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## Personal information

NAME

**Sample Client** 

SEX AT BIRTH

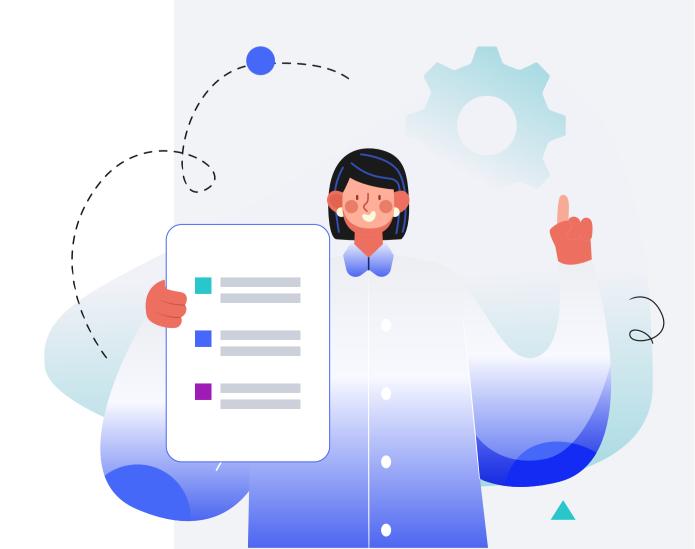
**Female** 

HEIGHT

5ft 9" 175.0cm

WEIGHT

**165lb 75.0kg** 



DISCLAIMER

This report does not diagnose this or any other health conditions. Please talk to a healthcare professional if this condition runs in your family, you think you might have this condition, or you have any concerns about your results.

COMT Gene Report Introduction

### Introduction

The  $\underline{COMT}$  gene helps make an enzyme called  $\underline{catechol-O-methyltransferase}$  (COMT). The COMT enzyme helps break down chemical messengers in the body. These include [R, R, R]:

- <u>Dopamine</u>
- Norepinephrine (noradrenaline)
- <u>Epinephrine</u> (adrenaline)

Dopamine triggers feelings of pleasure and reward. It is also important for many cognitive functions, such as memory and attention. Norepinephrine and epinephrine support the "fight or flight" stress response [R, R, R, R].

In addition, COMT helps break down other compounds such as <u>estrogen</u> byproducts, bioflavonoids (e.g., <u>quercetin</u> and <u>fisetin</u>), tea catechins, and certain drugs (e.g., <u>L-DOPA</u>, and dobutamine) [R, R].

The activity of the COMT enzyme may influence [R, R, R, R, R]:

- Stress response
- Mental health
- Cognitive function
- Pain sensitivity

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COMT Gene Report Your genetics

## COMT Gene Variant



Based on the variant we looked at, you likely have typical COMT activity. You carry one copy of the "worrier" allele and one copy of the "warrior" allele (<u>rs4680</u>-AG), so you are likely in between these two.

One common variant of the COMT gene,  $\underline{rs4680}$ , may affect COMT enzyme activity. Some people call rs4680 the "worrier or warrior" variant [R, R].

The "G" allele of this variant is linked to a higher COMT enzyme activity. People with two copies of this allele (GG) have been nicknamed the "warriors." They break down stress-related chemical messengers more quickly. This may help improve their performance under stress [R].

On the negative side, "warriors" may have lower cognitive performance under relaxed conditions [R, R, R].

People with two copies of the "A" allele (AA) may have lower COMT enzyme activity. They have been nicknamed the "worriers." They break down stress-related chemical messengers more slowly in the brain. For this reason, they may be more vulnerable to stress. This includes an increased susceptibility to heart disease, possibly due to the effects of these chemical messengers on blood pressure and heart rate [R, R, R].

The good news is that "worriers" may become more emotionally resilient with age. They also tend to have enhanced cognitive performance under relaxed conditions. Interestingly, "worriers" seem to have a more pronounced placebo response due to higher dopamine levels [R, R, R].

People carrying both alleles (AG) tend to be in between the described extremes [R, R].



## Likely typical COMT activity based on the genetic variants we looked at



Your top variants that most likely impact your genetic predisposition:

GENE	SNP	GENOTYPE
COMT	rs4680	AG

The number of "risk" variants in this table doesn't necessarily reflect your overall result.

**COMT Gene Report** Your genetics

Did you know? People with "warrior" genetics may be more likely to engage in combat sports, justifying the nickname of this variant [R].

However, keep in mind that your cognitive function and response to stress are also influenced by other factors, such as:

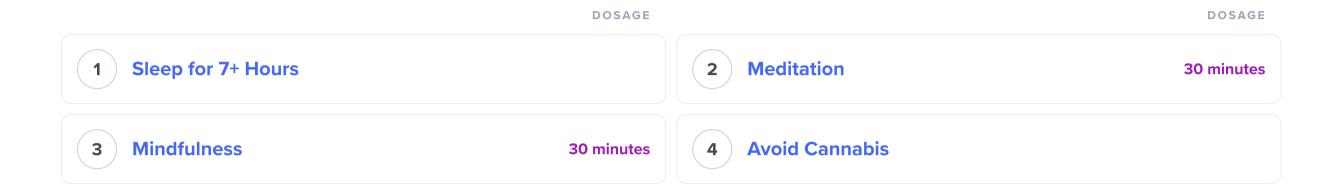
- Other variants in the *COMT* gene
- Many other genes
- Environmental factors

COMT Gene Report Your recommendations

## Your Recommendations

Your recommendations are prioritized according to the likelihood of it having an impact for you based on your genetics, along with the amount of scientific evidence supporting the recommendation.

You'll likely find common healthy recommendations at the top of the list because they are often the most impactful and most researched.



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COMT Gene Report Your recommendations

#### **How to implement**

Ensure you allocate enough time in your schedule to achieve a minimum of 7 hours of sleep each night. This might involve going to bed earlier or adjusting your evening routine to promote relaxation and make it easier to fall asleep.

#### **Description**

Optimizing sleep involves adopting healthy sleep habits and creating a sleep-conducive environment to ensure restorative and sufficient sleep duration. It supports cognitive function, mood stability, and overall physical health. Most experts recommend getting at least 7 hours of good-quality sleep each night.

<u>Sleep</u> supports your body and mind [R, R]. More precisely, sleep helps:

- Support brain health [R, R]
- Maintain a healthy weight and appetite  $[\underline{R}, \underline{R}, \underline{R}]$
- Regulate blood pressure [R, R]
- Balance blood sugar [R, R]

Ways to sleep better include [R]:

- Reducing your bright light exposure (screen time) in the evenings
- Sticking to a regular sleep schedule
- Avoiding hunger or large meals before bed
- Avoiding nicotine, caffeine, and alcohol before bed
- Maintaining a sleep area that's cool, dark, and quiet

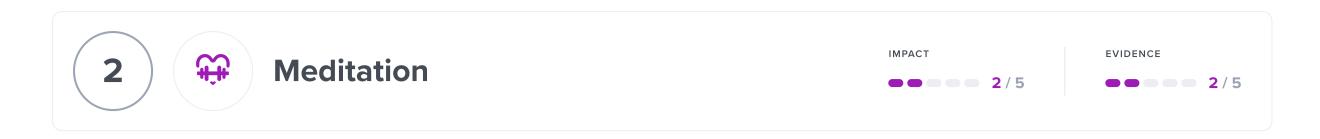
#### **How it helps**

Sleep supports brain health and cognitive function [R, R].

Accordingly, sleep deprivation or poor sleep quality may impair cognition [R, R].

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**COMT Gene Report** Your recommendations



#### **How to implement**

Set aside 10-20 minutes each day in a quiet space without distractions to practice meditation. Focus on your breath or perform guided meditation using an app or audio track.

TYPICAL STARTING DOSE 30 minutes

#### **Description**

Meditation is a mindfulness practice that can reduce stress, improve mental clarity, and promote relaxation. Regular meditation is associated with numerous mental and emotional health benefits, including reduced anxiety and enhanced emotional well-being.

<u>Meditation</u> is a relaxation technique that trains your mind to focus and redirect your thoughts. Some of the main types of meditation are [R]:

- Mindfulness
- Focused
- Transcendental
- Mantra
- Moving

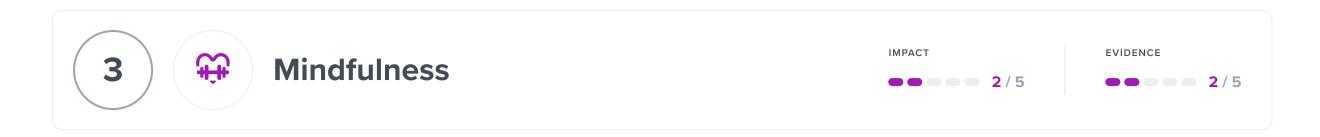
People use meditation to improve [R, R]:

- Stress and anxiety
- Mood
- Sleep disturbances
- Pain

#### **How it helps**

Mindfulness and other types of meditation may help reduce stress [R, R, R, R, R, R].

**COMT Gene Report** Your recommendations



#### **How to implement**

Set aside 5-10 minutes each day to practice mindfulness meditation. Find a quiet place, assume a comfortable seated position, close your eyes, focus on your breathing, and observe your thoughts and sensations without judgment.

TYPICAL STARTING DOSE 30 minutes

#### **Description**

Mindfulness involves paying focused and non-judgmental attention to the present moment. It can reduce stress, improve emotional regulation, and enhance overall mental clarity and well-being.

Mindfulness is the practice of being aware of the present moment. When practicing mindfulness, a person acknowledges their thoughts, feelings, and sensations without any judgment [R].

Mindfulness and other types of  $\underline{\text{meditation}}$  may improve  $[\underline{R}]$ :

- Weight and anxiety
- Low mood
- Sleep disturbances
- Pain
- High blood pressure

#### **How it helps**

Mindfulness and other types of meditation may help reduce stress [R, R, R, R, R, R].

**COMT Gene Report** Your recommendations

#### **How to implement**

Stop any form of cannabis use, including smoking, vaping, edibles, and topical applications. If you currently use cannabis, it's recommended to cease usage immediately and seek support or counseling if necessary for cessation.

#### **Description**

Avoiding cannabis is advised in situations where its use is prohibited by law or poses health risks, particularly for individuals with a history of substance abuse or mental health conditions. Responsible use and adherence to local regulations are essential to minimize potential negative consequences.

Cannabis (marijuana) is a plant used for its medicinal and recreational properties. It contains substances called cannabinoids, such as CBD and THC [R].

Cannabis misuse can have long-term consequences, such as [R, R, R, R]:

- Lung damage
- Mental health problems
- Cognitive impairment

#### **How it helps**

Cannabis misuse is linked to an increased risk of psychosis and cognitive impairment  $[\mathbb{R}, \mathbb{R}]$ .

Strategies to help with cannabis misuse include [R, R, R, R]:

- Talk therapy (e.g., cognitive-behavioral therapy)
- Support groups