

#### CAPABILITY **EATING BEHAVIOR**

Eating behavior encompasses not only what you eat but also when you eat and why. Your food choices, meal timing and motives for eating are all influenced by a complex interplay of physical, emotional and social factors. Your Mental Health Map reveals the influence your genes may have on these traits and insights and actions to optimize your EATING BEHAVIOR.



**WATCH GENOMIND'S EATING BEHAVIOR VIDEO** 

**Meal Patterns** 



EATING BEHAVIOR MEAL PATTERNS

**WATCH GENOMIND'S MEAL PATTERNS** VIDEO

MEAL PATTERNS refer to when you choose to eat and why. It turns out that for physical and mental health, when we eat may be just as important as what we eat. There is a natural rhythm to meal patterns that is driven by our rate of metabolism (how fast we burn calories) as well as our CIRCADIAN RHYTHM (our natural body clock). The genes that control this natural rhythm support eating at regular intervals, which ensures that our energy levels are constant throughout the day and drop off just in time for sleep. Unfortunately, our modern, fast-paced lifestyle can lead us to skip meals or eat later in the evening when metabolism is low. These types of eating patterns disrupt our natural rhythm and can have serious health consequences in the long run.

PREDISPOSITION:

# CELL CYCLE

GENE: ARID3B

YOUR GENOTYPE: A/A 84% of the population share this

genotype.

GENE: CLOCK

**CIRCADIAN RHYTHM** 

YOUR GENOTYPE: T/C

32% of the population share this genotype.

### **NORMAL ACTIVITY**

Scientific research is emerging on how some genes may play a role in our meal timing preferences, and it seems that CELL CYCLE REGULATION (how cells throughout the body metabolize nutrients) may be a key factor. We test for variants in one of the genes involved with this process that predispose some people to skip meals during the day. However, your genotype is associated with NORMAL ACTIVITY.

LEARN MORE ABOUT EATING BEHAVIOR

**NEW ACTIONS** 

PREDISPOSITION:

## **NORMAL ACTIVITY**

Our CIRCADIAN RHYTHM is the internal clock that influences our sleep wake cycle. This entails much more than feeling awake vs feeling sleepy. Genes that drive the CIRCADIAN RHYTHM also influence our metabolism and the signaling between the gut and the brain. This is what makes us feel hungry at specific times of the day. We test for variants in a core CIRCADIAN RHYTHM gene that predispose some people toward late-night snacking. However, your genotype is associated with NORMAL ACTIVITY.



NEW INSIGHTS,

**NEW ACTIONS** 



## **Eating Triggers**



WATCH GENOMIND'S EATING TRIGGERS VIDEO

What motivates you to eat? Is it simply to satisfy your hunger or do you seek food for additional reasons such as comfort during stressful or emotional times, or a reward after a particularly successful day? Research has determined that there are parts of the brain that feel rewarded by eating high-fat or high-sugar foods, and behavior that is rewarded is likely to be repeated. Understanding what triggers you to eat can help you avoid overeating, and potential health issues associated with it.



# YOUR GENOTYPE: A/G

42% of the population share this genotype.

#### **EMOTIONAL EATING**

PREDISPOSITION:

People with your genotype may be more likely than others to eat for pleasure or comfort, rather than hunger. This is referred to as EMOTIONAL EATING, and is driven largely by how DOPAMINE is used in areas of the brain that connect positive emotions with learned behavior. In psychology, this is known as the DOPAMINE REWARD SYSTEM because it encourages us to seek activities that we find pleasurable or rewarding. We detected a variant in a gene that affects the DOPAMINE REWARD SYSTEM (ANKK1) which may be associated with increased sensitivity to the immediate gratification of food. This may be why people with your genotype tend to be more likely to eat even when they are not hungry.

STRENGTH OF EVIDENCE: Preliminary, based on multiple studies





FOOD SELECTIVITY refers to a person's choice of what to eat or drink. Not surprisingly, your taste buds play a large role in determining what foods you select. Did you know that people perceive tastes differently? Some people are able to distinguish different flavors to a much greater degree than others because of BITTER TASTE RECEPTORS on their tongues. This is believed to influence not only the selection but also the amount of food a person consumes and may explain why some people are PICKY EATERS while others are not.



44% of the population share this

genotype.

#### PREDISPOSITION: NORMAL ACTIVITY

**Food Selectivity** 

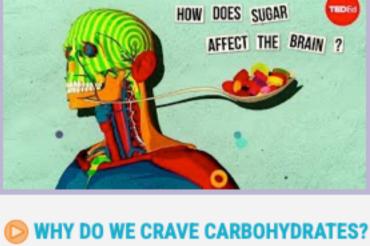
## Do you ever wonder why some people love foods like Brussels sprouts while others hate them?

It turns out that people are wired to taste food differently. This difference in taste perception seems to be largely driven by BITTER TASTE RECEPTORS on the tongue. These taste receptors allow us to perceive bitterness in food. We test for variants in the BITTER TASTE RECEPTOR gene that are associated with increased sensitivity to bitter flavors and predispose some people to avoid certain foods. However, your genotype is associated with NORMAL ACTIVITY.

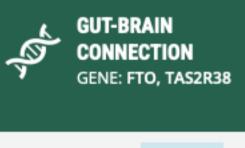




## Carb Intake



Do you ever wonder why some people have a SWEET TOOTH, which makes them unable to resist sweet foods and sugar-sweetened drinks, while others have no desire for them? As a species, we have been engineered to crave carbohydrates (carbs) as they are important for brain function, providing necessary fuel for the central nervous system as well as energy for working muscles. They enable fat metabolism and displace protein from being used as an energy source. For our ancestors, carb craving was important for survival, as carbs were not easily obtained. In today's world, however, in which we have an abundance of carb-rich foods, it is easy to overindulge on them. Some of us, it seems, have inherited a genetic predisposition for craving carbs, which may have helped our ancestors survive, but today can make it difficult to avoid excessive CARB INTAKE and maintain a healthy diet.



## YOUR GENOTYPE: T/T, A/G



#### 20% of the population share this genotype.



having a SWEET TOOTH. The GUT-BRAIN CONNECTION refers to signals that are sent to the brain from the digestive system that tell us when we feel hungry or full. This connection may also be involved with craving certain foods. In multiple studies, people with your genotype reported consuming increased amounts of sugar-sweetened drinks and foods in their diet. STRENGTH OF EVIDENCE: Strong, based on multiple genome-wide association studies

We detected a variant in a key GUT-BRAIN CONNECTION gene (FTO) that predisposes you to

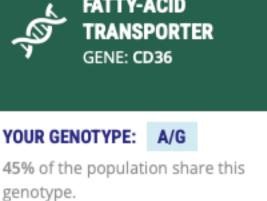




Fat Intake



Dietary fat is often thought of as something that should be avoided, but in reality fat is a macronutrient that is vital for our mental and physical health. Not only is it a key energy source, fat also helps regulate our hormones and is important for the growth, development and function of cells throughout our body and brain. Aside from this, it makes food more satisfying and better tasting. So why are we told to watch our FAT INTAKE? It turns out that how much fat you eat is less important than the type of fat you eat. Unfortunately, we tend to reach for foods that contain unhealthy fats like cookies or crackers over foods that have healthy fats in them like avocados, eggs or nuts because that is what is available to meet our fat craving. For those who may be genetically predisposed to increased FAT INTAKE, it is particularly important to learn more about our natural cravings and how to satisfy them in a way that is healthy.



#### NORMAL ACTIVITY When someone says something tastes 'creamy' they are actually saying that it feels creamy. The

PREDISPOSITION:

## FATTY ACID TRANSPORTER is responsible for the mouthfeel of certain fatty foods. When

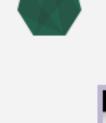
chocolate melts in your mouth it creates a smooth, full, coating sensation that most people find pleasant. We test for variants in the FATTY ACID TRANSPORTER gene that may predispose some people to crave fatty foods. However, your genotype is associated with NORMAL ACTIVITY.

many of us continue to eat well after the stomach says 'I've had enough.' We test for genetic

variants that impact FULLNESS SIGNALING and predispose some people to increased caloric

intake. However, your genotype is associated with NORMAL ACTIVITY.





# **Total Caloric Intake**



PREDISPOSITION:

resulting in larger portion sizes and one of the highest obesity rates in the world. Why is it that some people are able to resist eating more than they should while others feel the need to 'clean their plate' even when presented with too much food? The genetic influence on the FULLNESS SIGNALING mechanisms within our bodies offers an explanation. A genetic predisposition toward increased TOTAL CALORIC INTAKE likely would have helped our ancestors survive the wilderness, but presents health problems for us today. With a better understanding of your eating behaviors and natural tendencies, you will be positioned to take control of how much you eat, while retaining a love of food and joy of mealtime with friends and family.

In the United States, we have a food culture that values quantity over quality



YOUR GENOTYPE: T/T 58% of the population share this

genotype.

## **NORMAL ACTIVITY**

FULLNESS SIGNALING is how the stomach messages the brain that it is full. Unfortunately,

