



Cognitive Panel

Health Action Plan

October 1, 2019

Demo Client

Kit #1234ABCD5678

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Understand Your Genetics

This report is broken down into three main sections: Trait Impact, Recommendations and Trait Detail. Depending on the number of traits being reviewed, your report will contain multiple trait and recommendation detail sections. Terms and sections of the report are defined below.

DNA

DNA is a long, ladder-shaped molecule. The rungs of the ladder are made of two amino acids pairing together, these are called bases. They always pair the same way, A (Adenine) with T (Thymine), and C (Cytosine) with G (Guanine). The body is constantly replicating DNA strands.

GENE

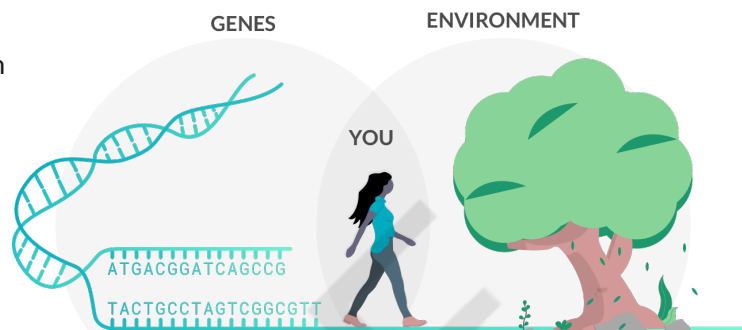
Genes are the basic units of heredity (passed down from generation to generation). They are made of DNA and provide the instructions for how our body works, what we look like, etc. Humans have between 20,000 - 25,000 genes. We inherit half of them from our mother and half from our father.

SNP

A SNP is a Single Nucleotide Polymorphism. SNPs occur when the amino acids making up the base pair do not come together in the same way as the original DNA strand. For example, the original strand may have had an A but the replicated strand has a G. SNPs are common and many of them have no impact to the individual, however, some can change how our body works.

VARIANT

Variants are how SNPs are referred to in this report. When the amino acid in the copied strand is different from the original, it is called a variant - it varies from the original. Variants are not necessarily 'good' or 'bad' they are simply different from the original. The depiction of variants is shown as: +/+ (both copies have different amino acids), +/- (one copy has a different amino acid), -/- (both copies have the same amino acid as the original) or U (one copy is indeterminate).



Reading This Report

Trait	Impact Score
Trait Name	

Gene	SNP/RSID	Variant
SMPL	ex1234567	+ -

Trait Recommendations

1 Trait Impact

This report focuses on traits. These are typically groups of SNPs that have a similar impact on the body's function. We use a proprietary algorithm to determine the impact a group of SNPs may have on a specific function in the body based on your individual test results.

2 Traits

The traits in our reports are typically grouped by body function, a symptom type, a disease, a nutrient need, or a response to environment. Within the trait pages, you will see the SNPs that are looked at for that trait, your variant type and recommendations to optimize health and minimize risk based on your individual results.

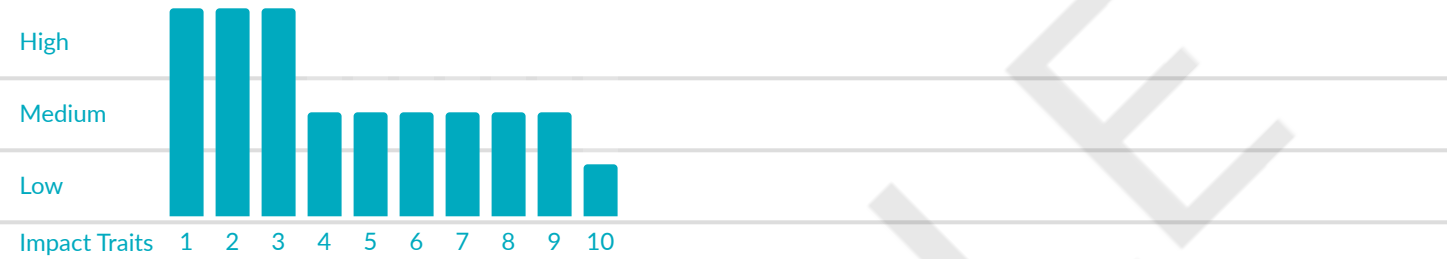
3 Recommendations

Your genes, and therefore your SNPs, will not change during your life. However, this report focuses on SNPs whose impact can be influenced by external factors like diet, exercise, supplements, and lifestyle changes.

Disclaimer - The recommendations in this report have been carefully prepared and reviewed for you by your health and wellness provider, based on his or her reasoned medical judgment about your personal health needs. Be sure that you have shared with your health and wellness provider all relevant information about your health, including any medications or dietary supplements you may be taking, and any medical conditions you may be experiencing, before you adopt any of these recommendations. This test is performed via DNA sequencing. As with all genetic testing with the highest possible standards, the data generated during the laboratory process will have a <99% sensitivity and specificity.

How These Traits Affect You

This page provides a high-level snapshot of the clinical significance of each trait within this panel. The results are in two categories: traits that are ranked high, medium or low impact as well as traits for which there is an explicit result (i.e. categorical such as "yes" or "no"). At the end of this page are a summary of any non-reportable (NR) traits. The results for these traits are unable to be determined from the sample submitted. Recommendations are made for traits with high or medium impact only.



Impact Traits	Impact	Learn More
1 Depression	HIGH	Page 11
2 Inflammation	HIGH	Page 13
3 Oxidative Stress	HIGH	Page 15
4 Alzheimer's Disease	MEDIUM	Page 16
5 Anxiety	MEDIUM	Page 18
6 Concussion with TBI	MEDIUM	Page 20
7 Dementia	MEDIUM	Page 21
8 Mild Cognitive Impairment	MEDIUM	Page 22
9 Parkinson's Disease	MEDIUM	Page 24
10 Omega 3	LOW	

Supplements

Below is a list of the top recommended supplements curated specifically for you. These recommendations may represent a subset of the total recommendations found within the Supplement sections of your report. Recommendations are listed in order of importance based on your individual genetic results. These recommendations have been reviewed by your healthcare provider. Please contact your provider if you have any questions.

Recommendation Name	The Details	Linked Traits
1 Vitamin C	Supplement with 500 - 1,000 mg of vitamin C per day.	Alzheimer's Disease, Anxiety, Depression, Oxidative Stress, Parkinson's Disease
2 Vitamin D3	Supplement with 3,000 IUs of vitamin D3 per day.	Alzheimer's Disease, Depression, Inflammation, Parkinson's Disease
3 Folate	Supplement with 400 - 800 mcg of methyl-folate per day.	Depression, Inflammation, Mild Cognitive Impairment
4 Magnesium	Supplement with 300 - 500 mg of magnesium per day.	Anxiety, Depression, Mild Cognitive Impairment
5 Omega-3	Supplement with 2 - 5 g of omega-3 fatty acid supplement that contains essential fatty acids DHA and EPA.	Alzheimer's Disease, Anxiety, Depression
6 Docosahexaenoic Acid (DHA)	Supplement with 2 g of Docosahexaenoic Acid (DHA) per day.	Concussion with TBI, Mild Cognitive Impairment
7 Probiotics	Supplement with a 10 - 50 billion CFU probiotic per day.	Anxiety, Depression
8 Resveratrol	Supplement with 150 - 2,000 mg of resveratrol per day.	Alzheimer's Disease, Mild Cognitive Impairment
9 Vitamin E	Supplement with 100 - 400 IUs of vitamin E per day.	Oxidative Stress, Parkinson's Disease
10 Zinc	Supplement with 10 - 40 mg of zinc per day.	Depression, Oxidative Stress

Note - If you are taking any medications, consult with your practitioner before starting any new supplements as they may have adverse effects with your medications.

Diet

Below is a list of the top dietary recommendations curated specifically for you. These recommendations may represent a subset of the total recommendations found within the Diet sections of your report. Recommendations are listed in order of importance based on your individual genetic results. These recommendations have been reviewed by your healthcare provider. Please contact your provider if you have any questions.

Recommendation Name	The Details	Linked Traits
1 Anti-Inflammatory Diet	Consume a diet rich in anti-inflammatory foods.	Depression, Inflammation
2 Consume Fatty Fish	Consume 5 to 6 oz of cold-water fatty fish 2 to 3 times per week.	Alzheimer's Disease, Mild Cognitive Impairment
3 Folate Rich Foods	Consume a diet rich in folate.	Depression, Mild Cognitive Impairment
4 Fruits and Vegetables	Include fruits and vegetables at every meal to increase levels of antioxidants in the body, especially strawberries, blueberries, broccoli, sprouts, and green leafy vegetables.	Inflammation, Oxidative Stress
5 Magnesium Rich foods	Consume a diet rich in magnesium.	Anxiety, Depression
6 Mediterranean Diet	Adopt a Mediterranean-style diet that includes a variety of antioxidant-rich foods, heart healthy fats, and complex carbohydrates.	Inflammation, Mild Cognitive Impairment
7 Beta-Carotene	Aim to get the recommended 6 to 15 mg of beta-carotene from the diet per day.	Alzheimer's Disease
8 Calorie Restriction	Reduce overall calorie intake to create a calorie deficit.	Oxidative Stress
9 Caution with Iron Rich Foods	Avoid excessive dietary iron intake.	Parkinson's Disease
10 Consume Beneficial Probiotics	Consume 6 to 8 oz of probiotic-rich foods daily.	Alzheimer's Disease

Lifestyle

Below is a list of the top lifestyle recommendations curated specifically for you. These recommendations may represent a subset of the total recommendations found within the Lifestyle sections of your report. Recommendations are listed in order of importance based on your individual genetic results. These recommendations have been reviewed by your healthcare provider. Please contact your provider if you have any questions.

Recommendation Name	The Details	Linked Traits
1 Brain Exercise	Engage in daily brain stimulating activities, such as puzzles, crosswords, or reading, for at least 30 minutes.	Alzheimer's Disease, Mild Cognitive Impairment, Parkinson's Disease
2 Meditation	Engage in 10 to 20 minutes of mindfulness meditation 2 or more times per week.	Anxiety, Depression
3 Hypothermia Treatment	Engage in practitioner-supervised short-term mild hypothermia treatments (cooling the core temperature ~2 degrees F) for a period of 3 to 14 days.	Concussion with TBI
4 Intermittent Fasting	Try intermittent fasting (fasting for 14+ hours daily) or alternate day fasting (fasting for 24 hours every other day).	Inflammation
5 Lemon Balm Essential Oils	Apply a lemon balm essential oil twice daily for at least 4 weeks.	Alzheimer's Disease
6 Reduce Stress	Engage in enjoyable hobbies such as gardening, sports, or other leisure activities to help reduce stress.	Oxidative Stress
7 Sleep Consistency	Stick to a consistent sleep routine that consists of going to sleep and waking up at approximately the same time each day.	Inflammation

Exercise

Below is a list of the top exercise recommendations curated specifically for you. These recommendations may represent a subset of the total recommendations found within the Exercise sections of your report. Recommendations are listed in order of importance based on your individual genetic results. These recommendations have been reviewed by your healthcare provider. Please contact your provider if you have any questions.

Recommendation Name	The Details	Linked Traits
1 Aerobic Activity	Aim for 20 to 30 minutes of aerobic physical activity most days of the week.	Alzheimer's Disease, Anxiety, Dementia, Depression, Mild Cognitive Impairment, Oxidative Stress, Parkinson's Disease
2 Yoga	Incorporate at least 1 to 2 yoga sessions into your weekly exercise routine.	Depression, Oxidative Stress
3 Dancing	Incorporate 45 to 60 minutes of dance several times per week into your normal exercise routine.	Depression
4 Qigong	Practice Qigong 30 minutes per day, 3 to 4 times per week.	Anxiety

Further Testing

Below is a list of the top further testing recommendations curated specifically for you. These recommendations may represent a subset of the total recommendations found within the Further Testing sections of your report. Recommendations are listed in order of importance based on your individual genetic results. These recommendations have been reviewed by your healthcare provider. Please contact your provider if you have any questions.

Recommendation Name	The Details	Linked Traits
1 Homocysteine Levels	Check blood homocysteine levels	Alzheimer's Disease, Anxiety, Dementia, Depression, Inflammation, Mild Cognitive Impairment, Parkinson's Disease
2 Antioxidants	Test for circulating antioxidant levels	Dementia, Mild Cognitive Impairment, Parkinson's Disease
3 Vitamin D3 (25-OH)	Test blood levels of vitamin D3 (25-OH)	Depression, Mild Cognitive Impairment, Parkinson's Disease
4 C-Reactive Protein (CRP) or hsCRP	Test levels of C-Reactive Protein (CRP) or hsCRP	Inflammation
5 Carotinoids	Test alpha-carotene, beta-carotene, beta-cryptoxanthin, lycopene, lutein, zeaxanthin and serum Vitamin A	Depression
6 Erythrocyte Sedimentation Rate (ESR)	Test erythrocyte sedimentation rate (ESR) in blood	Inflammation
7 Fibrinogen	Test fibrinogen levels in the body	Inflammation
8 Folate Testing	Test folate levels	Inflammation
9 Glutathione	Test Glutathione serum levels	Alzheimer's Disease
10 IL-6 Testing	Test for levels of IL-6	Inflammation



Appendix 1

Cognitive Panel

SAMPLE

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Depression

People with similar genetic markers may be predisposed or at a higher risk for depression.

Gene	SNP	Variant	Impact
HTR1A	rs6295	+/+	High
HTR1A	rs878567	+/+	High
FKBP5	rs3800373	+/+	High
SLC6A4	rs25531	+/+	High
FKBP5	rs1360780	+/+	High
FKBP5	rs9296158	+/+	High
CRHR1	rs110402	+/+	High
GNB3	rs5443	+/+	High
CHRH2	rs3779250	+/+	High
MTHFR	rs1801133	+/-	Medium
KSR2	rs7973260	+/-	Medium
LHPP	rs35936514	-/-	Low
SLC6A15	rs1545843	+/-	Low
SIRT1	rs12415800	-/-	Low
PCLO	rs2522833	+/-	Low

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT

• Omega-3

• Zinc

• Vitamin C

• Vitamin D3

• Folate

• Magnesium

• Probiotics

• SAMe (S-Adenosyl-L-Methionine)

DIET

• Magnesium Rich foods

• Zinc Rich Foods

• Anti-Inflammatory Diet

• Folate Rich Foods

• Gluten Free Diet

LIFESTYLE

- Meditation

EXERCISE

- Dancing
- Aerobic Activity
- Yoga

FURTHER TESTING

- Carotinoids
- Serum B12 Levels
- Homocysteine Levels
- Zinc
- Vitamin D3 (25-OH)
- Methylmalonic Levels
- Magnesium

Inflammation

People with similar genetic markers may be more likely to experience increased levels of inflammation, which is the body’s natural response to an injury, wound, or infection.

Gene	SNP	Variant	Impact
TNF-α	rs1800629	+/+	High
IL6	rs1800795	+/+	High
TNF-α	rs1799724	+/-	Medium
PTPN22	rs2476601	+/-	Medium
IL-10	rs1800872	+/-	Low
TNF-α	rs1799964	-/-	Low
IL23R	rs2201841	+/-	Low
IL-10	rs3024505	-/-	Low

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT	<ul style="list-style-type: none">MultivitaminVitamin D3Curcumin	<ul style="list-style-type: none">Betaine Hydrochloride (HCl)Folate
DIET	<ul style="list-style-type: none">Anti-Inflammatory DietDietary FiberNut Consumption	<ul style="list-style-type: none">Omega-3 Rich FoodsMediterranean DietFruits and Vegetables
LIFESTYLE	<ul style="list-style-type: none">Sleep Consistency	<ul style="list-style-type: none">Intermittent Fasting
FURTHER TESTING	<ul style="list-style-type: none">Homocysteine LevelsC-Reactive Protein (CRP) or hsCRPFibrinogen	<ul style="list-style-type: none">IL-6 TestingErythrocyte Sedimentation Rate (ESR)Folate Testing

-
- TNF-alpha
-

SAMPLE

Oxidative Stress

People with similar genetic markers may experience higher levels of oxidative stress due in part to antioxidant depletion.

Gene	SNP	Variant	Impact
UGT	rs1105879	+/+	High
CDKN	rs10811661	+/+	High
GSTP1	rs1695	-/-	Low
CYP1A1	rs1048943	-/-	Low
LRRK2	rs34637584	-/-	Low
SOD2	rs4880	+/-	Low

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT	<ul style="list-style-type: none">ZincVitamin CVitamin E
DIET	<ul style="list-style-type: none">Calorie RestrictionFruits and Vegetables
LIFESTYLE	<ul style="list-style-type: none">Reduce Stress
EXERCISE	<ul style="list-style-type: none">Aerobic ActivityYoga
FURTHER TESTING	<ul style="list-style-type: none">Markers of Oxidative Stress

Alzheimer's Disease

People with similar genetic markers may be at a higher risk for developing Alzheimer's disease.

Gene	SNP	Variant	Impact
APOE	rs7412	E3/E3	Medium
CD2Ap	rs9349407	+/+	High
SORL1	rs11218343	+/+	High
SPSB1	rs11121365	+/-	Medium
BIN1	rs744373	+/-	Medium
ABCA7	rs3764650	+/-	Medium
CR1	rs3818361	+/-	Medium
RAB20	rs56378310	+/-	Medium
MS4A4E	rs670139	+/-	Medium
BDH1	rs2484	-/-	Low
APOE	rs429358	E3/E3	Medium
PLD3	rs145999145	-/-	Low
CR1	rs6656401	-/-	Low
ST6GAL1	rs3936289	-/-	Low
ADARB2	rs10903488	-/-	Low
TREM2	rs75932628	-/-	Low
PDS5B	rs192470679	-/-	Low
TOMM40	rs2075650	NR	Not Reportable

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT	• Omega-3	• Vitamin C
	• Vitamin D3	• Resveratrol
DIET	• Vitamin C Rich Foods	• Low Glycemic Index Foods
	• Consume Beneficial Probiotics	• Consume Fatty Fish
	• Vitamin E Rich Foods	• Beta-Carotene

LIFESTYLE

- Lemon Balm Essential Oils
- Brain Exercise

EXERCISE

- Aerobic Activity

FURTHER TESTING

- Manganese
- Homocysteine Levels
- Glutathione

SAMPLE

Anxiety

People with similar genetic markers may be at a higher risk for anxiety-related disorders, such as generalized anxiety disorder and panic disorder.

Gene	SNP	Variant	Impact
LOCI5225	rs1709393	+/+	High
SLC6A4	rs25531	+/+	High
CAMKMT	rs1067327	+/+	High
RGS2	rs4606	+/+	High
MAOA	rs6323	+/+	High
ACCN1	rs280039	+/-	Medium
LOC101927284	rs9302001	+/-	Medium
TMEM132D	rs7309727	+/-	Medium
TMEM16B	rs12579350	+/-	Medium
SDK2	rs3816995	+/-	Medium
COMT	rs4680	+/-	Medium
MFHAS1	rs12682352	+/-	Medium
MAGI1	rs35855737	+/-	Medium
NPSR1	rs324981	-/-	Low
PLEKHG1	rs9372078	-/-	Low
HTR1A	rs6295	-/-	Low
CALCOCO1	rs941184	-/-	Low
PKP1	rs860554	-/-	Low
BDNF	rs6265	-/-	Low
NPY5R	rs12501691	-/-	Low
NPY	rs16147	+/-	Low
CLU	rs17466684	-/-	Low
BDKBR2	rs10144552	-/-	Low

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT

- Omega-3
- Vitamin C
- Magnesium
- Probiotics

- L-Lysine and L-Arginine
- Lavender Oil
- Phosphatidylserine
- Ashwagandha
- L-Theanine

DIET

- Magnesium Rich foods

LIFESTYLE

- Meditation

EXERCISE

- Qigong
- Aerobic Activity

FURTHER TESTING

- Homocysteine Levels

Concussion with TBI

People with similar genetic markers may require additional recovery time, or experience more severe memory and thinking problems during recovery from a concussive injury.

Gene	SNP	Variant	Impact
APOE	rs7412	E3/E3	= Medium
BDNF	rs6265	-/-	— Low
CACNA1A	rs121908225	-/-	— Low
NOS3	rs2070744	-/-	— Low
APOE	rs429358	E3/E3	= Medium

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT

- Vitamin D and Progesterone Injections
- Creatine
- Enzogenol
- Docosahexaenoic Acid (DHA)

LIFESTYLE

- Hypothermia Treatment

Dementia

People with similar genetic markers may be at a higher risk for developing certain forms of dementia in older age.

Gene	SNP	Variant	Impact
APOE	rs7412	E3/E3	Medium
PHLDB2	rs951660	+/-	Medium
TMEM106B	rs1990622	+/-	Medium
TNF-α	rs1799724	+/-	Medium
HLA	rs9268856	+/-	Medium
SYK	rs290227	+/-	Medium
TNFRSF19	rs9317882	+/-	Medium
FAM134B	rs10041159	+/-	Medium
HLA	rs1980493	-/-	Low
APOE	rs429358	E3/E3	Medium
AGT	rs61754634	-/-	Low
HSPA1A	rs1008438	-/-	Low
TNF-α	rs1799964	-/-	Low
HLA	rs9268877	-/-	Low
APOE	rs769449	-/-	Low

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT	<ul style="list-style-type: none">L-CarnitineCholineAntioxidantsCombined Nutraceutical
DIET	<ul style="list-style-type: none">Potassium Rich FoodsDiet Quality
EXERCISE	<ul style="list-style-type: none">Aerobic Activity
FURTHER TESTING	<ul style="list-style-type: none">Homocysteine LevelsAntioxidants

Mild Cognitive Impairment

People with similar genetic markers may be at a higher risk for mild cognitive impairment.

Gene	SNP	Variant	Impact
MS4A6A	rs610932	+/+	High
APOE	rs7412	E3/E3	Medium
HRK/FBXW8	rs7294919	+/+	High
ASTN2	rs7852872	+/-	Medium
LHFP	rs9315702	+/-	Medium
MSRB3/WIF1	rs17178006	-/-	Low
GCFC2	rs2298948	-/-	Low
BDNF	rs6265	-/-	Low
DPP4	rs6741949	-/-	Low
IL6	rs1800795	-/-	Low
F5	rs6703865	-/-	Low
APOE	rs429358	E3/E3	Medium
PARP1	rs1136410	-/-	Low

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT

- Folate
- Magnesium
- Docosahexaenoic Acid (DHA)
- Vitamin B12
- Resveratrol

DIET

- Folate Rich Foods
- Mediterranean Diet
- Selenium Rich Foods
- Consume Fatty Fish

LIFESTYLE

- Brain Exercise

EXERCISE

- Aerobic Activity

FURTHER TESTING

- Non-Ceruloplasmin-Bound Copper
- Homocysteine Levels

-
- Vitamin D3 (25-OH)
 - Antioxidants
-

SAMPLE

Parkinson's Disease

People with similar genetic markers may be at a higher risk for developing Parkinson's disease.

Gene	SNP	Variant	Impact
SNCA	rs199533	+/+	High
SNCA	rs199498	+/+	High
RAB7L1	rs823128	+/+	High
SNCA	rs356219	+/+	High
GPNMB	rs199347	+/+	High
VPS13C	rs2414739	+/+	High
SNCA	rs2736990	+/+	High
GCH1	rs11158026	+/+	High
SIPA1L2	rs10797576	+/+	High
STK39	rs2102808	+/+	High
BCKDK/STX1B	rs14235	+/+	High
HLA-DQB1	rs9275326	+/+	High
MCCC1	rs11711441	+/+	High
SREBF1	rs11868035	+/+	High
INPP5F	rs117896735	+/+	High
MCCC1	rs12637471	+/+	High
RAB7L1	rs823114	+/-	Medium
RAB7L1	rs823118	+/-	Medium
BST1	rs4698412	+/-	Medium
SNCA	rs11012	+/-	Medium
MTHFR	rs1801133	+/-	Medium
LRRK2	rs1994090	+/-	Medium
MIR4697	rs329648	+/-	Medium
BST1	rs11724635	+/-	Medium
SNCA	rs17577094	+/-	Medium
SNCA	rs8070723	+/-	Medium
SNCA	rs2942168	+/-	Medium
FAM47E	rs6812193	+/-	Medium
SNCA	rs393152	+/-	Medium
SNCA	rs12185268	+/-	Medium
TMEM175	rs6599389	-/-	Low
TMEM175	rs11248051	-/-	Low

GBA	rs12726330	-/-	Low
SNCA	rs11931074	-/-	Low
UCHL1	rs5030732	-/-	Low
LRRK2	rs34637584	-/-	Low
RAB7L1	rs947211	-/-	Low
TMEM175	rs34311866	-/-	Low
SNCA	rs6532194	-/-	Low
TMEM175	rs11248060	-/-	Low
CCDC62	rs11060180	-/-	Low
LRRK2	rs1491942	-/-	Low
RIT2	rs4130047	-/-	Low
STK39	rs1474055	-/-	Low
LRRK2	rs76904798	-/-	Low
DDRGK1	rs8118008	-/-	Low
GBA	rs34372695	-/-	Low
ACMSD/TMEM163	rs6430538	-/-	Low
TMEM175	rs6599388	NR	Not Reportable
SNCA	rs356220	NR	Not Reportable

Recommendations

These recommendations are based on the genetic findings in the chart above.

SUPPLEMENT

- Vitamin C
- Vitamin D3
- Riboflavin (Vitamin B2)
- Vitamin E
- Niacinamide (Vitamin B3)

DIET

- Caution with Iron Rich Foods
- Reduce Your Dietary Fat Intake
- Flavonoids

LIFESTYLE

- Brain Exercise

EXERCISE

- Aerobic Activity

FURTHER TESTING

- Homocysteine Levels
- Vitamin D3 (25-OH)
- Vitamin C Test
- Antioxidants

- Serum Iron

SAMPLE



Recommendation Detailed Appendix



Appendix 2

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Supplements

Recommendation Name	The Details	Linked Traits
Vitamin C	Supplement with 500 - 1,000 mg of vitamin C per day.	Alzheimer's Disease, Anxiety, Depression, Oxidative Stress, Parkinson's Disease
Vitamin D3	Supplement with 3,000 IUs of vitamin D3 per day.	Alzheimer's Disease, Depression, Inflammation, Parkinson's Disease
Folate	Supplement with 400 - 800 mcg of methyl-folate per day.	Depression, Inflammation, Mild Cognitive Impairment
Magnesium	Supplement with 300 - 500 mg of magnesium per day.	Anxiety, Depression, Mild Cognitive Impairment
Omega-3	Supplement with 2 - 5 g of omega-3 fatty acid supplement that contains essential fatty acids DHA and EPA.	Alzheimer's Disease, Anxiety, Depression
Docosahexaenoic Acid (DHA)	Supplement with 2 g of Docosahexaenoic Acid (DHA) per day.	Concussion with TBI, Mild Cognitive Impairment
Probiotics	Supplement with a 10 - 50 billion CFU probiotic per day.	Anxiety, Depression
Resveratrol	Supplement with 150 - 2,000 mg of resveratrol per day.	Alzheimer's Disease, Mild Cognitive Impairment
Vitamin E	Supplement with 100 - 400 IUs of vitamin E per day.	Oxidative Stress, Parkinson's Disease
Zinc	Supplement with 10 - 40 mg of zinc per day.	Depression, Oxidative Stress
Antioxidants	Consider taking 1,000 - 5,000 mg of an antioxidant supplement daily.	Dementia
Ashwagandha	Supplement with 250 - 300 mg of ashwagandha per day.	Anxiety
Betaine Hydrochloride (HCl)	Supplement with 1 - 2 g of betaine hydrochloride (HCl) with meals for at least 6 months.	Inflammation
Choline	Supplement with 250 - 500 mg of choline per day.	Dementia
Combined Nutraceutical	Consider supplementing a nutraceutical containing: 320 mg Bacopa monner extract, 100 mg L-theanine, 30 mg saffron extract, 9.5 mg vitamin B6, 450 mcg biotin, 400 mcg folic acid, 33 mcg vitamin B12, and 25 mcg vitamin D3 each day for at least 8 weeks.	Dementia
Creatine	Supplement with 0.4 g of creatine per kilogram of body weight per day for at least 6 months.	Concussion with TBI
Curcumin	Supplement with 250 - 2,000 mg of curcumin extract per day.	Inflammation
Enzogenol	Supplement with 1,000 mg of enzogenol daily for at least 6 weeks.	Concussion with TBI
L-Carnitine	Supplement with 500 mg - 4 g of L-carnitine per day.	Dementia

L-Lysine and L-Arginine	Supplement with a combination of 2.64 g per day of L-lysine and 2.64 g of L-arginine per day.	Anxiety
L-Theanine	Supplement with 200 mg of L-theanine per day.	Anxiety
Lavender Oil	Supplement with 80 mg of an oral lavender supplement per day.	Anxiety
Multivitamin	Supplement with a multivitamin that includes activated B vitamins.	Inflammation
Niacinamide (Vitamin B3)	Supplement with 1 - 3 g of niacinamide (vitamin B3) per day.	Parkinson's Disease
Phosphatidylserine	Supplement with 400 mg of phosphatidylserine per day.	Anxiety
Riboflavin (Vitamin B2)	Supplement with 100 - 400 mg of riboflavin (vitamin B2) per day.	Parkinson's Disease
SAMe (S-Adenosyl-L-Methionine)	Supplement with 800 mg of SAMe per day.	Depression
Vitamin B12	Supplement with 500 mcg of vitamin B12 per day.	Mild Cognitive Impairment
Vitamin D and Progesterone Injections	Supplement with 3,000 IUs of vitamin D3 along with 1 mg of progesterone per kilogram of body weight every 12 hours after injury for at least 5 days.	Concussion with TBI

Diet

Recommendation Name	The Details	Linked Traits
Anti-Inflammatory Diet	Consume a diet rich in anti-inflammatory foods.	Depression, Inflammation
Consume Fatty Fish	Consume 5 to 6 oz of cold-water fatty fish 2 to 3 times per week.	Alzheimer's Disease, Mild Cognitive Impairment
Folate Rich Foods	Consume a diet rich in folate.	Depression, Mild Cognitive Impairment
Fruits and Vegetables	Include fruits and vegetables at every meal to increase levels of antioxidants in the body, especially strawberries, blueberries, broccoli, sprouts, and green leafy vegetables.	Inflammation, Oxidative Stress
Magnesium Rich foods	Consume a diet rich in magnesium.	Anxiety, Depression
Mediterranean Diet	Adopt a Mediterranean-style diet that includes a variety of antioxidant-rich foods, heart healthy fats, and complex carbohydrates.	Inflammation, Mild Cognitive Impairment
Beta-Carotene	Aim to get the recommended 6 to 15 mg of beta-carotene from the diet per day.	Alzheimer's Disease
Calorie Restriction	Reduce overall calorie intake to create a calorie deficit.	Oxidative Stress
Caution with Iron Rich Foods	Avoid excessive dietary iron intake.	Parkinson's Disease
Consume Beneficial Probiotics	Consume 6 to 8 oz of probiotic-rich foods daily.	Alzheimer's Disease
Diet Quality	Consume a diet that is low in saturated fats, high in antioxidants, and high in B vitamins.	Dementia
Dietary Fiber	Increase dietary fiber intake to recommended 25 g for females and 30 g for males.	Inflammation
Flavonoids	Aim to eat 6 servings, approximately 1,000 mg, per day of flavinoid foods.	Parkinson's Disease
Gluten Free Diet	Avoid gluten-containing foods such as baked goods, cereals, or other foods processed in a facility that also processes gluten.	Depression
Low Glycemic Index Foods	Choose low-glycemic index foods to avoid blood sugar spikes.	Alzheimer's Disease
Nut Consumption	Consume a variety of nuts including almonds, walnuts, macadamia nuts, and brazil nuts.	Inflammation
Omega-3 Rich Foods	Consume a diet rich in omega-3 fatty acids.	Inflammation
Potassium Rich Foods	Consume a diet rich in potassium.	Dementia
Reduce Your Dietary Fat Intake	Reduce the amount of fat in the diet to no more than 20% of total daily caloric intake (no more than 22 g of saturated fat).	Parkinson's Disease

Selenium Rich Foods	Consume a diet rich in selenium.	Mild Cognitive Impairment
Vitamin C Rich Foods	Consume a diet rich in vitamin C.	Alzheimer's Disease
Vitamin E Rich Foods	Aim to get at least 15 mg of tocopherols (vitamin E) from a combination of diet and supplementation per day.	Alzheimer's Disease
Zinc Rich Foods	Consume a diet rich in zinc.	Depression

Lifestyle

Recommendation Name	The Details	Linked Traits
Brain Exercise	Engage in daily brain stimulating activities, such as puzzles, crosswords, or reading, for at least 30 minutes.	Alzheimer's Disease, Mild Cognitive Impairment, Parkinson's Disease
Meditation	Engage in 10 to 20 minutes of mindfulness meditation 2 or more times per week.	Anxiety, Depression
Hypothermia Treatment	Engage in practitioner-supervised short-term mild hypothermia treatments (cooling the core temperature ~2 degrees F) for a period of 3 to 14 days.	Concussion with TBI
Intermittent Fasting	Try intermittent fasting (fasting for 14+ hours daily) or alternate day fasting (fasting for 24 hours every other day).	Inflammation
Lemon Balm Essential Oils	Apply a lemon balm essential oil twice daily for at least 4 weeks.	Alzheimer's Disease
Reduce Stress	Engage in enjoyable hobbies such as gardening, sports, or other leisure activities to help reduce stress.	Oxidative Stress
Sleep Consistency	Stick to a consistent sleep routine that consists of going to sleep and waking up at approximately the same time each day.	Inflammation

Exercise

Recommendation Name	The Details	Linked Traits
Aerobic Activity	Aim for 20 to 30 minutes of aerobic physical activity most days of the week.	Alzheimer's Disease, Anxiety, Dementia, Depression, Mild Cognitive Impairment, Oxidative Stress, Parkinson's Disease
Yoga	Incorporate at least 1 to 2 yoga sessions into your weekly exercise routine.	Depression, Oxidative Stress
Dancing	Incorporate 45 to 60 minutes of dance several times per week into your normal exercise routine.	Depression
Qigong	Practice Qigong 30 minutes per day, 3 to 4 times per week.	Anxiety

Further Testing

Recommendation Name	The Details	Linked Traits
Homocysteine Levels	Check blood homocysteine levels	Alzheimer's Disease, Anxiety, Dementia, Depression, Inflammation, Mild Cognitive Impairment, Parkinson's Disease
Antioxidants	Test for circulating antioxidant levels	Dementia, Mild Cognitive Impairment, Parkinson's Disease
Vitamin D3 (25-OH)	Test blood levels of vitamin D3 (25-OH)	Depression, Mild Cognitive Impairment, Parkinson's Disease
C-Reactive Protein (CRP) or hsCRP	Test levels of C-Reactive Protein (CRP) or hsCRP	Inflammation
Carotinoids	Test alpha-carotene, beta-carotene, beta-cryptoxanthin, lycopene, lutein, zeaxanthin and serum Vitamin A	Depression
Erythrocyte Sedimentation Rate (ESR)	Test erythrocyte sedimentation rate (ESR) in blood	Inflammation
Fibrinogen	Test fibrinogen levels in the body	Inflammation
Folate Testing	Test folate levels	Inflammation
Glutathione	Test Glutathione serum levels	Alzheimer's Disease
IL-6 Testing	Test for levels of IL-6	Inflammation
Magnesium	Test magnesium levels	Depression
Manganese	Test blood manganese levels	Alzheimer's Disease
Markers of Oxidative Stress	Test markers of oxidative stress	Oxidative Stress
Methylmalonic Levels	Test for methylmalonic levels	Depression
Non-Ceruloplasmin-Bound Copper	Test non-ceruloplasmin-bound copper levels	Mild Cognitive Impairment
Serum B12 Levels	Measure serum B12 levels	Depression
Serum Iron	Test serum iron levels	Parkinson's Disease
TNF-alpha	Test for TNF-alpha	Inflammation
Vitamin C Test	Test blood vitamin C levels	Parkinson's Disease
Zinc	Test serum zinc levels	Depression