

# GEDMatch & High ROH

Your GEDMatch result show you have a DNA feature called "high ROH." What does it mean to have "high ROH?" Simply put, it means there is more similarity between the DNA you got from your genetic father and the DNA you got from your genetic mother than is typical for most people.



## DNA Basics

Your DNA is divided up into three types: mitochondrial, sex-chromosomal, and autosomal. ROH tells mostly about autosomal DNA. Autosomal DNA comes in chromosome pairs that are numbered - two copies of chromosome 1, two copies of chromosome 2, and so on.

GEDMatch's "Are Your Parents Related?" tool looks through the autosomal DNA, and it detects long stretches where the DNA markers seem to be matching between the chromosome copy from the mother and the copy from father, those regions show up as yellow. This yellow region is an ROH, or "run of homozygosity."

It is common to see yellow regions for people who come from tight-knit ethnic communities like Ashkenazi Jews or those of Mennonite or Amish descent. When large regions of yellow appear, an immediate family relationship is suspected between the parents of that person whose DNA has been tested.

The chart below shows regions (yellow) where there is ROH between the two copies of chromosome 4. The similarity comes from a person's mother and father having an ancestor or ancestor in common.



## How you're feeling...

It can feel confusing and isolating to find out this type of information, especially if it comes out of the blue. It helps to hear how others have reacted to the news of having high ROH. Every person's reaction is different, and there is no "right" or "wrong" when it comes to feelings. Here's how some other people have reacted after learning about high ROH:

“Do I have to tell my adult children about this?”

“My grief is so strong. It feels like a death in the family.”

“This is devastating.”

“I am so angry about all the lies.”

## What about health implications?

Many people are concerned about what this means for their health and the health of their children. High ROH does not carry forward to future generations. Some people with high ROH will have medical issues related to recessive genetic conditions and traits, and these are often present and detected in childhood. Other people will discover late in life (or never find out) and have no outward signs or adverse effects. If you have concerns about medical implications of high ROH, seek out a genetics professional with knowledge about ROH, such as a genetic counselor or medical geneticist.



To our knowledge, there has never been a case in which the high ROH was later proven untrue. Many people may never discover how the high ROH came to be, especially adoptees who may not know or be able to identify any biological family.

## Could it be a mistake?

Many people wonder if the results are true, or if there might be a mistake. It is a reasonable question to ask. If it feels right, look into repeat testing. You could test with a different ancestry company or seek out a medical-grade genetic test ordered by a doctor or genetic counselor.

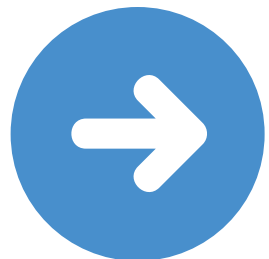


In rare cases, some people have only a small region of yellow, or they have one entire chromosome that is yellow and the rest are not. This happens due to biological glitches that arise during the early embryo stage of life and NOT because of any close family relationship between the parents.

## What next?

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It is important to understand that high ROH is not your fault. You can't control your DNA, but you can control how you respond. What happens next depends on what is important to you. There are a few resources to help you get started. Details on how to connect with each of these resources are listed separately.



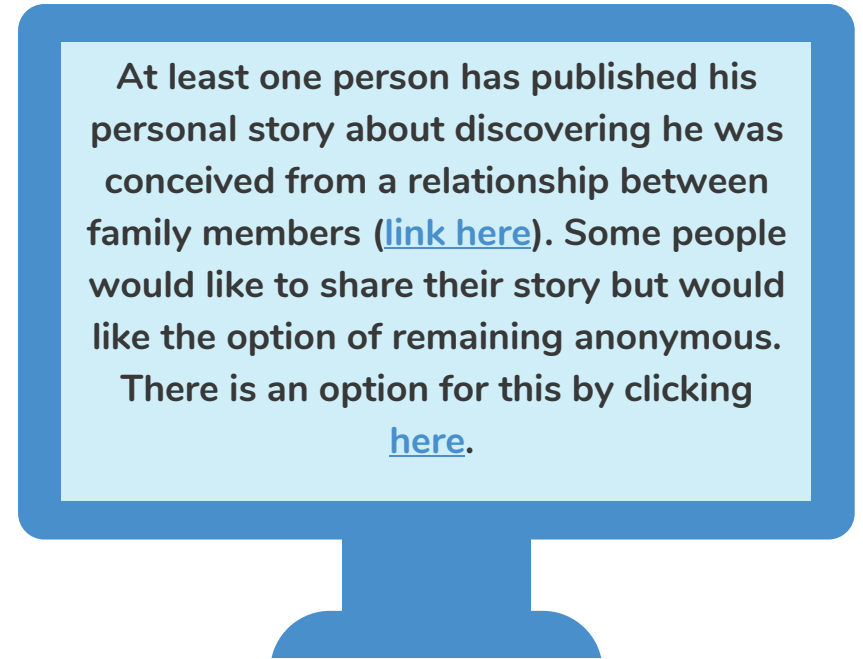


## Connect with Resources

Every day, more people are discovering they have high ROH and want to connect with others who have been through a similar experience. There is no formal system for making connections at this time, but if you are interested in this, reach out to Brianne Kirkpatrick [here](#) or CeCe Moore [here](#). Networks are forming in the high ROH community.



Read stories online and share your own or get one-on-one support from someone like you.



The website [www.psychologytoday.com](http://www.psychologytoday.com) has a search tool for locating a therapist or counselor near you. Although they may not immediately understand the science behind high ROH, these helpers are trained at supporting people through a healing process after emotional wounds and trauma.

Genetic counselors can help you understand the potential medical impacts of having high ROH. Search for a genetic counselor in your area on [www.nsgc.org](http://www.nsgc.org). Be aware that not all genetic counselors are familiar with GEDMatch results.

This brochure was developed by Watershed DNA founder, Brianne Kirkpatrick, a genetic counselor with expertise in ancestry testing. For compassionate support and immediate understanding of GEDMatch and high ROH results, consider scheduling with Brianne on [www.WatershedDNA.com](http://www.WatershedDNA.com).

