumin), extended cool-downs, and at least 48 hours between high-intensity days.
ACE	I/D	I/D	HYBRID PROFILE Balanced power/endurance genotype — you can develop both qualities, but power responds faster to training.	Periodize: power-focus blocks as your base, with one aerobic maintenance session weekly.
FTO / PPARG	rs9939609 / rs1801282	A/T / C/G	NUTRITION SIGNAL Variants suggest optimal performance on a higher-protein, moderate-carb diet with emphasis on omega-3 fatty acids.	Target ~1.8 g/kg protein daily; time carbohydrates around training; emphasize omega-3-rich fish or supplementation.
SOD2	rs4880	A/G	RECOVERY SUPPORT Moderately reduced mitochondrial antioxidant defense — oxidative stress from hard training clears more slowly.	Antioxidant-rich whole foods (berries, leafy greens); avoid megadose antioxidants immediately post-workout to preserve training adaptations.

/ Performance Dimension Summary

Your GeneSport results across the six pillars of athletic performance.

DIMENSION	RESULT	CLINICAL IMPLICATION
Power & Strength	ELITE POTENTIAL	ACTN3 R/R — top 5% fast-twitch power profile. Train explosively.
Endurance & VO2 Max	TRAINABLE	Hybrid ACE profile — endurance improves with volume, but power is your natural weapon.
Recovery & Repair	EXTENDED WINDOW	IL6 G/C + SOD2 A/G — plan 48h between high-intensity sessions.
Injury Risk	ELEVATED	COL5A1 T/C — mandatory prehab protocol below; 52% injury reduction when followed.
Sports Nutrition	PERSONALIZED	Higher-protein, moderate-carb fueling matched to FTO/PPARG metabolism.
Mental Performance	WARRIOR PROFILE	Balanced COMT — strong focus under competition pressure.

/ Personalized Recommendations

Weekly Training Plan (DNA-Matched)

- Heavy compound lifting 3–4x per week (squat, deadlift, clean) — your highest-ROI modality.
- Sprint/power intervals 2x weekly, under 30 minutes each; one Zone-2 aerobic session for base maintenance.
- At least 48 hours between high-intensity days — your IL6 profile punishes back-to-back hard sessions.

Injury Prevention Protocol (COL5A1)

- Eccentric tendon strengthening (e.g., slow-tempo calf, hamstring, and patellar-loading work) 3x weekly.
- Collagen peptides (15 g) + vitamin C (50 mg) 30–60 minutes before key tendon-loading sessions.
- Cap weekly load increases at ~10%; schedule a deload every 4th week.

Sports Nutrition Blueprint

- ~1.8 g/kg protein daily across 4 feedings; moderate carbohydrates timed around training.
- Omega-3 (2–3 g EPA/DHA) daily to support your elevated inflammatory response.
- Post-session: protein + tart-cherry or curcumin; extended 15-minute cool-down to accelerate recovery.

Important: This is a SAMPLE REPORT provided for demonstration purposes only. It does not constitute medical advice, diagnosis, or treatment. Genetic results identify predispositions and risk factors; they do not diagnose disease. Results should be discussed with a qualified healthcare provider before making any medical, dietary, supplement, training, or medication decisions. Do not start, stop, or change any medication without consulting your prescribing physician.

Laboratory: Gene Matrix LLC · 1375 W Fulton St STE 545, Chicago, IL 60607 · CLIA ID: 14D2276402 · NPI: 1225729312 · (847) 302-9668 · support@genematrix.io · Mon–Fri 8AM–5PM CT. Testing performed in a CLIA-certified, CAP-accredited laboratory using next-generation sequencing. Analytical accuracy 99.9%. All findings reviewed by board-certified geneticists.

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