

Your Ancestral Journey

The origin of our species lies in Africa: It's where we first evolved and where we've spent the majority of our time on Earth. We have since migrated to every corner of the globe, a journey that is written in our DNA.

With the sample you sent us, we ran a comprehensive analysis to identify thousands of genetic markers—breadcrumbs—in your DNA, which are passed down from generation to generation. By looking at the order in which these markers occurred over time, we can trace the journey of your ancestors out of Africa. Furthermore, with these markers we have created a human family tree. Everyone alive today falls on a particular branch of this family tree. We have examined your markers to determine which branch you belong to. The results of our analysis—your personal journey—are outlined below.

Your Genius Matches (Present - 120,000 Years Ago)

We determine your Genius Matches through the analysis of either mitochondrial or Y-chromosome DNA, two parts of the DNA which are inherited directly, without mixing, from one ancestor in any given generation. Furthermore, if you go back 150,000 years, all seven billion humans share one single, common maternal ancestor: A Mitochondrial Eve. Her male counterpart was Y-chromosome Adam. Actually, any two individual people that ever lived may share a match (an Eve or an Adam) at a more recent point in time. First maternal cousins, for example, share a match at the grandmother level. Although it's true that every two living people share a common ancestor, in reality we share multiple ancestors. Some of these common ancestors lived centuries ago, while others lived and migrated across the earth millennia ago. Here we estimate when in time you shared a direct female or direct male ancestor with a famous historical genius. Learn about your own Genius Matches below.

0 Matches

12,000 - 0 Years Ago

No results for this time frame.

0 Matches

25,000 - 12,000 Years Ago

No results for this time frame.

1 Match

45,000 - 25,000 Years Ago

Ramses II / Ramesses the Great

1303 - 1213 BC

Royal Genius

The third pharaoh of the 19th Dynasty in Egypt (1292-1186 BCE), Ramses II won a decisive victory over the Hittites at The Battle of Kadesh. He used this victory to enhance his reputation as a great warrior, resulting in the world's first known peace treaty in 1258 BCE. He lived to be 90, outliving most of his 200 wives and concubines, ninety-six sons and sixty daughters. His name and accomplishments are inscribed from one end of Egypt to the other.

10 Matches

65,000 - 45,000 Years Ago

Petrarch

1304-1374

Poetic Genius

Francesco Petrarca was an Italian scholar, poet, and humanist whose 14th century writings arguably ushered in the Renaissance movement across Italy, and eventually throughout Europe. Because of his drive to revisit the scholarly classics of the past and his ever inquisitive thirst for knowledge, he was regarded as one of the greatest scholars of his age.

Abraham Lincoln

1809-1865

Political Genius

Most historians consider Lincoln the greatest of all U.S. Presidents. He was a gifted politician, and astute at bringing people together in mutual understanding and consensus. This 16th American President kept the young country from splintering during some of the darkest days in American history, the U.S. Civil War.

Queen Victoria

1819-1901

Royal Genius

Victoria was the longest serving monarch of the British Empire, and oversaw some of the greatest advances scientifically, industrially, and across various aspects of society during an age of great advancement and development: The Victorian Era. Her tenure not only changed Great Britain, but had linguistic and societal impacts across the globe that are still lasting today.

Nicolas Copernicus

1473-1543

Mathematical Genius

Copernicus was one of the greatest mathematicians and astronomers of all time. He established that the Sun, rather than the Earth, was the center of the Solar System. This concept set the foundation for the modern day understanding of our place in the universe. Copernicus could also speak multiple languages, and he dabbled in economics and politics as well.

Benjamin Franklin

1706-1790

Multi-faceted Genius

Not only was Benjamin Franklin one of the founding fathers of the United States of America, but he was also a writer, publisher, physicist, naturalist, and economist, and his name is synonymous with wealth (a Benjamin is a \$100 bill). Franklin is also credited with the idea of harnessing the power of electricity, a concept that completely altered the world as we know it.

Marie Antoinette

1755-1783**Historical Genius**

Marie Antoinette is one of the most famous leaders, turned villains of recent history. To this day she is remembered for her staunch conservatism and displays of wealth. She is attributed with the infamous phrase, "let them eat cake," supposedly uttered in response to the poverty in France. She is ultimately remembered for her death by guillotine in the center of Paris.

Napoleon**1769-1821****Military Genius**

Napoleon was a political and military leader that rose to power in the late 18th century during the French Revolution. Under his rule, France rose to the position of European super power. Napoleon was later captured, tried, and found guilty. He eventually died in confinement in St. Helena island in the South Atlantic. His military tactics are still studied today, while his liberal political leanings continue to influence Europe and the world.

Maria Theresa**1717-1780****Royal Genius**

Maria Theresa was a queen among queens. Her titles continuously changed as the geography of continental Europe evolved as nations merged then split apart during the heart of the 18th century. Maria was at one time Holy Roman Empress, Queen of Bohemia, and Archduchess of Austria. She was mother to sixteen children, the most famous of which was her youngest daughter, Maria Antonia, also known as Marie Antoinette.

Richard III**1452 - 1485****Royal Genius**

"My kingdom for a horse!" The last Yorkist king of England, Richard III's death at the Battle of Bosworth effectively ended the Wars of the Roses. Infamous because of the disappearance of his young nephews - the Princes in the Tower - and through William Shakespeare's play 'Richard III,' his remains were lost for more than five centuries. In 2012, mitochondrial DNA helped identify his skeleton, found in an archeological excavation of a parking lot.

Jesse James**1847 - 1882****Outlaw Genius**

Born in Missouri in 1847, Jesse Woodson James seemed destined to be a minister. Instead, by age 16, he and his brother Frank were robbing banks and trains, attacking Union troops and killing supporters of Abraham Lincoln as part of the Quantrill Raiders gang. In the decade following the Civil War, James's criminal career rose steeply, and he became a national figure. He was killed in 1882 by one of his own gang members, Robert Ford, who received a pardon in turn for the killing.

12 Matches

120,000 - 65,000 Years Ago

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Genghis Khan

1162-1227

Military Genius

Founder and ruler of the Mongol Empire, which became the largest empire in history shortly after his death in the early 13th century. Khan was known as a ruthless ruler who grew his empire by absorbing tribes and customs from neighboring regions. Today he is considered one of the greatest military geniuses of all time.

Leo Tolstoy

1828-1910

Literary Genius

Often cited as one of the greatest authors of all time. This Russian writer has been an inspiration to countless authors, and War and Peace is lauded as a literary masterpiece. Today, Tolstoy is considered more than just a writer, he was also a moral and religious leader.

Charles Darwin

1809-1882

Scientific Genius

Darwin was a 19th century English naturalist attributed as the first person to propose the idea of evolution by means of Natural Selection. He proposed that all living things evolved from ancestral beings that once lived in a more distant past. His message was that ultimately all living species share a common ancestor, or match, in evolutionary history.

Nicolas Copernicus

1473-1543

Mathematical Genius

Copernicus was one of the greatest mathematicians and astronomers of all time. He established that the Sun, rather than the Earth, was the center of the Solar System. This concept set the foundation for the modern day understanding of our place in the universe. Copernicus could also speak multiple languages, and he dabbled in economics and politics as well.

Thomas Jefferson

1743-1826

Political Genius

Jefferson was the third president of the United States and one of the founding fathers of the country. He was an architect, horticulturalist and an academic scholar, and often a strong advocate for religious freedom and tolerance. Jefferson, like many of his predecessors, was also a slave-owner. Under his leadership the U.S. nearly doubled in size, as he orchestrated the Louisiana Purchase of 1803.

King Tut

1341 BC to 1323 BC

Pharaoh Genius

Not much is known about this Egyptian leader from the 14th century B.C. other than he was possibly as young as nine when he took power, and that he died by the age of eighteen. Tutankhamun (or King Tut) ruled Egypt during the height of the empire, during which time he rejected some of the radical religious beliefs held by his predecessors. Furthermore, Tut is thought to have been the son of siblings, physically weak, and also stricken with malaria. All of these conditions may have contributed to his early death.

Sir Frances Drake

1540-1596

Ocean Genius

Sir Drake was a British sea captain, politician, and slaver of the 16th century. He led the second expedition to circumnavigate the world, and thus he was first to complete the voyage as ship captain. Ferdinand Magellan did not live to see his boat return home. Drake was also known to many as a mercenary and thief who brought piracy to the American Pacific.

Nikola Tesla

1856-1943

Engineering Genius

Although his work was historically overshadowed by that of colleague turned nemesis, Thomas Edison, Tesla is attributed with developing the idea of alternating current (AC) and the induction motor. His accomplishments, however, remained obscure until the late 1990's when historians began to uncover the genius of his work in the fields of electronics and magnetism.

Richard III

1452 - 1485

Royal Genius

"My kingdom for a horse!" The last Yorkist king of England, Richard III's death at the Battle of Bosworth effectively ended the Wars of the Roses. Infamous because of the disappearance of his young nephews - the Princes in the Tower - and through William Shakespeare's play "Richard III," his remains were lost for more than five centuries. In 2012, mitochondrial DNA helped identify his skeleton, found in an archeological excavation of a parking lot.

Alexander Hamilton

1755 - 1804

Political Genius

Before he was on Broadway or the \$10 bill, Alexander Hamilton was a delegate to the Constitutional Convention, an author of the Federalist papers, and the first US secretary of the treasury. Born in 1757 in the British West Indies, he became General George Washington's assistant in 1777. Hamilton convinced New Yorkers to ratify the U.S Constitution. He died of a gunshot wound sustained during a duel with Aaron Burr on July 12, 1804, in New York City.

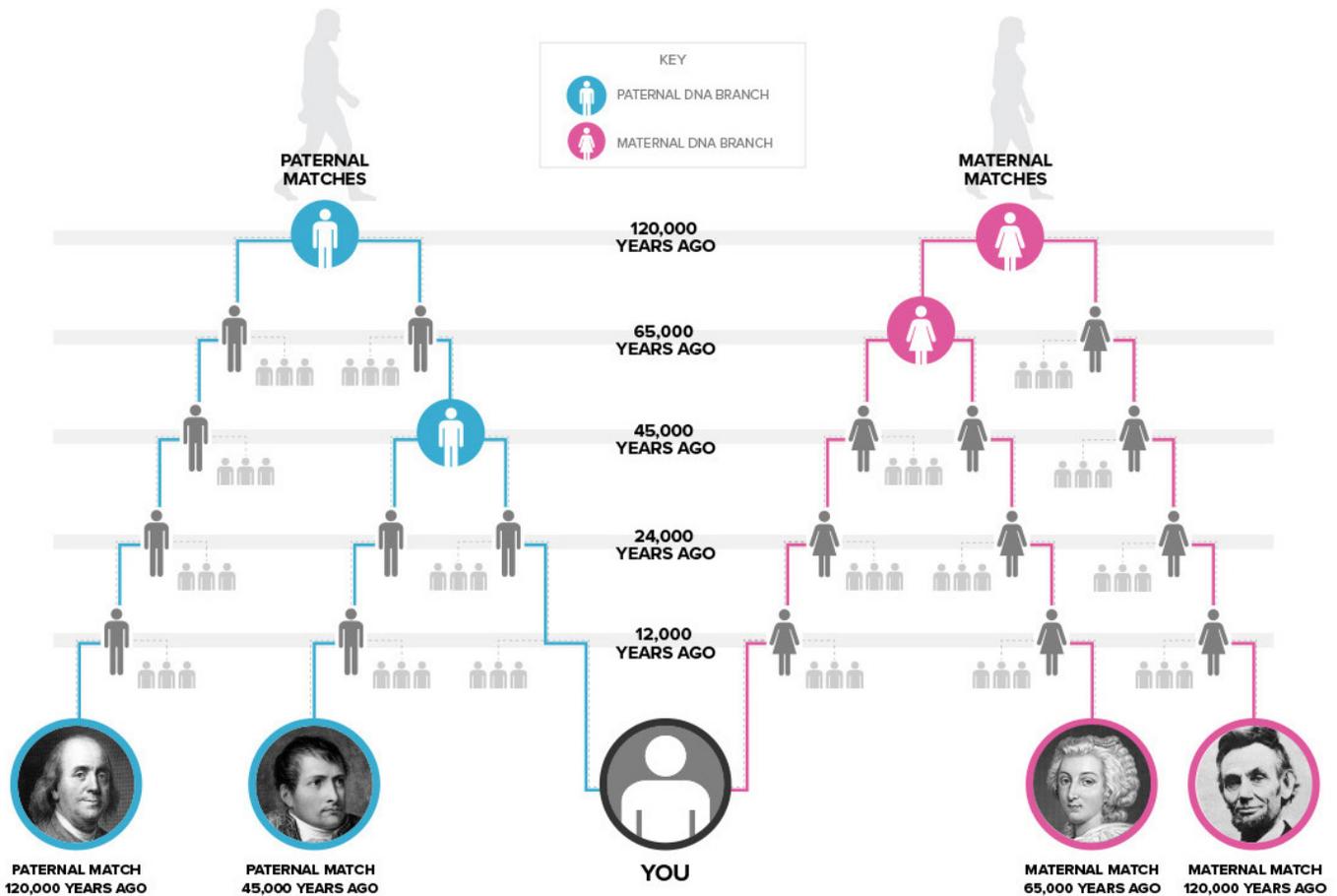
Martin Luther

1483 - 1546

Theological Genius

A German monk who began the Protestant Reformation in the 16th century, Martin Luther was one of the most influential and controversial figures in Christian history. He called into question some of the basic tenets of Roman Catholicism, and his followers soon split from the Roman Catholic Church to begin the Protestant tradition. A prominent theologian, Luther's desire for people to feel closer to God led him to translate the Bible into the language of the people, radically changing the relationship between church leaders and their followers.

The Science Behind Your Matches



The diagram above is illustrative and depicts both paternal and maternal branching to help you understand how the science behind matching works. In this example, the matches show when in ancient history your maternal and/or paternal line diverged or "branched" from that of a famous Genius (For example, Lincoln, 60,000 years ago). Male participants can get both paternal and maternal matches, whereas female participants can only get maternal matches.

Have a question?

-How did NG define Genius?

National Geographic is very liberal in its definition of genius. Since we are looking predominantly at historical figures, our definition of genius is that of "remarkable" or "historic" figure. But, you know, we are all truly geniuses in our own ways.

-Can my DNA tell me if I'm a genius?

Although there are genes associated with the ability to learn and intelligence, we are not currently analyzing those genes or DNA markers with Geographic.

-Why do I see men in my maternal matches?

Since we all have mothers, we all carry mitochondrial DNA, which is inherited strictly through the mother's line. So, just like you and your brother have the same mother, you and your first male cousin have the same maternal-grandmother, and you and your male second cousin have the same maternal great-grandmother, you all share a direct maternal ancestor in the past, even if one or both of you are male. The same logic applies for your genius matches.

-Why do I see zero matches for some timeframes?

We compare your maternal and paternal DNA to a limited number of "geniuses," so it's quite likely that you don't have a match that falls into one of our specifically designated time blocks. That is all.

-Why don't I have any recent matches (12,000 - 0 years)?

In some cases your lineages may not have a match in the last 12,000 years. That doesn't mean that you don't share an ancestor with any of those people in that shorter time frame. It just means that you don't share a direct maternal or direct paternal match within the last 12,000 years.

-My closest match is 45,000 years ago, what does that mean?

Although you likely shared common ancestors with many geniuses in more recent times, we only track your direct maternal (mother's mother's mother...) and direct paternal (father's father's father...) line for both you and the genius. In your case, your most recent genius match on one of those two lines was 45,000 years ago.

Your Regional Ancestry

(500 Years to 10,000 Years Ago)

We are all more than the sum of our parts, but the results below offer some of the most fascinating and newest information possible with your Geno 2.0 Next Generation test. In this section, we display your affiliations with a set of twenty-two world regions. This information is determined from your entire genome, so we're able to see both parents' information, going back six generations, or more. Your percentages reflect both recent influences and ancient genetic patterns in your DNA due to how groups migrated to and from different regions, mixing for hundreds or even thousands of years. Your ancestors may have also mixed with ancient, now extinct hominid cousins, like Neanderthals. If you or your parents have an admixed background, this pattern can get complicated very quickly! Use the reference population matches below to help understand your results.

What Your Results Mean

We are all more than just the sum of our parts, but the regional percentages below offer some of the most fascinating information in your Geno test. In this section, we display your affiliations based on a set of twenty-two world regions. This information is captured from points across your entire genome, so we're able to see both parents' information going back six generations or more. Your percentages reflect mostly recent influences, yet they may also show some ancient patterns in your DNA due to mixing of groups from different regions over hundreds, if not thousands, of years. If you have a very mixed background, the pattern can get complicated quickly. Use the reference population matches below to help understand your unique results.

Your First Reference Population: Dutch

This reference group is based on a Dutch population. This population is similar in composition to that from Germany but differs in the percentage mixture (or gene flow) from British and Scandinavian regions to the north and west of the region. The large western/central European component is itself a genetic mixture of populations that first reached Europe as hunter-gatherers some 40,000 years ago but later intermixing with agriculturalists arriving in the past 10,000 years from the Middle East.

DUTCH

Northwestern Europe: 77%

Eastern Europe: 19%

Jewish Diaspora: 4%

YOU

Northwestern Europe: 72%

Eastern Europe: 19%

West Mediterranean: 4%

Western Africa: 3%

Your Second Reference Population: British (England)

This reference population is based on people living in England, in the United Kingdom. The dominant Great Britain and Ireland and smaller Scandinavian components reflect distinct remnants from early settlers in northern Europe, hunter-gatherers who arrived there more than 30,000 years ago. The Western and Central and Southern European percentages likely arrived later, first with the spread of agriculture from the Fertile Crescent in the Middle East over the past 8,000 years, and much later by the reach of the Roman Empire. English populations today retain links to both the early Europeans and later migrants.

BRITISH (ENGLAND)

Northwestern Europe: 74%

Southwestern Europe: 11%

Eastern Europe: 8%

Northeastern Europe: 4%

Jewish Diaspora: 3%

YOU

Northwestern Europe: 72%

Eastern Europe: 19%

West Mediterranean: 4%

Western Africa: 3%

Your Deep Ancestry (1,000 Years - 100,000 Years Ago)

Introduction to Your Story

We will now take you back through the stories of your distant ancestors and show how the movements of their descendants gave rise to your lineage.

Each segment on the map above represents the migratory path of successive groups that eventually coalesced to form your branch of the tree. We start with the marker for your oldest ancestor, and walk forward to more recent times, showing at each step the line of your ancestors who lived up to that point.

What is a marker? Each of us carries DNA that is a combination of genes passed from both our mother and father, giving us traits that range from eye color and height to athleticism and disease susceptibility. As part of this process, the Y-chromosome is passed directly from father to son, unchanged, from generation to generation down a purely male line. Mitochondrial DNA, on the other hand, is passed from mothers to their children, but only their daughters pass it on to the next generation. It traces a purely maternal line.

The DNA is passed on unchanged, unless a mutation—a random, naturally occurring, usually harmless change—occurs. The mutation, known as a marker, acts as a beacon; it can be mapped through generations because it will be passed down for thousands of years.

When geneticists identify such a marker, they try to figure out when it first occurred, and in which geographic region of the world. Each marker is essentially the beginning of a new lineage on the family tree of the human race. Tracking the lineages provides a picture of how small tribes of modern humans in Africa tens of thousands of years ago diversified and spread to populate the world.

By looking at the markers you carry, we can trace your lineage, ancestor by ancestor, to reveal the path they traveled as they moved out of Africa. Our story begins with your earliest ancestor. Who were they, where did they live, and what is their story? Click “Next” to begin.

Branch: L3

Age: 67,000 Years Ago

Location of Origin: East Africa

This woman's descendants would eventually account for both out-of-Africa maternal lineages, significant population migrations in Africa, and even take part in the Atlantic Slave Trade related dispersals from Africa.

The common direct maternal ancestor to all women alive today was born in East Africa around 180,000 years ago. Dubbed "Mitochondrial Eve" by the popular press, she represents the root of the human family tree. Eve gave rise to two descendant lineages known as L0 and L1'2'3'4'5'6, characterized by a different set of genetic mutations their members carry.

Current genetic data indicates that indigenous people belonging to these groups are found exclusively in Africa. This means that, because all humans have a common female ancestor, and because the genetic data shows that Africans are the oldest groups on the planet, we know our species originated there.

Eventually, L1'2'3'4'5'6 gave rise to L3 in East Africa. It is a similar story: an individual underwent a mutation to her mitochondrial DNA, which was passed onto her children. The children were successful, and their descendants ultimately broke away from L1'2'3'4'5'6, eventually separating into a new group called L3.

While L3 individuals are found all over Africa, L3 is important for its movements north. Your L3 ancestors were significant because they are the first modern humans to have left Africa, representing the deepest branches of the tree found outside of that continent.

From there, members of this group went in a few different directions. Many stayed on in Africa, dispersing to the west and south. Some L3 lineages are predominant in many Bantu-speaking groups who originated in west-central Africa, later dispersing throughout the continent and spreading this L3 lineage from Mali to South Africa. Today, L3 is also found in many African-Americans.

Other L3 individuals, your ancestors, kept moving northward, eventually leaving the African continent completely. These people gave rise to two important macro-haplogroups (M and N) that went on to populate the rest of the world.

Why would humans have first ventured out of the familiar African hunting grounds and into unexplored lands? It is likely that a fluctuation in climate may have provided the impetus for your ancestors' exodus out of Africa.

The African Ice Age was characterized by drought rather than by cold. Around 50,000 years ago the ice sheets of northern Europe began to melt, introducing a period of warmer temperatures and moister climate in Africa. Parts of the inhospitable Sahara briefly became habitable. As the drought-ridden desert changed to savanna, the animals your ancestors hunted expanded their range and began moving through the newly emerging green corridor of grasslands. Your nomadic ancestors followed the good weather and plentiful game northward across this Saharan Gateway, although the exact route they followed remains to be determined.

Point of Interest

The L branch is shared by all women alive today, both in Africa and around the world. The L3 branch is the major maternal branch from which all mitochondrial DNA lineages outside of Africa arose.

Branch: N

Age: About 60,000 Years Ago

Location of Origin: East Africa or Asia

Your next ancestor is the woman whose descendants formed haplogroup N. Haplogroup N comprises one of two groups that were created by the descendants of L3.

One of these two groups of individuals moved north rather than east and left the African continent across the Sinai Peninsula, in present-day Egypt. Also faced with the harsh desert conditions of the Sahara, these people likely followed the Nile basin, which would have proved a reliable water and food supply in spite of the surrounding desert and its frequent sandstorms.

Descendants of these migrants eventually formed haplogroup N. Early members of this group lived in the eastern Mediterranean region and western Asia, where they likely coexisted for a time with other hominids such as Neanderthals. Excavations in Israel's Kebara Cave (Mount Carmel) have unearthed Neanderthal skeletons as recent as 60,000 years old, indicating that there was both geographic and temporal overlap of these two hominids. This likely accounts for the presence of Neanderthal DNA in people living outside of Africa.

Some members bearing mutations specific to haplogroup N formed many groups of their own which went on to populate much of the rest of the globe. These descendants are found throughout Asia, Europe, India, and the Americas. However, because almost all of the mitochondrial lineages found in the Near East and Europe descend from N, it is considered a western Eurasian haplogroup.

After several thousand years in the Near East, members of your group began moving into unexplored nearby territories, following large herds of migrating game across vast plains. These groups broke into several directions and made their way into territories surrounding the Near East.

Today, haplogroup N individuals who headed west are prevalent in Turkey and the eastern Mediterranean, they are found further east in parts of Central Asia and the Indus Valley of Pakistan and India. And members of your haplogroup who headed north out of the Levant across the Caucasus Mountains have remained in southeastern Europe and the Balkans. Importantly, descendants of these people eventually went on to populate the rest of Europe, and today comprise the most frequent mitochondrial lineages found there.

Point of Interest

This line and its sister lineage are the only two founding lineages to expand out of Africa.

Notable People

Ann Curry of the Today Show belongs to this lineage.

Branch: R

Age: About 55,000 Years Ago

Location of Origin: West Asia

After several thousand years in the Near East, individuals belonging to a new group called haplogroup R began to move out and explore the surrounding areas. Some moved south, migrating back into northern Africa. Others went west across Anatolia (present-day Turkey) and north across the Caucasus Mountains of Georgia and southern Russia. Still others headed east into the Middle East, and on to Central Asia. All of these individuals had one thing in common: they shared a female ancestor from the N clan, a recent descendant of the migration out of Africa.

The story of haplogroup R is complicated, however, because these individuals can be found almost everywhere, and because their origin is quite ancient. In fact, the ancestor of haplogroup R lived relatively soon after humans moved out of Africa during the second wave, and her descendants undertook many of the same migrations as her own group, N.

Because the two groups lived side by side for thousands of years, it is likely that the migrations radiating out from the Near East comprised individuals from both of these groups. They simply moved together, bringing their N and R lineages to the same places around the same times. The tapestry of genetic lines became quickly entangled, and geneticists are currently working to unravel the different stories of haplogroups N and R, since they are found in many of the same far-reaching places.

Point of Interest

Descendants of this line dominate the European maternal landscape, making up 75 to 95 percent of the lineages there.

Branch: U

Age: Around 47,000 Years Ago

Location of Origin: West Asia

Descending from the R group, a woman gave rise to people who now constitute haplogroup U. Because of the great genetic diversity found in haplogroup U, it is likely that this woman lived around 47,000 years ago.

Her descendants gave rise to several different subgroups, some of which exhibit very specific geographic homelands. The very old age of these subgroups has led to a wide distribution; today they harbor specific European, northern African, and Indian components, and are found in Arabia, the northern Caucasus Mountains, and throughout the Near East.

One interesting subgroup is U6, which branched off from haplogroup R while still in the Middle East, moved southward, and today is found in parts of northern Africa. Today, U6 individuals are found in around ten percent of people living in North Africa.

Other members of the larger haplogroup U descend from a group that moved northward out of the Near East. These women crossed the rugged Caucasus Mountains in southern Russia, and moved on to the steppes of the Black Sea. These individuals represent movements from the Black Sea steppes west into regions that comprise the present-day Baltic States and western Eurasia. This grassland then served as the home base for subsequent movements north and west.

Today, this line is part of populations in Europe, West Asia (including Arabia), North Africa, India, and the North Caucasus Mountains. In Europe, this lineage averages 7 percent of the population. In Scandinavian countries (Norway, Sweden, the Netherlands, etc.) it is between 9 and 16 percent of the population. In England, it is about 12 percent of the population. Toward the Mediterranean, this line is between 10 and 12 percent of the population in Croatia and Greece.

Point of Interest

A subtype of this lineage links the Saami people in Scandinavia to Berber populations in North Africa.

Branch: U5

Age: 30,000 Years Ago

Location of Origin: West Asia or Europe

The most recent common ancestor for all U5 individuals broke off from the rest of the group and headed north into Scandinavia. Even though U5 is descended from an ancestor in haplogroup U, it is also ancient, estimated to be around 30,000 years old.

U5 is quite restricted in its variation to Scandinavia, and particularly to Finland. This is likely the result of the significant geographical, linguistic, and cultural isolation of the Finnish populations, which would have restricted geographic distribution of this subgroup and kept it fairly isolated genetically. The Saami, reindeer hunters who follow the herds from Siberia to Scandinavia each season, have the U5 lineage at a very high frequency of around 50 percent, indicating that it may have been introduced during their movements into these northern territories.

The U5 lineage is found outside of Scandinavia, though at much lower frequencies and at lower genetic diversity. Interestingly, the U5 lineage found in the Saami has also been found in some North African Berber populations in Morocco, Senegal, and Algeria. Finding similar genetic lineages in populations living thousands of miles apart is certainly unexpected, and is likely the result of re-expansions that occurred after the last glacial maximum around 15,000 years ago. Humans who had been confined to narrow patches in southern Europe began to move outward again, recolonizing ancient territories and bringing new genetic lineages with them.

In addition to being present in some parts of North Africa, U5 individuals also live sporadically in the Near East at two percent—about one-fifth as frequent as in parts of Europe—and are completely absent from Arabia. Their distribution in the Near East is largely confined to surrounding populations, such as Turks, Kurds, Armenians, and Egyptians. Because these individuals contain lineages that first evolved in Europe, their presence in the Near East is the result of a back-migration of people who left northern Europe and headed south, as though retracing the migratory paths of their own ancestors.

Point of Interest

This line is represented in the Neolithic Bell Beaker site in Germany.

Branch: U5b

Age: 17,950 ± 4,280 Years Ago

Location of Origin: Europe

Today, this line is present most often in Finland (15 percent) and Latvia (12 percent). It is between 6 and 9 percent of maternal lineages in Luxembourg, Northern Ireland, Spain, and Slovenia.

This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Heatmap for U5b

This next step in your journey is a map showing the frequency of your haplogroup (or the closest haplogroup in your path that we have frequency information for) in indigenous populations from around the world, providing a more detailed look at where your more recent ancestors settled in their migratory journey. What do we mean by recent? It's difficult to say, as it could vary from a few hundred years ago to a few thousand years ago depending on how much scientists currently know about your particular haplogroup. As we test more individuals and receive more information worldwide, this information will grow and change.

The colors on the map represent the percentage frequency of your haplogroup in populations from different geographic regions—red indicates high concentrations, and light yellow and grey indicate low concentrations. The geographic region with the highest frequency isn't necessarily the place where the haplogroup originated, although this is sometimes the case.

The map of U5b shows that it is widespread in western Eurasia, particularly to the north. This spread began with the expansion of haplogroup U5b-bearing populations out of West Asia during the Upper Paleolithic, prior to 12,000 years ago, and like other branches of U it reached Europe during the Paleolithic. Despite later waves of migrants from other lineages, it remains common there.

Does this mean you're related to people in the areas highlighted on your map? Distantly, yes! We are all connected through our ancient ancestry. In order for us to learn more ancestry information about where haplogroups settled in more recent times, please choose to contribute your results to science (check the checkbox during Login or from the Account Settings tab of your

Profile), and fill out your ancestry information in the Profile section of the site. Also be sure to tell your own story in the Our Story section.

Branch: P305

Age: More than 100,000 years old

Location of Origin: Africa

The common direct paternal ancestor of all men alive today was born in Africa between 300,000 and 150,000 years ago. Dubbed “Y-chromosome Adam” by the popular press, he was neither the first human male nor the only man alive in his time. He was, though, the only male whose Y-chromosome lineage is still around today. All men, including your direct paternal ancestors, trace their ancestry to one of this man’s descendants. The oldest Y-chromosome lineages in existence, belonging to the A00 branch of the tree, are found only in African populations.

Around 100,000 years ago the mutation named P305 occurred in the Y chromosome of a man in Africa. This is one of the oldest known mutations that is not shared by all men. Therefore, it marks one of the early splits in the human Y-chromosome tree, which itself marks one of the earliest branching points in modern human evolution. The man who first carried this mutation lived in Africa and is the ancestor to more than 99.9% of paternal lineages today. In fact, men who do not carry this mutation are so rare that its importance in human history was discovered only in the past two years.

As P305-bearing populations migrated around the globe, they picked up additional markers on their Y chromosomes. Today, there are no known P305-bearing individuals without these additional markers.

Branch: M42

Age: About 80,000 Years Ago

Location of Origin: East Africa

Around 80,000 years ago, the BT branch of the Y-chromosome tree was born, defined by many genetic markers, including M42. The common ancestor of most men living today, some of this man’s descendants would begin the journey out of Africa to the Middle East and India. Some small groups from this line would eventually reach the Americas, while other groups would settle in Europe, and some would remain near their ancestral homeland in Africa.

Individuals from this line whose ancestors stayed in Africa often practice cultural traditions that resemble those of the distant past. For example, they often live in traditional hunter-gatherer societies. These include the Mbuti and Biaka Pygmies of central Africa, as well as Tanzania’s Hadza.

Point of Interest

The M42 branch is shared by almost all men alive today, both in Africa and around the world.

Branch: M168

Age: About 70,000 years ago

Location of Origin: East Africa

When humans left Africa, they migrated across the globe in a web of paths that spread out like the branches of a tree, each limb of migration identifiable by a marker in our DNA. For male lineages, the M168 branch was one of the first to leave the African homeland.

The man who gave rise to the first genetic marker in your lineage probably lived in northeast Africa in the region of the Rift Valley, perhaps in present-day Ethiopia, Kenya, or Tanzania. Scientists put the most likely date for when he lived at around 70,000 years ago. His descendants became the only lineage to survive outside of Africa, making him the common ancestor of every non-African man living today.

Your nomadic ancestors would have followed the good weather and the animals they hunted, although the exact route they followed remains to be determined. In addition to a favorable change in climate, around this same time there was a great leap forward in modern humans' intellectual capacity. Many scientists believe that the emergence of language gave us a huge advantage over other early humanlike species. Improved tools and weapons, the ability to plan ahead and cooperate with one another, and an increased capacity to exploit resources in ways we hadn't been able to earlier allowed modern humans to rapidly migrate to new territories, exploit new resources, and replace other hominids such as the Neanderthals.

Point of Interest

This male branch is one of the first to leave the African homeland.

Branch: M203

Age: About 50,000 Years Ago

Location of Origin: Northeast Africa

Two major paternal lineages survive from the first man to have this genetic marker.

Branch: M96

Age: 50,000 – 55,000 Years Ago

Location of Origin: Africa

Near the time of this man's birth, modern human populations expanded and moved out from their ancestral homelands. He belonged to a group that traveled across and settled Africa. This participation in African expansions has led to its wide distribution in modern Africa. Later, branches of his descendants took part in the second expansion from Africa. These migrants are responsible for its presence in Eurasia.

Today, this lineage and its descendant branches are present in Africa, Asia, and Europe. In Africa, it has high frequencies in Bantu populations: 83 percent of Bantus from Kenya, 86 percent of Bantus from Tanzania and Gabon, and 97 percent of Bantus from the Congo. They are 76 percent of the Zulu population. They make up 91 percent of the Dogon male population. They are also 92 percent of Yoruban male lineages.

In West Asia, the frequencies from one population to the next are more varied. Among Arab populations, frequencies are moderate to high: 17 percent in Sudan, 26 percent in Lebanon, 52 percent in Libya, and 8 percent in Qatar. It is between 12 and 23 percent of Jewish populations, and it contributes to 80 to 92 percent of Berber populations.

In Europe, its frequencies are highest in the South and the East. It is 13 to 17 percent of Italian male lineages. It is about 17 percent of the Serbian male population. It is 2 percent of Belgian, Finnish, and Irish male lineages.

Point of Interest

Geneticists have found members of this lineage at trace frequencies among Bantu-speakers from South Africa, Pygmies and Bantus from the Cameroon, and in Saudi Arabia.

Branch: P147

Age: 45,000 – 50,000 Years Ago

Location of Origin: Africa

Today, most members of this lineage belong to one of its descendant branches. Those who do not are rare.

This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Branch: P177

Age: About 40,000 Years Ago

Location of Origin: Africa

In modern populations, most of this man's descendants belong to two main branches of his lineage.

This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Branch: P2

Age: 24,000 – 27,000 Years Ago

Location of Origin: East Africa

From the highlands of modern Ethiopia, this lineage spread across East Africa.

Today, those from this line include the Amhara (6 to 10 percent), Oromo (11 to 13 percent), Iraq (11 percent), South African Bantu (2 percent), Senegalese (3 percent), Ewe (3 percent), Fante (3 percent), Wolof (3 percent), Mossi (2 percent), and the Fulbe (6 percent). It also includes Ethiopian Jews (18 percent) who are part of the Jewish Diaspora.

This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Branch: M215

Age: About 22,500 Years Ago

Location of Origin: East Africa

From East Africa, many from this line traveled across Africa, reaching South Africa and West Africa. Others from this line traveled out of Africa to Europe and Asia.

Branch: M123

Age: To Be Determined

Location of Origin: Anatolia or Levant Region

Descendants of this line have traveled south to Oman and the Horn of Africa. Others have migrated to the Mediterranean region and are present in Northern Portugal and Galicia.

This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Branch: M34

Age: To Be Determined

Location of Origin: Anatolia or Levant

This lineage spread across both the Anatolian and Levant regions. Some from this line have migrated to Ethiopia while others have moved north toward Europe. It has a strikingly high frequency in the Dead Sea region of Jordan (31 percent).

This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Heatmap for M34

This next step in your journey is a map showing the frequency of your haplogroup (or the closest haplogroup in your path that we have frequency information for) in indigenous populations from around the world, providing a more detailed look at where some of your more recent ancestors settled in their migratory journey. What do we mean by recent? It's difficult to say, as it could vary from a few hundred years ago to a few thousand years ago, depending on how much scientists currently know about your particular haplogroup. As we test more individuals and receive more information worldwide, this information will grow and change.

The colors on the map represent the varying percentage frequencies of your haplogroup in populations from different geographic regions—red indicates high concentrations, and light yellow and grey indicate low concentrations. The geographic region with the highest frequency isn't necessarily the place where the haplogroup originated, although this is sometimes the case.

You may find that your map shows a wide distribution for your haplogroup, with large portions of the world highlighted, or unusual places far from where you live. Does this mean you're related to people in all of those places? Distantly, yes! We are all connected through our ancient ancestry.

In order for us to learn more ancestry information about where haplogroups settled in more recent times, please choose to contribute your results to science (check the checkbox during Login or from the Account Settings tab of your Profile), and fill out your ancestry information in the Profile section of the site. Also be sure to tell your own story in the Our Story section.

Your Hominin Ancestry

(50,000 Years Ago and Older)

Your Hominin Ancestry

When our ancestors first migrated out of Africa around 60,000 years ago, they were not alone. At that time other species of hominin—our evolutionary cousins—walked the Eurasian landmass. One of these cousins was the Neanderthals. As our modern human ancestors migrated throughout Eurasia, they encountered these hominins and interbred, resulting in a small amount of Neanderthal DNA, for example, being introduced into the modern human gene pool.

Most non-Africans are about 1.1 percent Neanderthal. This percentage is calculated using a sophisticated analytical method that looks at parts of your DNA that you share with these hominin populations, as well as your complete regional ancestral components. The science around this calculation is new, and it is thanks to participation from citizens like you, that we continue to learn more and improve on this method. For this reason, your hominin result may change slightly over time as our accuracy and understanding improves.

NEANDERTHAL

*Out of a maximum of 5%

