NutriGen™

Professional Nutrigenomic Advice

· **Brief Results Report**

www.gxsciences.com

Fagron genomics

Patient report

Disclaimer

METHODOLOGY AND LIMITATIONS: Testing for genetic variation/mutation on listed genes was performed using Real-Time PCR with TaqMan® allele-specific probes on the QuantStudio 12K Flex. All genetic testing is performed by GX Sciences, 805 Las Cimas Pkwy, Suite 430, Austin TX, 78746. This test will not detect all the known alleles that result in altered or inactive tested genes. This test does not account for all individual variations in the individual tested. Test results do not rule out the possibility that this individual could be a carrier of other mutations/variations not detected by this gene mutation/variation panel. Rare mutations surrounding these alleles may also affect our detection of genetic variations. Thus, the interpretation is given as a probability. Therefore, this genetic information shall be interpreted in conjunction with other clinical findings and familial history. Patients should receive appropriate genetic counseling to explain the implications of these test results. The analytical and performance characteristics of this laboratory-developed test (LDT) were determined by GX Sciences' laboratory pursuant to Clinical Laboratory Improvement Amendments (CLIA) requirements. CLIA #: 45D2144988 Laboratory Director: James Jacobson, PhD DISCLAIMER: This test was developed and its performance characteristics were determined by GX Sciences. It has not been cleared or approved by the FDA. The laboratory is regulated under CLIA and qualified to perform high-complexity testing. This test is used for clinical purposes. It should not be regarded as investigational or for research. rsIDs for the alleles being tested were obtained from the dbSNP database. DISCLAIMER: Report contents and report recommendations are created based on the consultation, advice, and direction of Dr. Kendal Stewart, Medical Director for GX Sciences. Sole responsibility for the proper use of the information on the GX Sciences report rests with the user, or those professionals with whom the user may consult. Report contents and report recommendations are intended to be informational only. Report contents and report recommendations are not intended and should not be interpreted to make claims regarding the use, efficacy, or safety of products, formulas, and/or services listed herein. Only a doctor or other appropriately licensed health care professional, as a learned intermediary, can determine if a formula, product, or service described herein is appropriate for a specific patient. Sole responsibility for the proper use of the information on the GX Sciences report rests with the user, or those professionals with whom the user may consult. DISCLAIMER: These products are not approved by the Food and Drug Administration and are not intended to diagnose, treat, cure, or prevent disease. These recommendations are for informational purposes only and an individual is not required to use such products. These are recommendations only and do not replace the advisement of your healthcare practitioner. This test is NOT for diagnostic purposes. It may identify general health risks that are associated with genetic variations but does NOT indicate a propensity for or susceptibility to any illness, disease, impairment, or other disorders, whether physical or mental.

Patient name	**William Wellness**
Date of birth	**08-08-2000**
Sample code	**NUT16919AA**
Doctor's name	**Development Testing**
Collection date	**02-10-2023**
Reception date	**02-17-2023**
Results date	**02-20-2023**

How to read and use the NutriGen™ patient's report

1. Important genetic results

Summary of the categories where your genes have an important impact on your health and weight. For each category presented, we show you the final score for your own predisposition to have an impact on it and a brief description of what this means.

2. Recommended diet type

In case of following a weight loss intervention, we depict here our recommendation on the type of diet that will be optimal for you to succeed in your strategy. You will get a score showing the percentage of efficiency. The graph reads red for low efficiency and green for high efficiency.

3. Intolerance risk

Here you can find how high is your genetic risk of intolerance to specific products (lactose, alcohol, gluten, caffeine and fructose) that might shape your future diet. Legend reads from green (low risk of intolerance) to red (high risk of intolerance).

4. Vitamin and mineral deficiency risk

This section shows your predisposition to suffer from deficiency in vitamins and minerals, based in your genetic profile, allowing to elaborate a plan on your supplementation needs. Legend reads from green (low risk of intolerance) to red (high risk of intolerance).

5. The best food supplements

This section includes an overview of the recommended supplements, distributed in 3 phases to ensure the supply of all your nutritional needs in the future. Your doctor or health specialist will set the duration of each phase for you based on your clinical condition and treatment evolution.
· Phase 1 – Detox: Detoxification of parasites and pinworms, intestinal dysbiosis and cellular oxidative state.
· Phase 2 – Restructuring: Cell and tissue restructuring at all levels and covering of mineral, vitamin and trace element deficiencies according to the diagnose of patient's needs.
· Phase 3 – Supplementation: Supplementation and recovery of the optimal state at all levels: cellular, tissue, immune, bone-muscular, psycho-neuronal and endocrine.

6. Top 5 food categories

Made from your genetic and health/behavior data. List of the 5 best foods you can eat per category, to help you with a hands-on list of foods for you. Food is suggested from the results of the test performed by GX Sciences.

7. Distribution of daily intake of foods

In this graph you can visualize the optimal proportion of fats, proteins and healthy carbohydrates intake on a daily basis, based in your genetic profile.

8. Physical activity

This section shows the expected benefits of exercise in improving your cholesterol HDL levels and reducing body fat according to your genetic results. The graph reads from green (high benefits expected) to red (low benefits expected).

9. Recommended calories

Our recommendation for your daily calorie intake, inferred from your BMI and gender. This calculation is a suggestion, consultation with your health care provider is recommended.

10. Complete genetic results

This table includes a complete description of all the analyzed SNPs within the NutriGen™ both at gene and SNP level, your genetic variant and the risk it confers to each category of our test.

Efficacies

01 Important genetic results

12.72%

Efficacy of exercise
Very low efficacy of exercise to reduce body fat and regulate cholesterol levels. Intensive dietary interventions may be the best option.

28.69%

Morphological genetics in overweight predisposition
Medium-high genetic predisposition to being overweight. In case of overweight or obesity, it is caused mainly by inherited genetics. Following the recommendations of this DNA analysis will improve outcomes.

37.02%

Glucose metabolism
Medium-high dysregulation of glucose metabolism. Intake of refined sugar and carbohydrates will be dangerous. High risk of developing Type-II diabetes.

37.38%

Carbohydrate metabolism
Negative carbohydrate metabolism: Carbohydrate intake will lead to dysregulation in cholesterol levels and also to increased calorie and fat intake. Eliminating refined carbohydrates is urgent; move to wholegrain carbohydrates and reduce the quantity.

43.28%

Fat metabolism
Negative fat burning capacity. It would be recommended to decrease the general fat intake.

63.57%

Behavioural genetics in food intake
Medium-low dysregulation of food intake behaviour. Slight predisposition to being overweight. In case of excessive quantity or compulsive intake, strategies to reduce anxiety should be considered.

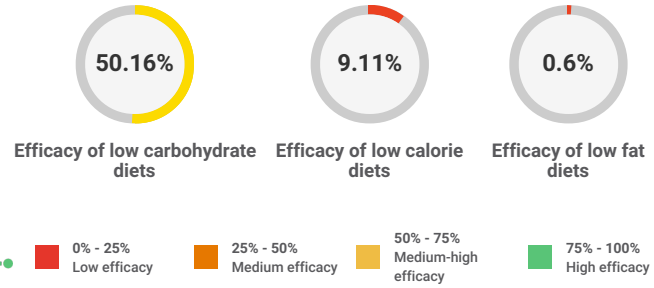
79.81%

Detoxification imbalances
Average detoxification capacities.

99.67%

Flavour sensitivities
Normal or average flavour sensitivity.

02 Matching Diet Type



Risks

03 Intolerances risk

04 Vitamin and Mineral deficiency risk

VITAMINS	MINERALS
Vitamin A	Calcium malabsorption risk
Vitamin B6	Predisposition to dysregulated calcium levels
Vitamin B9 (folate)	Risk of iron overload
Vitamin B12	Risk of low iron plasma levels
Vitamin C	Predisposition to dysregulated magnesium levels
Vitamin D	Predisposition to dysregulated selenium levels
Vitamin E	Sodium sensitivity

Low risk · Medium risk · Medium to high risk · High risk

Supplements

05 The best food supplements

DETOX I DETOXIFICATION (OXIDATION) LIVER
- Ubiquinol
- Methionine
- Vitamin B12 (Cianocobalamin)
- Manganese
- Resveratrol
- Magnesium
- Nicotinamide (niacinamide)
- Zinc gluconate

DETOX II DETOXIFICATION (CONJUGATION) LIVER
- Methionine
- Magnesium
- Magnesium
- Vitamin B9 (Methylfolate)
- Vitamin D3 (Cholecalciferol)
- Alpha-Lipoic Acid (ALA)
- Acetylcysteine (N-Acetylcysteine)
- Glutamine (levoglutamine)

PHASE 2 (TRANSPORTATION/EXCRETION) KIDNEY OR GI TRACT
- Magnesium
- Glutamine (levoglutamine)

SUPPLEMENTATION PHASE
- Ubiquinol
- Methionine
- Vitamin B12 (Cianocobalamin)
- Magnesium
- Biotin
- Manganese
- Resveratrol
- Magnesium

*These recommendations are based only in the analysis of your genetic test. Always seek the advice of your physician or other qualified health specialist before proceeding with any nutritional or dietary modifications.

Food categories

06 Top 5 according to your needs 1/2

Vegetables
- Spinach, boiled
- Turnip greens
- Red pepper
- Chicory
- Bamboo shoots

Legumes and derivatives
- Lentil, boiled
- Pinto bean, steeped, boiled
- Broad bean, dried, steeped, boiled
- White bean, boiled
- Chickpea, canned

Fruits and derivatives
- Raspberry
- Black currant
- Cranberries, raw
- Chayote
- Strawberry

Cereals and derivates
- Corn starch
- Barley
- Rye
- Barley flour
- Rye flour

Fish and derivatives
- Tuna
- Cod
- Halibut
- Monkfish, grilled
- Tuna, canned in water

Meats and derivatives
- Turkey, breast, without skin, grilled
- Liver, pork
- Ostrich, sirloin
- Turkey
- Beef, part n/s, roasted, with separable fat

Nuts and seeds
- Lupin
- Brazil nuts, kernel only
- Brazil nut
- Hazelnut
- Sweetened almond milk

Eggs and derivatives
- Egg, duck
- Egg, turkey
- Egg, quail
- Egg, chicken, boiled
- Egg, chicken, white

Milk and derivatives
- Milk, skimmed, pasteurized
- Soy Yoghurt
- Almond milk
- Milk, semi-skimmed, pasteurized
- Cottage cheese

Tubers and derivatives
- Red potatos, baked
- Potato, red, flesh & skin, baked
- Potato, russet, cooked in skin, microwaved
- Parsnip
- Arrowroot flour

06 Top 5 not recommended 2/2

Vegetables
- Pickled gherkin

Fruits and derivatives
- Fruit paste

Cereals and derivates
- Cereal, GoLean Crunch, Kashi
- Bar, dark chocolate mocha almond bar, Luna Inc
- Cereal, Honey Vanilla Crunch organic gluten free, Cascadian Farms
- Raisin pudding
- Gluten-free multigrain sandwich bread, Whole Foods Market, Inc.

Fish and derivatives
- Based on your results, there are no restricted foods in this category. To suit your needs, please consult a healthcare professional.

Meats and derivatives
- Based on your results, there are no restricted foods in this category. To suit your needs, please consult a healthcare professional.

Nuts and seeds
- Bar, Fruit, Nut & Veggie bar, Naked
- Bar, Almond, Kind Inc.
- Bar, Peanut Butter Dark Chocolate, Kind Inc
- Cashew Milk
- almond creamer, by Danone Us, LLC

Milk and derivatives
- Almond milk yogurt, strawberry, Lyrical foods, Inc.

Sugars and derivatives
- Based on your results, there are no restricted foods in this category. To suit your needs, please consult a healthcare professional.

Snacks
- Based on your results, there are no restricted foods in this category. To suit your needs, please consult a healthcare professional.

Non-alcoholic beverages
- Based on your results, there are no restricted foods in this category. To suit your needs, please consult a healthcare professional.

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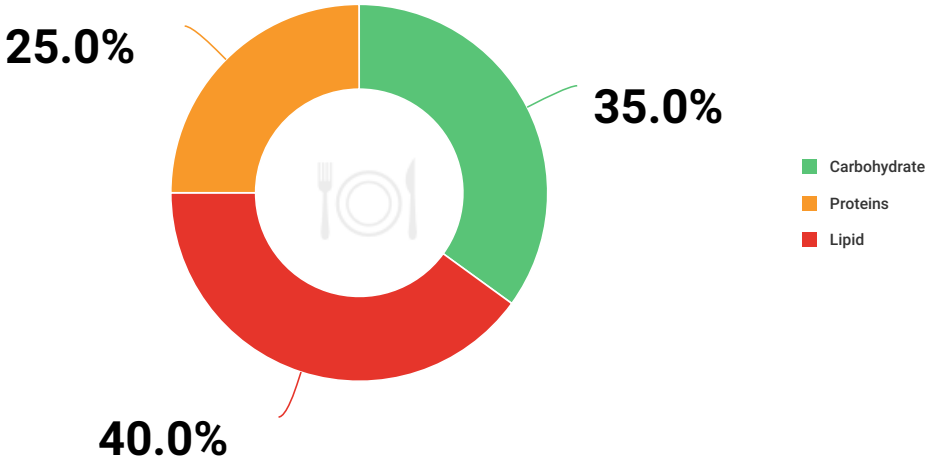
Daily food intake

07 Distribution according to your results



ABOUT

From the results obtained in the analysis, **your dietary habits** and your general information, our genetic and nutritionist adviser team have determined a **personalized plan** with **nutritional** and **dietetic** recommendations.

1. Make the 3 main meals of the day and in their hours
2. Make 2 small snacks of fruit and nuts according to recommendations: 11am - 5pm
3. Drink water 1.5 - 2 L / day before and between main meals

Physical activity

08 According to your results

0%

Benefits from endurance exercise for improving HDL levels

Exercise alone will not be enough for cholesterol regulation.

25.44%

Exercise to reduce body fat

An exercise strategy may not be the best option for weight loss. Rather introduce diet restrictions and institute healthy sport-related habits (walking, swimming at low intensity).

Low benefit | Medium benefit | Medium-high benefit | High benefit

Calories

Recommended calories 09

Pre-obesity

1200-1500 Kcal/day

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Genetic results

10 Complete genetic results table

GENETIC RISK	MARKER	LOCUS	YOUR VARIANT	YOUR RESULT
Genetic risk of overweight/obesity	MC4R-1	rs2229616	CC	
	SH2B1-2	rs7498665	AA	
	FTO-1	rs9939609	TT	
	FTO-2	rs1121980	GG	
	MC4R-2	rs17700633	GG	
Risk of rebound weight gain	ADIPOQ	rs17300539	GG	
Risk of increased BMI	MC4R-3	rs12970134	GA	
	MC4R-4	rs17782313	CT	
	SH2B1-1	rs4788102	GG	
Basal metabolic rate (burn calories at rest)	FABP2	rs1799883	CT	
	LEPR-4	rs2025804	GG	
Weight loss capability during diet interventions	ACSL5	rs2419621	CC	
Appetite and anxiety risk	COMT	rs4680	AG	
	NMB	rs1051168	GG	
	DRD2-1	rs1800497	AG	
	MC4R-1	rs2229616	CC	
	DRD2-2	rs6277	AA	
Satiety: Feeling Full	FTO-1	rs9939609	TT	
Benefits from endurance exercise for improving HDL levels	PPARD	rs2016520	TT	
Exercise to reduce body fat	FTO-1	rs9939609	TT	
	FTO-2	rs1121980	GG	
	LIPC	rs1800588	CT	
	LEP	rs7799039	AG	

GENETIC RISK	MARKER	LOCUS	YOUR VARIANT	YOUR RESULT
Response to monosunsaturated fats (MUFAs)	ADIPOQ	rs17300539	GG	
Response to polyunsaturated fats (PUFAs)	PPAR-Y	rs1801282	CC	
	FADS1	rs174547	CT	
Response to fat intake to improve the HDL levels	LIPC	rs1800588	CT	
Capability to digest starchy food	AMY1-AMY2	rs11577390	CC	
	AMY1	rs4244372	TT	
Refined carbohydrate sensitivity	FABP2	rs1799883	CT	
Carbohydrates and HDL levels predisposition	KCTD10	rs10850219	GG	
Carbohydrates and LDL levels	MMAB	rs2241201	GG	
Predisposition to reduced HDL levels	APOA5	rs662799	AA	
	CETP	rs5883	CC	
Predisposition to increased levels of triglycerides	PPAR-Y	rs1801282	CC	

Indications

Negative effect | Medium effect | Positive effect

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Genetic results

10 Complete genetic results table

GENETIC RISK	MARKER	LOCUS	YOUR VARIANT	YOUR RESULT
Predisposition to increased oxidation of LDL	APOB-2	rs676210	AG	
Risk of increased cholesterol LDL levels	CELSR2	rs12740374	GT	
	HNF1A	rs2650000	AA	
	LDLR	rs6511720	GG	
	ABCG8	rs6544713	CC	
Risk of unbalanced Triglycerides/HDL ratio	HMGCR	rs3846663	CT	
Risk of increased glucose levels in plasma after fasting	PLIN1	rs2289487	CC	
	GHSR	rs490683	GG	
Risk of insulin resistance	PPAR-Y	rs1801282	CC	
	ADIPOQ	rs17300539	GG	
	TCF7L2-2	rs7903146	CC	
	FTO-1	rs9939609	TT	
	FTO-2	rs1121980	GG	
Risk of Type-II diabetes	PPAR-Y	rs1801282	CC	
	PLIN1	rs2289487	CC	
	TCF7L2-2	rs7903146	CC	
	FTO-1	rs9939609	TT	
	MC4R-2	rs17700633	GG	
	CDKN2A/B	rs10811661	CT	
	KCNQ1	rs2237892	CC	
	CDKN2A, CDKN2B	rs2383208	AG	
	CDKAL1	rs7756992	AA	
	TCF7L2-1	rs7901695	TT	
Bitter taste sensitivity	TAS2R38-1	rs1726866	AG	
	TAS2R38-2	rs713598	CG	
Salt sensitivity	ACE	rs4343	AA	

GENETIC RISK	MARKER	LOCUS	YOUR VARIANT	YOUR RESULT
Sweet flavour preference	SLC2A2	rs5400	GG	
Antioxidant capability	GPX1	rs1050450	GG	
	NQO1	rs1800566	AG	
	COMT	rs4680	AG	
	SOD2	rs4880	AG	
	CYP1B1	rs1056836	CG	
	CYP1A1-2	rs1048943	TT	
	GSTP1	rs1695	AA	
Calcium malabsorption risk	CYP2R1-1	rs10766197	GG	
	GC	rs2282679	TT	
Predisposition to dysregulated calcium levels	DGKD	rs1550532	CG	
	CYP24A1	rs1570669	AG	
	CASR-1	rs17251221	AA	
	CASR-2	rs1801725	GG	
	CARS	rs7481584	GG	
	GCKR	rs780094	TT	
Risk of iron overload	HFE	rs1800562	GG	
Risk of low iron plasma levels	TF-1	rs3811647	AA	
	TMPRSS6	rs4820268	AA	
	TF-2	rs8177253	TT	
Predisposition to dysregulated magnesium levels	CASR-1	rs17251221	AA	
	TRPM6	rs11144134	TT	
	SHROOM3	rs13146355	AG	
	DCDC5	rs3925584	TT	
	MUC1	rs4072037	TT	
Predisposition to dysregulated selenium levels	AGA	rs1395479	AC	
	SLC39A11	rs891684	GG	
Sodium sensitivity	ACE	rs4343	AA	

Indications

Negative effect | Medium effect | Positive effect

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Genetic results

10 Complete genetic results table

GENETIC RISK	MARKER	LOCUS	YOUR VARIANT	YOUR RESULT
Lactose intolerance risk	MCM6-1	rs182549	TT	
	MCM6-2	rs4988235	AA	
Alcohol metabolism	ALDH2	rs671	GG	
Risk of celiac disease	HLA-7	rs2187668	CT	
	HLA-8	rs4639334	GA	
	HLA-2	rs2395182	TT	
	HLA-4	rs4713586	AA	
	HLA-5	rs7454108	TT	
	HLA-6	rs7775228	TT	
Caffeine metabolism	CYP1A1-1	rs2470893	TT	
	CYP1A2	rs762551	AA	
Fructose intolerance risk	ALDOB-1	rs1800546	CC	
	ALDOB-2	rs76917243	GG	

GENETIC RISK	MARKER	LOCUS	YOUR VARIANT	YOUR RESULT
Efficacy of low calorie diets	PPAR-Y	rs1801282	CC	
	ADIPOQ	rs17300539	GG	
	LEPR-1	rs1805134	TT	
	ACSL5	rs2419621	CC	
	ADRB2	rs1042714	CG	
Efficacy of low carbohydrate diets	KCTD10	rs10850219	GG	
	MMAB	rs2241201	GG	
Efficacy of low fat diets	PPAR-Y	rs1801282	CC	
	GHSR	rs490683	GG	
	APOA2	rs5082	AA	
	SH2B1-2	rs7498665	AA	
	TCF7L2-2	rs7903146	CC	
	FTO-1	rs9939609	TT	

Indications

Negative effect | Medium effect | Positive effect

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Together
we create the future of personalized medicine.

Fagron genomics