



## Genetic Ancestry and *All of Us*

### Your DNA carries a record of generations past

You get half of your DNA from your biological mother. The other half is from your biological father. Because of this, your DNA can tell you about your genetic ancestors from the last few hundred years.

### What you can learn

Your genetic ancestry tells you where your recent ancestors likely lived. This is based on your DNA. Before global travel became possible, people from the same region shared patterns of DNA. As they migrated and blended with others from different geographic regions, these DNA patterns became mixed.

People often wonder if genetic ancestry and ethnicity are the same thing. They aren't. Genetic ancestry is about where on the globe your relatives came from. Ethnicity means a group of people who share things like language, religious beliefs, or culture. People of the same ethnicity often share the same genetic ancestry. But this isn't always the case.

It's also important to remember that your identity is about more than just DNA. Your story includes family stories passed down from generation to generation. Historical records can also help. Together with your DNA, this information can be used to help build your family tree and to tell the story of how your family has shaped who you are.



### How we get these results and why your participation matters

When you join the *All of Us* Research Program, you can provide blood (or saliva) samples. These samples contain your DNA. We use a method called genotyping to generate data about your DNA. Genotyping looks at a small amount of DNA that gives us information about many of the more common DNA changes among us.

To create your genetic ancestry results, we then compare your DNA to publicly available DNA datasets. These datasets have information about groups of people who are known to have lived in a specific area of the world. Then we can tell you how much of your DNA comes from a certain part of the world.

These datasets currently have more DNA information from people with ancestors from Europe. This means genetic ancestry results may be more detailed for people with European genetic ancestry. But *All of Us* participants have ancestors from many regions of the world. As more and more of our participants provide their DNA, the more diverse and accurate genetic ancestry information can become for everyone.

## Genetic ancestry groups you might see

Here are the genetic ancestry groups that *All of Us* currently compares DNA with:

- **The Americas**, which includes North, Central, and South America
- **Eastern and Northern Asia**, such as China or Mongolia
- **Europe**, including Russia and the Mediterranean
- **The Middle East and North Africa**
- **Oceania**, such as Papua New Guinea or Fiji
- **Southern and Western Asia**, such as India or the Arabian Peninsula
- **Sub-Saharan Africa**

These groups cover pretty big areas of the world. As we learn more about genetic ancestry, we plan to be able to update these groups or add more specific groups. If we do so, you might get an update with a more detailed look into your genetic ancestry.

## How to get your results

To get your genetic ancestry results from *All of Us*, you will first need to go through the Consent to Get DNA Results in your *All of Us* account. Answer “Yes” to tell us that you want your DNA results in general. Later, when we are ready to create your genetic ancestry report, we will contact you to check if you want those specific results. If you say “Yes”, you will get those results when they are ready—which for most people will be almost immediately.

## Questions?

Forgot your *All of Us* password? Call us at (844) 842-2855 or email [help@joinallofus.org](mailto:help@joinallofus.org). Toll-free TTY-based Telecommunications Relay Service is available by dialing 711.

*All of Us* is a research program and does not provide health care, medical advice, or tests for medical treatment or diagnosis. *All of Us* and the *All of Us* logo are service marks of the U.S. Department of Health and Human Services.



## Quick pointers

### Genetic ancestry results won't tell you about your health

We return health-related DNA results separately. That means you will get a separate message when we are ready to create a health-related DNA results report for you.

### *All of Us* won't give you a report on who you are related to, but your DNA does tell about you and people who are related to you by blood

Your genetic ancestry results could reveal information that you did not expect. They could make you wonder if you are related to a family member in the way you thought. That could be because DNA results are not always the same for all family members.

### It is your choice if you want to get these results or not

You can choose to see other kinds of DNA results even if you don't want to learn about your genetic ancestry. If you don't want any results, your DNA can still be used for research. You can still participate in *All of Us*. And you can always change your mind.

### *All of Us* plans to check DNA for a variety of information

This will include information about your traits (such as why you might love or hate cilantro), whether you may have an increased risk of developing a particular health condition, how your body might react to certain medications, and/or other health-related information. You can choose if you want to get some or all of these results as they become available.

