



# Detox 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

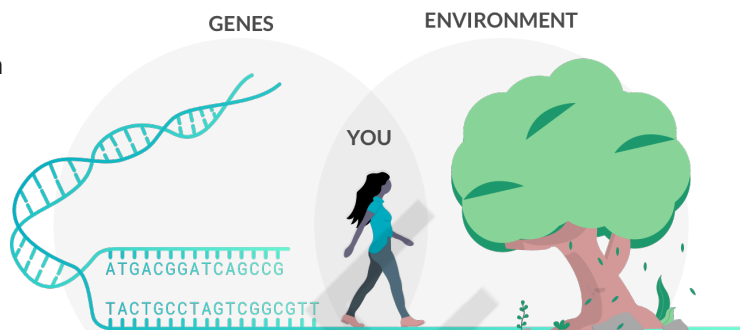
Genes are the basic units of heredity (passed down from generation to generation). They are made of DNA and provide the instructions for how our body works, what we look like, etc. Humans have between 20,000 - 25,000 genes. We inherit half of them from our mother and half from our father.

## 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.

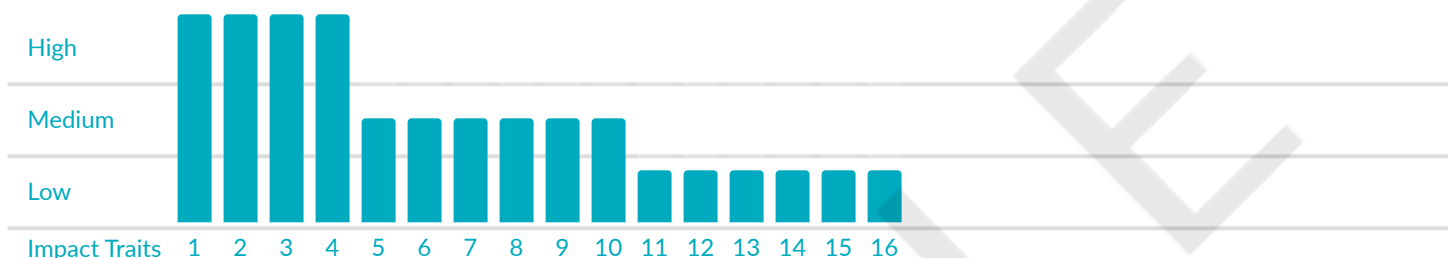
### 3 Recommendations

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 Inflammation	HIGH	<a href="#">Page 12</a>
2 Oxidative Stress	HIGH	<a href="#">Page 14</a>
3 SOD	HIGH	<a href="#">Page 15</a>
4 SULT	HIGH	<a href="#">Page 16</a>
5 CYP1B1	MEDIUM	<a href="#">Page 17</a>
6 Estrogen Metabolism	MEDIUM	<a href="#">Page 18</a>
7 Glutathione	MEDIUM	<a href="#">Page 20</a>
8 MTHFR	MEDIUM	<a href="#">Page 21</a>
9 NAT	MEDIUM	<a href="#">Page 22</a>
10 SLC	MEDIUM	<a href="#">Page 23</a>
11 CYP1A1	LOW	
12 CYP1A2	LOW	
13 CYP2s	LOW	
14 Nrf2	LOW	
15 SUOX	LOW	
16 UGT	LOW	

Categorical Traits	Result	Learn More
1 COMT	Average Metabolizer	<u>Page 24</u>

SAMPLE

## 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
<b>1 Folate</b>	Supplement with 400 - 800 mcg of methyl-folate per day.	COMT, Estrogen Metabolism, Inflammation, MTHFR, NAT, SLC
<b>2 Curcumin</b>	Supplement with 250 - 2,000 mg of curcumin extract per day.	Estrogen Metabolism, Glutathione, Inflammation, SOD
<b>3 Vitamin C</b>	Supplement with 500 - 1,000 mg of vitamin C per day.	NAT, Oxidative Stress, SOD
<b>4 Vitamin D3</b>	Supplement with 3,000 IUs of vitamin D3 per day.	Inflammation, SLC, SULT
<b>5 Ellagic Acid</b>	Supplement with 200 mg of ellagic acid per day.	Estrogen Metabolism, Glutathione
<b>6 Lycopene</b>	Supplement with 15 mg of lycopene per day.	CYP1B1, Estrogen Metabolism
<b>7 Magnesium</b>	Supplement with 300 - 500 mg of magnesium per day.	COMT, Estrogen Metabolism
<b>8 Resveratrol</b>	Supplement with 150 - 2,000 mg of resveratrol per day.	Estrogen Metabolism, Glutathione
<b>9 Soybean Isoflavone Extract</b>	Supplement with 500 mg of soybean isoflavones per day.	CYP1B1, Estrogen Metabolism
<b>10 Vitamin B12</b>	Supplement with 500 mcg of vitamin B12 per day.	MTHFR, SLC

**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
<b>1 Mediterranean Diet</b>	Adopt a Mediterranean-style diet that includes a variety of antioxidant-rich foods, heart healthy fats, and complex carbohydrates.	Inflammation, NAT, SOD
<b>2 Reduce Intake of Grilled and Well-Done Meat</b>	Reduce your intake of meat, poultry, and fish cooked at temperatures exceeding 400 degrees F.	CYP1B1, Estrogen Metabolism, NAT
<b>3 Allium Vegetables</b>	Aim to include at least 1 serving of allium vegetables, garlic, and leeks, in your daily diet.	Estrogen Metabolism, Glutathione
<b>4 Citrus Foods</b>	Aim to include 1 serving of citrus foods to your diet per day.	Estrogen Metabolism, Glutathione
<b>5 Cruciferous Vegetables</b>	Add 2 to 5 cups of cruciferous vegetables per day to your diet.	Estrogen Metabolism, Glutathione
<b>6 Dietary Fiber</b>	Increase dietary fiber intake to recommended 25 g for females and 30 g for males.	Estrogen Metabolism, Inflammation
<b>7 Fruits and Vegetables</b>	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
<b>8 Anthocyanin Rich Foods</b>	Consume approximately 5 to 10 g of anthocyanin-rich foods, such as blueberries, cherries, and yams, per day.	Glutathione
<b>9 Anti-Inflammatory Diet</b>	Consume a diet rich in anti-inflammatory foods.	Inflammation
<b>10 Calorie Restriction</b>	Reduce overall calorie intake to create a calorie deficit.	Oxidative Stress

# 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
<b>1 Avoid 2nd Hand Smoke and/or Quit Smoking</b>	Quit smoking and limit any exposure to second-hand smoke.	CYP1B1, Estrogen Metabolism, NAT
<b>2 Limit Alcohol</b>	Avoid alcohol or limit alcohol to no more than 1 drink per day for women and 2 drinks per day for men.	CYP1B1, Estrogen Metabolism, NAT
<b>3 Avoid Polychlorinated Biphenyl (PCBs)</b>	Avoid Polychlorinated Biphenyl (PCBs) by reducing your intake of contaminated foods such as fish, shellfish, meat, poultry, milk, and dairy products.	Estrogen Metabolism, NAT
<b>4 Intermittent Fasting</b>	Try intermittent fasting (fasting for 14+ hours daily) or alternate day fasting (fasting for 24 hours every other day).	Inflammation
<b>5 Limit Ibuprofen</b>	Limit the use of non-steroidal anti-inflammatory drugs (NSAID), such as Ibuprofen or Aspirin.	NAT
<b>6 Limit Xenoestrogens</b>	Limit exposure to xenoestrogens, such as those found in pesticides and plastic containers.	Estrogen Metabolism
<b>7 Reduce Stress</b>	Engage in enjoyable hobbies such as gardening, sports, or other leisure activities to help reduce stress.	Oxidative Stress
<b>8 Sleep Consistency</b>	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
<b>1 Aerobic Activity</b>	Aim for 20 to 30 minutes of aerobic physical activity most days of the week.	Oxidative Stress
<b>2 Yoga</b>	Incorporate at least 1 to 2 yoga sessions into your weekly exercise routine.	Oxidative Stress

## 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
<b>1 Folate Testing</b>	Test folate levels	Inflammation, MTHFR
<b>2 Homocysteine Levels</b>	Check blood homocysteine levels	Inflammation, MTHFR
<b>3 C-Reactive Protein (CRP) or hsCRP</b>	Test levels of C-Reactive Protein (CRP) or hsCRP	Inflammation
<b>4 Catecholamine Markers</b>	Test urinary catecholamine markers	COMT
<b>5 Erythrocyte Sedimentation Rate (ESR)</b>	Test erythrocyte sedimentation rate (ESR) in blood	Inflammation
<b>6 Estradiol Testing (E2)</b>	Test estradiol (E2) levels	Estrogen Metabolism
<b>7 Fibrinogen</b>	Test fibrinogen levels in the body	Inflammation
<b>8 Hormone Metabolism Urine Tests</b>	Test for urinary hormone metabolites	Estrogen Metabolism
<b>9 IL-6 Testing</b>	Test for levels of IL-6	Inflammation
<b>10 Markers of Oxidative Stress</b>	Test markers of oxidative stress	Oxidative Stress



## Appendix 1

# Detox Panel

SAMPLE

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# 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- $\alpha$	rs1800629	+/+	High
IL6	rs1800795	+/+	High
TNF- $\alpha$	rs1799724	+/-	Medium
PTPN22	rs2476601	+/-	Medium
IL-10	rs1800872	+/-	Low
TNF- $\alpha$	rs1799964	-/-	Low
IL23R	rs2201841	+/-	Low
IL-10	rs3024505	-/-	Low

## Recommendations

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

### SUPPLEMENT

- Multivitamin
- Betaine Hydrochloride (HCl)
- Vitamin D3
- Folate
- Curcumin

### DIET

- Anti-Inflammatory Diet
- Omega-3 Rich Foods
- Dietary Fiber
- Mediterranean Diet
- Nut Consumption
- Fruits and Vegetables

### LIFESTYLE

- Sleep Consistency
- Intermittent Fasting

### FURTHER TESTING

- Homocysteine Levels
- IL-6 Testing
- C-Reactive Protein (CRP) or hsCRP
- Erythrocyte Sedimentation Rate (ESR)
- Fibrinogen
- 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

- Zinc
- Vitamin C
- Vitamin E

### DIET

- Calorie Restriction
- Fruits and Vegetables

### LIFESTYLE

- Reduce Stress

### EXERCISE

- Aerobic Activity
- Yoga

### FURTHER TESTING

- Markers of Oxidative Stress

# SOD

People with similar genetic markers may be at a higher risk for decreased antioxidant defense pathways against free radicals and reactive oxygen species (ROS).

Gene	SNP	Variant	Impact
SOD2	rs4880	+/-	Medium

## Recommendations

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

### SUPPLEMENT

- CoQ10
- Quercetin
- Vitamin C
- Vitamin A
- Curcumin
- Manganese
- Vitamin E

### DIET

- Mediterranean Diet

# SULT

People with similar genetic markers may be at a higher risk for impaired metabolism of xenobiotics (foreign chemical substances) such as polycyclic aromatic hydrocarbons (carcinogens) and anticancer drugs.

Gene	SNP	Variant	Impact
SULT1A1	rs1801030	+/+	High
SULT1A1	rs1042157	+/-	Medium

## Recommendations

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

SUPPLEMENT	<ul style="list-style-type: none"><li>Vitamin D3</li></ul>
DIET	<ul style="list-style-type: none"><li>Mindful Caffeine Intake</li><li>Vitamin A Rich Foods</li></ul>



# CYP1B1

People with similar genetic markers may be at a higher risk for impaired hydroxylation pathways, a process in which hydroxyl groups (-OH) are added to organic compounds, resulting in increased exposure to certain toxins and oxidative metabolites.

Gene	SNP	Variant	Impact
CYP1B1	rs1056837	+/+	≡ High
CYP1B1	rs1056836	-/-	— Low

## Recommendations

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

### SUPPLEMENT

- Soybean Isoflavone Extract
- Lycopene

### DIET

- Reduce Intake of Grilled and Well-Done Meat
- Foods with Perillyl Alcohol (POH)

### LIFESTYLE

- Avoid 2nd Hand Smoke and/or Quit Smoking
- Limit Alcohol

# Estrogen Metabolism

People with similar genetic markers may be at a higher risk for impaired estrogen metabolizing pathways. This may result in increased exposure to oxidative estrogen metabolites, which have been associated with various health conditions involving the menstrual cycle, cellular growth and creating estrogen dominance.

Gene	SNP	Variant	Impact
GSTM1	rs366631	+/+	High
CYP1A1	rs2606345	+/-	Medium
CYP1A1	rs4646422	-/-	Low
CYP2D6	rs1065852	-/-	Low
GSTP1	rs1695	-/-	Low
CYP1A1	rs1048943	-/-	Low
CYP1A2	rs2069514	-/-	Low
CYP1A2	rs762551	+/-	Low
COMT	rs4680	+/-	Low
CYP1A1	rs2470893	-/-	Low
CYP1A1	rs4646903	-/-	Low

## Recommendations

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

### SUPPLEMENT

- Conjugated Linoleic Acid (CLA)
- Vitamin B6
- Folate
- Magnesium
- Curcumin
- DIM (3,3'-diindolylmethane)
- Astaxanthin
- Resveratrol
- Soybean Isoflavone Extract
- Rosemary Extract
- Lycopene
- Ellagic Acid

### DIET

- Green Tea
- Limit Coffee Intake
- Dietary Fiber
- Cruciferous Vegetables

- 
- Reduce Intake of Grilled and Well-Done Meat
  - Allium Vegetables
- 
- Citrus Foods
- 

## LIFESTYLE

- 
- Avoid 2nd Hand Smoke and/or Quit Smoking
  - Avoid Polychlorinated Biphenyl (PCBs)
- 
- Limit Xenoestrogens
  - Limit Alcohol
- 

## FURTHER TESTING

- 
- Hormone Metabolism Urine Tests
  - Estradiol Testing (E2)
-

# Glutathione

People with similar genetic markers may be at a higher risk for chronic diseases related to impaired antioxidant activity and drug metabolism pathways.

Gene	SNP	Variant	Impact
GSTM1	rs366631	+/+	High
GSTA1	rs3957357	+/-	Medium
GSTP1	rs1695	-/-	Low
GSS	rs17309872	-/-	Low
GSTM5	rs3754446	-/-	Low

## Recommendations

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

### SUPPLEMENT

- Garlic
- Omega-3
- Curcumin
- Resveratrol
- Ellagic Acid

### DIET

- Magnesium Rich foods
- Cruciferous Vegetables
- Anthocyanin Rich Foods
- Herbal Teas
- Allium Vegetables
- Citrus Foods

# MTHFR

People with similar genetic markers may be at a higher risk for reduced MTHFR enzyme activity, resulting in decreased folate concentrations, accumulation of homocysteine and various chronic diseases.

Gene	SNP	Variant	Impact
MTHFR	rs1801133	+/-	= Medium

## Recommendations

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

### SUPPLEMENT

- Vitamin B6
- Folate
- Vitamin B12
- Riboflavin (Vitamin B2)

### DIET

- Choline Rich Foods
- Vitamin B6 Rich Foods
- Vitamin B12 Rich Foods
- Folate Rich Foods

### FURTHER TESTING

- Homocysteine Levels
- Folate Testing
- Methylmalonic Levels

# NAT

People with similar genetic markers may have a higher risk of impaired acetylation activity, which results in an overload of toxins in the body.

Gene	SNP	Variant	Impact
NAT1	rs15561	+/-	== Medium
NAT2	rs1799930	+/-	== Medium
NAT1	rs6586714	+/-	== Medium
NAT2	rs1801280	-/-	— Low
NAT2	rs1799929	-/-	— Low
NAT2	rs1208	-/-	— Low
NAT1	rs4987076	-/-	— Low
NAT2	rs1799931	-/-	— Low
NAT1	rs4986988	-/-	— Low
NAT2	rs4271002	-/-	— Low
NAT1	rs4986782	-/-	— Low
NAT2	rs1801279	-/-	— Low
NAT2	rs1041983	+/-	— Low

## Recommendations

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

### SUPPLEMENT

- Vitamin C
- Folate

### DIET

- Mediterranean Diet
- Reduce Intake of Grilled and Well-Done Meat

### LIFESTYLE

- Limit Ibuprofen
- Avoid 2nd Hand Smoke and/or Quit Smoking
- Avoid Polychlorinated Biphenyl (PCBs)
- Limit Alcohol

# SLC

People with similar genetic markers may be at a higher risk for impaired folate metabolism.

Gene	SNP	Variant	Impact
SLC19A1	rs1888530	+/-	Medium
SLC19A1	rs3788189	+/-	Low

## Recommendations

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

SUPPLEMENT

- Vitamin D3
- Folate
- Vitamin B12
- Niacinamide (Vitamin B3)

DIET

- Protein Intake

# COMT

People with similar genetic markers experience more balanced levels of dopamine, epinephrine and norepinephrine (neurotransmitter and catecholamines) because their COMT enzyme is not too fast nor is it too slow. While stress and physical activity may cause dopamine levels to go up and down, people with this variant tend to have a balanced ability to detoxify estrogens and drugs and methylate.

Gene	SNP	Variant	Impact
COMT	rs4680	+/-	== Medium

## Recommendations

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

### SUPPLEMENT

- Folate
- Magnesium
- Digestive Enzymes
- COMT Inhibiting Plant Compounds

### FURTHER TESTING

- Catecholamine Markers





# Recommendation Detailed Appendix



## Appendix 2

# Detox Panel

October 1, 2019

**Demo Client**

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# Supplements

Recommendation Name	The Details	Linked Traits
Folate	Supplement with 400 - 800 mcg of methyl-folate per day.	COMT, Estrogen Metabolism, Inflammation, MTHFR, NAT, SLC
Curcumin	Supplement with 250 - 2,000 mg of curcumin extract per day.	Estrogen Metabolism, Glutathione, Inflammation, SOD
Vitamin C	Supplement with 500 - 1,000 mg of vitamin C per day.	NAT, Oxidative Stress, SOD
Vitamin D3	Supplement with 3,000 IUs of vitamin D3 per day.	Inflammation, SLC, SULT
Ellagic Acid	Supplement with 200 mg of ellagic acid per day.	Estrogen Metabolism, Glutathione
Lycopene	Supplement with 15 mg of lycopene per day.	CYP1B1, Estrogen Metabolism
Magnesium	Supplement with 300 - 500 mg of magnesium per day.	COMT, Estrogen Metabolism
Resveratrol	Supplement with 150 - 2,000 mg of resveratrol per day.	Estrogen Metabolism, Glutathione
Soybean Isoflavone Extract	Supplement with 500 mg of soybean isoflavones per day.	CYP1B1, Estrogen Metabolism
Vitamin B12	Supplement with 500 mcg of vitamin B12 per day.	MTHFR, SLC
Vitamin B6	Supplement with 25 - 50 mg of vitamin B6 per day.	Estrogen Metabolism, MTHFR
Vitamin E	Supplement with 100 - 400 IUs of vitamin E per day.	Oxidative Stress, SOD
Astaxanthin	Supplement with 4 - 12 mg of astaxanthin per day.	Estrogen Metabolism
Betaine Hydrochloride (HCl)	Supplement with 1 - 2 g of betaine hydrochloride (HCl) with meals for at least 6 months.	Inflammation
COMT Inhibiting Plant Compounds	Supplement with 400 mg EGCG and 250 mg Quercetin per day to reduce COMT activity.	COMT
CoQ10	Supplement with 150 - 500 mg of CoQ10 per day.	SOD
Conjugated Linoleic Acid (CLA)	Supplement with 2 - 4 g of conjugated linoleic acid (CLA) per day.	Estrogen Metabolism
DIM (3,3'-diindolylmethane)	Supplement with 200 - 300 mg of DIM per day.	Estrogen Metabolism
Digestive Enzymes	Supplement with digestive enzymes with meals.	COMT
Garlic	Supplement with 400 - 1,200 mg of garlic extract per day.	Glutathione
Manganese	Supplement with 10 mcg of manganese per day.	SOD
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.	SLC
Omega-3	Supplement with 2 - 5 g of omega-3 fatty acid supplement that contains essential fatty acids DHA and EPA.	Glutathione
Quercetin	Supplement with 500 - 1,000 mg of quercetin daily.	SOD
Riboflavin (Vitamin B2)	Supplement with 100 - 400 mg of riboflavin (vitamin B2) per day.	MTHFR
Rosemary Extract	Supplement with 700 mg per day of rosemary extract in capsule form or 2 - 4 ml of standardized rosemary extract three times daily.	Estrogen Metabolism
Vitamin A	Supplement with 3,000 - 5,000 IUs of vitamin A per day.	SOD
Zinc	Supplement with 10 - 40 mg of zinc per day.	Oxidative Stress

# Diet

Recommendation Name	The Details	Linked Traits
Mediterranean Diet	Adopt a Mediterranean-style diet that includes a variety of antioxidant-rich foods, heart healthy fats, and complex carbohydrates.	Inflammation, NAT, SOD
Reduce Intake of Grilled and Well-Done Meat	Reduce your intake of meat, poultry, and fish cooked at temperatures exceeding 400 degrees F.	CYP1B1, Estrogen Metabolism, NAT
Allium Vegetables	Aim to include at least 1 serving of allium vegetables, garlic, and leeks, in your daily diet.	Estrogen Metabolism, Glutathione
Citrus Foods	Aim to include 1 serving of citrus foods to your diet per day.	Estrogen Metabolism, Glutathione
Cruciferous Vegetables	Add 2 to 5 cups of cruciferous vegetables per day to your diet.	Estrogen Metabolism, Glutathione
Dietary Fiber	Increase dietary fiber intake to recommended 25 g for females and 30 g for males.	Estrogen Metabolism, Inflammation
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
Anthocyanin Rich Foods	Consume approximately 5 to 10 g of anthocyanin-rich foods, such as blueberries, cherries, and yams, per day.	Glutathione
Anti-Inflammatory Diet	Consume a diet rich in anti-inflammatory foods.	Inflammation
Calorie Restriction	Reduce overall calorie intake to create a calorie deficit.	Oxidative Stress
Choline Rich Foods	Consume a diet rich in choline.	MTHFR
Folate Rich Foods	Consume a diet rich in folate.	MTHFR
Foods with Perillyl Alcohol (POH)	Consume 1 to 2 servings of foods rich in perillyl alcohol (POH), such as cherries and herbal tea, per day.	CYP1B1
Green Tea	Aim to drink 1 to 3 cups of green tea per day.	Estrogen Metabolism
Herbal Teas	Drink at least 1 cup of caffeine-free herbal teas, such as dandelion, peppermint, rooibos, and honeybush, throughout the day.	Glutathione
Limit Coffee Intake	Drink no more than 3 cups of coffee per day.	Estrogen Metabolism
Magnesium Rich foods	Consume a diet rich in magnesium.	Glutathione
Mindful Caffeine Intake	Limit caffeine intake to no more than 100 mg per day or one cup of coffee per day.	SULT
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

Protein Intake	Focus on high quality protein sources.	SLC
Vitamin A Rich Foods	Consume a diet rich in vitamin A.	SULT
Vitamin B12 Rich Foods	Consume a diet rich in vitamin B12.	MTHFR
Vitamin B6 Rich Foods	Consume a diet rich in vitamin B6.	MTHFR

## Lifestyle

Recommendation Name	The Details	Linked Traits
Avoid 2nd Hand Smoke and/or Quit Smoking	Quit smoking and limit any exposure to second-hand smoke.	CYP1B1, Estrogen Metabolism, NAT
Limit Alcohol	Avoid alcohol or limit alcohol to no more than 1 drink per day for women and 2 drinks per day for men.	CYP1B1, Estrogen Metabolism, NAT
Avoid Polychlorinated Biphenyl (PCBs)	Avoid Polychlorinated Biphenyl (PCBs) by reducing your intake of contaminated foods such as fish, shellfish, meat, poultry, milk, and dairy products.	Estrogen Metabolism, NAT
Intermittent Fasting	Try intermittent fasting (fasting for 14+ hours daily) or alternate day fasting (fasting for 24 hours every other day).	Inflammation
Limit Ibuprofen	Limit the use of non-steroidal anti-inflammatory drugs (NSAID), such as Ibuprofen or Aspirin.	NAT
Limit Xenoestrogens	Limit exposure to xenoestrogens, such as those found in pesticides and plastic containers.	Estrogen Metabolism
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.	Oxidative Stress
Yoga	Incorporate at least 1 to 2 yoga sessions into your weekly exercise routine.	Oxidative Stress

## Further Testing

Recommendation Name	The Details	Linked Traits
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Folate Testing	Test folate levels	Inflammation, MTHFR
Homocysteine Levels	Check blood homocysteine levels	Inflammation, MTHFR
C-Reactive Protein (CRP) or hsCRP	Test levels of C-Reactive Protein (CRP) or hsCRP	Inflammation
Catecholamine Markers	Test urinary catecholamine markers	COMT
Erythrocyte Sedimentation Rate (ESR)	Test erythrocyte sedimentation rate (ESR) in blood	Inflammation
Estradiol Testing (E2)	Test estradiol (E2) levels	Estrogen Metabolism
Fibrinogen	Test fibrinogen levels in the body	Inflammation
Hormone Metabolism Urine Tests	Test for urinary hormone metabolites	Estrogen Metabolism
IL-6 Testing	Test for levels of IL-6	Inflammation
Markers of Oxidative Stress	Test markers of oxidative stress	Oxidative Stress
Methylmalonic Levels	Test for methylmalonic levels	MTHFR
TNF-alpha	Test for TNF-alpha	Inflammation