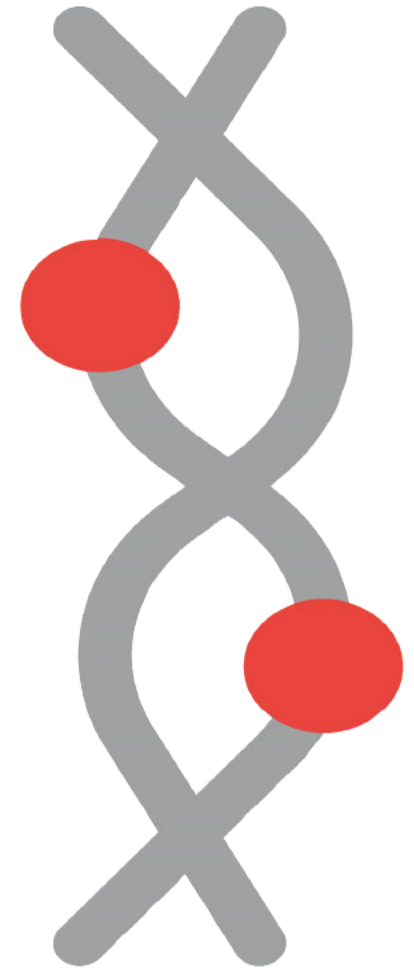


Fagron

genomics



Gene Comprehensive Nutrigenomic Report

Accession Number: #####
Specimen Collected: ##/##/####
Specimen Received: ##/##/####
Report Generated: February 27, 2025
Specimen Type: Buccal Swab
Provider: #####
Patient Name: #####
Patient DOB: ##/##/####
Patient Gender: Male

Do not make any decisions about your health solely based on the information contained in this report.
Always consult with a licensed and experienced health practitioner when you receive this report.

– 46 – Male

(-/-) Normal Risk (-/+) Medium Risk (+/+) High Risk

rsID	Gene	Genetic Result	Therapeutics Associated With Positive Result	Highly Recommended Therapeutics - Designs for Health Formulas	Provider Discretion: As Needed Formula Recommendations	Lifestyle Recommendations	Laboratory Recommendations
Men's Health							
Hormone Metabolism							
	CYP19A1	A/C (+/-)	Aromatase Inhibitor, Indole-3-Carbinal (I3C), Di-Indole Methane (DIM)	Consider DIM-Evail™ OR LibidoStim-MTM due to Risk for Increased Estrogen Conversion			Sex Hormones and Metabolites Panel OR Routine Plasma Estradiol
	CYP1B1	T/T (-/-)	Indole-3-Carbinal (I3C), Di-Indole Methane (DIM)				
	COMT	A/G (+/-)					
	SRD5A1	A/A (-/-)	Saw Palmetto, Beta-Sitosterol, Stinging Nettle				

– 46 – Male

(-/-) Normal Risk (-/+) Medium Risk (+/+) High Risk

rsID	Gene	Genetic Result	Therapeutics Associated With Positive Result	Highly Recommended Therapeutics - Designs for Health Formulas	Provider Discretion: As Needed Formula Recommendations	Lifestyle Recommendations	Laboratory Recommendations
Metabolic Risk Factor							
	PDE8B	A/A (+/+)	Iodine, Selenium, Increased Risk of Hypothyroidism	Thyroid Synergy™			Thyroid Panel Urinary Iodine OR Comprehensive Micronutrient/Mineral Analysis
	DIO1	A/A (+/+)	Selenium	Thyroid Synergy™ OR Thyromune™			Thyroid Panel Whole Blood Selenium OR Comprehensive Micronutrient Testing
	ATG5	C/C (+/+)	Curcumin, Lithium Orotate, D-Chiro-Inositol, Catechins, Resveratrol, Caffeine, 12+ Hour Fasting, Sulforaphane, Ginseng	Resveratrol Supreme Sensitol™	GlucoSupreme™ Herbal OR Chromium Synergy™ May Be Beneficial if Blood Sugar Control Is an Issue	May Have Reduced Blood Sugar Control Intermittent Fasting (12-15 Hours) Exercise Regularly	Routine Blood Sugar, Insulin, and HbA1c
	ATG12	C/C (+/+)					
	ATG16L1	C/T (+/-)					
Zinc Transport							
	SLC30A3	G/T (+/-)	Zinc				

– 46 – Male

(-/-) Normal Risk (-/+) Medium Risk (+/+) High Risk

rsID	Gene	Genetic Result	Therapeutics Associated With Positive Result	Highly Recommended Therapeutics - Designs for Health Formulas	Provider Discretion: As Needed Formula Recommendations	Lifestyle Recommendations	Laboratory Recommendations
Cardiovascular Health							
Homocysteine Metabolism							
	BHMT	A/G (+/-)	Choline, Trimethylglycine (Betaine)	Homocysteine Supreme™	Homocysteine Supreme™	Avoid Smoking and Heavy Alcohol Consumption	Plasma Methylation Profile OR Plasma Homocysteine
	MTR	A/A (+/+)	Methyltetrahydrofolate, Methylcobalamin, Methionine				
	CBS	G/A (+/-)	Methyltetrahydrofolate, Methylcobalamin, Pyridoxal 5'-Phosphate (B6), Choline, Trimethylglycine, Serine, N-Acetyl Cysteine				
Hypertension Risk							
	AGT	A/G (+/-)	Increased Risk of Salt Retention and Hypertension		HTN Supreme™	Salt Restriction, Especially after Age 40 Monitor Blood Pressure Closely after Age 40 Routine Stress Test after Age 45	Metabolic Panel OR Electrolyte Panel OR Comprehensive Micronutrient/Mineral Analysis
	ACE	A/G (+/-)					
Nitric Oxide Synthesis							
	NOS3	C/C (+/+)	L-Arginine, L-Citrulline, Beetroot Extract, Niacinamide	Vascanox HP® OR NOx Synergy™		Consume a Nitrate Rich Diet Avoid Antiseptic Toothpaste and Mouthwash Exercise Regularly	Nitric Oxide Test Strips

Summary for Men's Health

Highly Recommended Therapeutics - Designs for Health Formulas

Provider Discretion: As Needed Formula Recommendations

Lifestyle Recommendations

Laboratory Recommendations

Hormone Metabolism

- Consider DIM-Evail™ OR LibidoStim-M™ due to Risk for Increased Estrogen Conversion

- Sex Hormones and Metabolites Panel OR Routine Plasma Estradiol

Metabolic Risk Factor

- Thyroid Synergy™

- Thyroid Panel
- Urinary Iodine OR Comprehensive Micronutrient/Mineral Analysis
- Whole Blood Selenium OR Comprehensive Micronutrient Testing

- Thyroid Synergy™ OR Thyromune™

- Resveratrol Supreme
- Sensitol™

- GlucoSupreme™ Herbal OR Chromium Synergy™ May Be Beneficial if Blood Sugar Control Is an Issue

- May Have Reduced Blood Sugar Control
- Intermittent Fasting (12-15 Hours)
- Exercise Regularly

- Routine Blood Sugar, Insulin, and HbA1c

Cardiovascular Health

- Homocysteine Supreme™

- Homocysteine Supreme™

- Avoid Smoking and Heavy Alcohol Consumption

- Plasma Methylation Profile OR Plasma Homocysteine

- HTN Supreme™

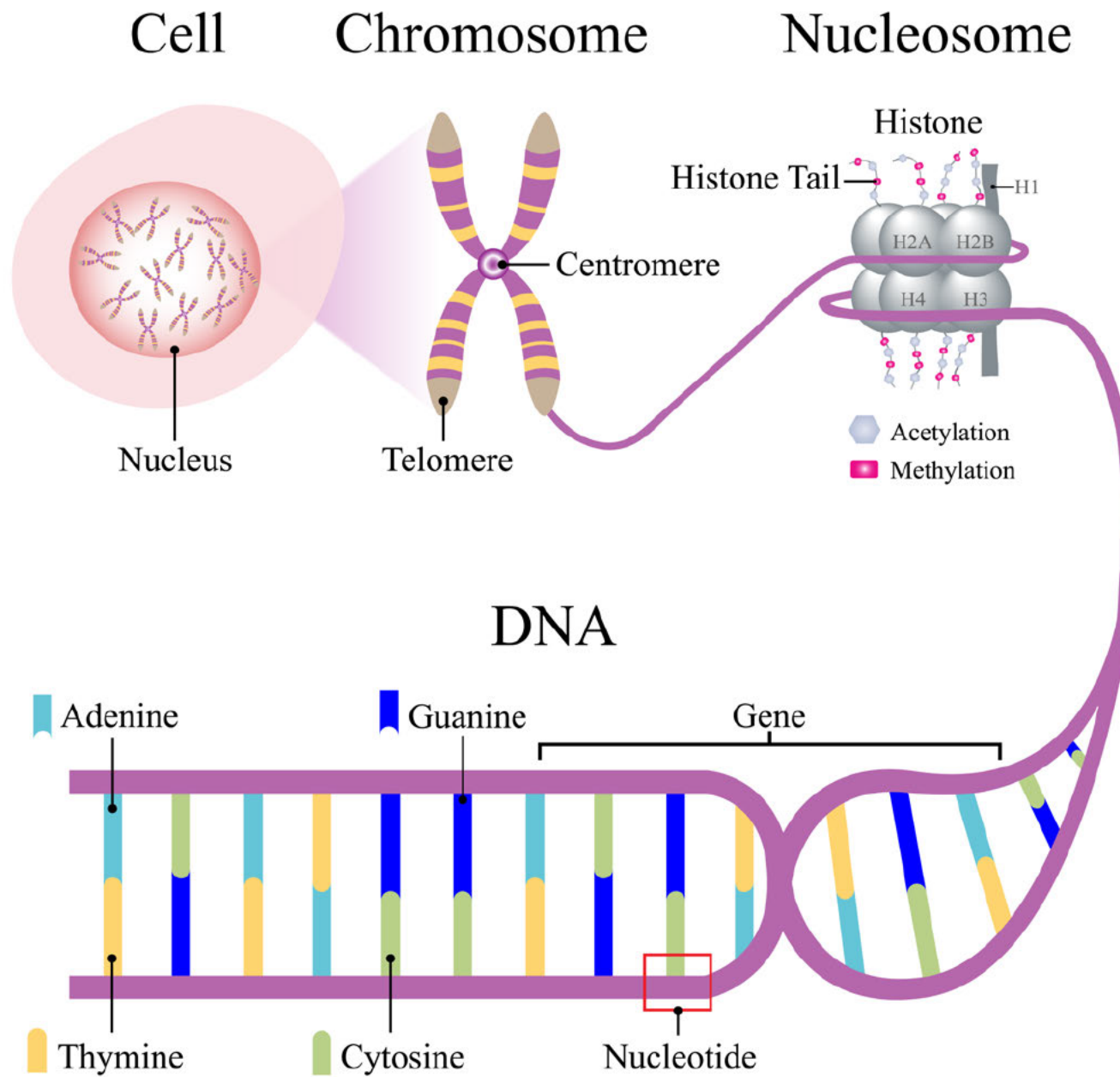
- Salt Restriction, Especially after Age 40
- Monitor Blood Pressure Closely after Age 40
- Routine Stress Test after Age 45

- Metabolic Panel OR Electrolyte Panel OR Comprehensive Micronutrient/Mineral Analysis

- Vascanox HP® OR NOx Synergy™

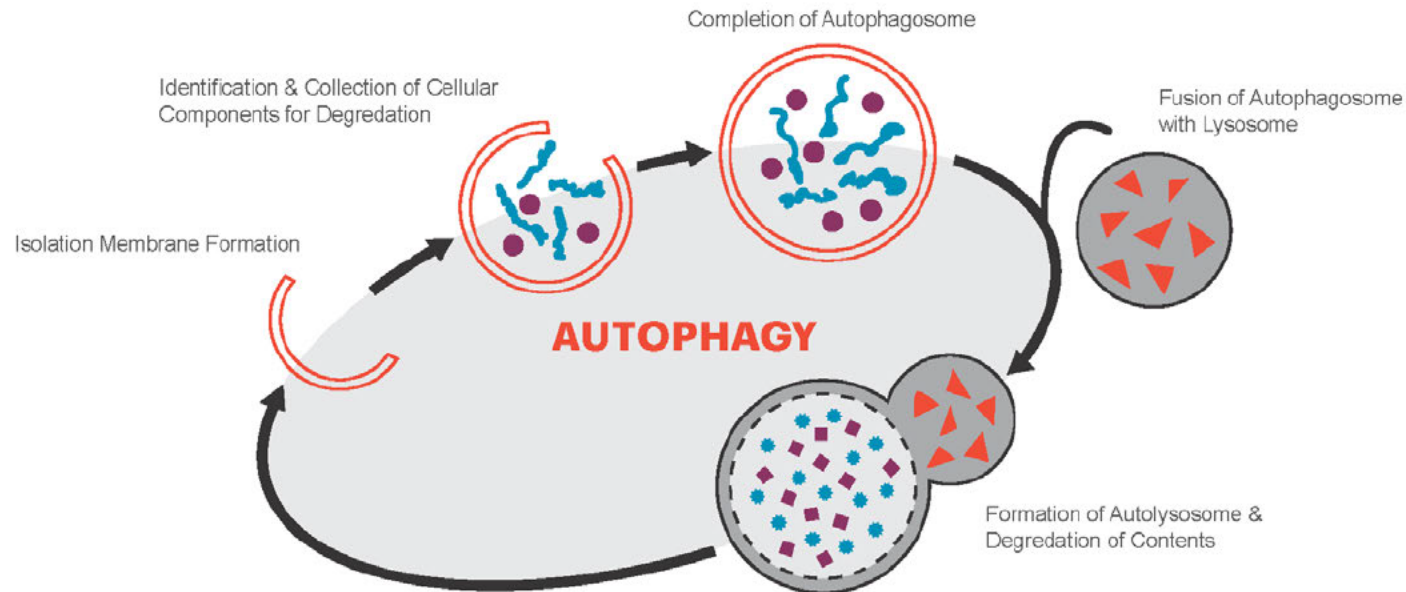
- Consume a Nitrate Rich Diet
- Avoid Antiseptic Toothpaste and Mouthwash
- Exercise Regularly

- Nitric Oxide Test Strips



AUTOPHAGY: Cellular Housekeeping

VARIANTS IN THE ATG GENES HAVE BEEN ASSOCIATED WITH CELLULAR BLOCKAGE



DEFECTS LEAD TO:

- Neurodegenerative Diseases
- Aging
- Heart Disease
- Developmental Disorders
- Type II Diabetes
- Insulin Resistance
- Fatty Liver
- Cancers

WAYS TO INCREASE

-  Intermittent fasting or low-calorie diet
-  Routine Exercise
-  Ketogenic diets (high fat, low carbs)
-  Medications & Supplements
D-Chiro Inositol (B8)
Metformin

IODINE

WAYS TO INCREASE LEVELS



FUNCTIONS



Synthesizes thyroid hormones (T3 & T4) for metabolic pathways



Role in growth & development



Role in immune response

DEFICIENCY VS HIGH INTAKE

Deficiency

- Developmental issues
- Improper thyroid hormone production
- Fertility issues

High intake

- Thyroid disorders
- Acute poisoning
 - Burning in mouth & throat
 - Fever
 - Abdominal pain
 - Nausea
 - Vomiting
 - Diarrhea

SELENIUM

WAYS TO INCREASE LEVELS



Brazil nuts



Low-fat milk products



Meats & seafood – fish (tuna, halibut, sardines), ham, shrimp, beef, liver, chicken, turkey



Boiled eggs



Wheat germ, Brewer's yeast



Whole grains (unless gluten free)



Supplements



ABSORBABLE SELENIUM

FUNCTIONS



Role in proper thyroid function & thyroid hormone metabolism



Role in DNA synthesis



Role in reproduction



Protection from infection & oxidative damage

DEFICIENCY VS HIGH INTAKE

Deficiency

- Cardiovascular disorders
- Developmental issues
- Thyroid disorders
- Joint & bone issues
- Infertility issues
- Cancers

High intake

- Metallic taste in mouth
- Garlic odor of breath
- Hair and nail loss or brittleness
- Nervous system abnormalities
- Nausea
- Diarrhea
- Skin rashes
- Fatigue
- Irritability

SELENOMETHIONINE & SELENOCYSTEINE
ACTIVE FORM

TESTOSTERONE METABOLISM

RELEVANT GENES

CYP1B1, CYP1A1, COMT & GSTP1

Variants produce higher estrogen levels.

SRD5A1

Sensitivity to hormone replacement therapy.
Increased risk for androgenic symptoms.

FUNCTIONS OF TESTOSTERONE



Regulates libido



Role in the production of red blood cells and sperm



Regulates bone mass, fat distribution, muscle mass & strength

SYMPTOMS OF EXCESS ESTROGEN



Gynecomastia



Loss of muscle mass



Mood changes



Sexual dysfunction



Fatigue

RECOMMENDATIONS & WAYS TO IMPROVE



Natural Aromatase Inhibitors (DIM, IC3, Cysin, Quercetin, Resveratrol)



Prescriptive Aromatase Inhibitors (Anastrozole, Letrozole)



Be cautious with Testosterone therapy



Natural DHT Blockers (Saw Palmetto, Biotin, Pygeum Bark, Pumpkin Seed Oil, Rosemary Oil)



Prescriptive DHT Blockers (Propecia, Avodart, Minoxidil, Spironolactone)

HORMONE METABOLISM

Hormones are chemical substances that controls and regulate body processes such as digestion, metabolism, growth, reproduction and mood

THE SRD5A1 GENE

Responsible for the conversion of testosterone to potent, DHT

Variants have been associated with:



Sensitivity to hormone replacement therapy (estrogen, testosterone, DHEA)



Acne



Male Baldness Pattern



Hair loss

THE CYP19A1 GENE

Responsible for the conversion of androgens to estrogen

Variants have been associated with estrogen-sensitivity effects such as:



Breast cancer risk



Female Pattern Hair Loss



Endometriosis



Estrogen Dominance



Toxicity of Aromatase Inhibitors

WAYS TO IMPROVE



Aromatase inhibitor or DIM (Di-Indoyl Methane)



Testosterone Therapy (to increase estrogen levels)



DHT (Di-Hydro Testosterone) Blocker if DHT is elevated

HYPERTENSION RISK FACTOR

HIGH BLOOD PRESSURE

- Ranges
 - Normal: 120/80
 - Range of concern: 140/90 or higher
- Risk factors: high salt diet, high alcohol intake, stress, little potassium intake, alcohol & tobacco use, obesity, genetics/family history, age, lack of physical activity
- Uncontrolled high blood pressure has been associated with an increased risk for cardiovascular diseases and stroke

AGT & ACE GENES

Variants have been associated with an increased risk for:



Salt retention



Kidney issues



Preeclampsia



Poor sports performance



Hypertension & other cardiovascular issues

LIFESTYLE CHANGES



Limit salt intake



Angiotensin II Receptor Blockers ("sartans")



Weight management & routine exercise



Mediterranean diet



Quit smoking



Heart-healthy diet/
Low-sodium diet/
DASH diet

DASH DIET

FOOD TO EAT



Fruits & vegetables



Egg whites



Whole grains (unless gluten free)



Nuts & nut butters



Lean, skinless meat & fish (salmon, trout, herring)



Legumes



Low-fat or fat free milk products
(Including fortified alternatives: Coconut, oat, almond)



Olive oils high in polyphenols



BENEFITS



Improves heart health



Improves and/or reduces risk for hypertension, heart disease and stroke

FOODS TO AVOID AND/OR LIMIT



Red meat



Fried foods



Sweets



Processed meats - deli meat, hotdogs, sausage, bacon



Sugar-sweetened beverages



Fats/oils - Butter, margarine, tropical oils (coconut, palm)



High-salt foods

Gene Information Key

rsID	Gene	"-" variant	"+" variant
	ACE	A	G
	AGT	A	G
	ATG12	T	C
	ATG16L1	C	T
	ATG5	T	C
	BHMT	G	A
	CBS	A	G
	COMT	G	A
	CYP19A1	A	C
	CYP1B1	T	C
	DIO1	C	A
	MTR	G	A
	NOS3	T	C
	PDE8B	G	A
	SLC30A3	T	G
	SRD5A1	A	G

Disclaimers

TESTING:

Testing Performed By: AC

METHODOLOGY AND LIMITATIONS DISCLAIMER:

Testing for genetic variation/mutation on listed genes was performed using ProFlex PCR and Real-Time PCR with TaqMan® allele-specific probes on the QuantStudio 12K Flex. All genetic testing is performed by GX Sciences, LLC d/b/a Fagron Genomics US ("Fagron Genomics US") (807 Las Cimas Pkwy, Suite 145, 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 for the administration of specific nutrients. Patients should receive appropriate genetic counseling to explain the implications of these test results. Details of assay performance and algorithms leading to clinical recommendations are available upon request. The analytical and performance characteristics of this laboratory developed test (LDT) were determined by Fagron Genomics US's laboratory (Laboratory Director: James Jacobson, PhD) pursuant to Clinical Laboratory Improvement Amendments (CLIA) requirements (CLIA #: 45D2144988).

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Fagron Genomics US SNP References

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