

词汇: *ancestry* 祖先

Have you ever wondered why your brother or sister doesn't look exactly like you despite having the same family tree? If you think that's odd, even stranger is the idea that you and your sibling may have very different ancestry **genes**. You have the same parents, and therefore the exact same **ancestors**, but somehow your DNA tests come back with very different results. How is this even possible?

Children **inherit** half of their DNA from each parent, via the **sperm** from the father and the **egg** from the mother. Our bodies contain 46 **chromosomes**, or 23 pairs. However, each reproductive cell has only 23 individual chromosomes. When the bodies of our **forbearers** created their sex cells, the cells engaged in **genetic reshuffling**, meaning each of the 23 chromosomes is a unique combination of an original pair. This process is also called **genetic recombination**.

This is why Dr. Prosanta Chakrabarty, a scientist who studies fish to help explain the evolution of human beings and our planet, says that your sister could be 10% more 'French' than you, despite having the same **primogenitors**. And the further you go back in your **lineage**, the more confusing it can be.

You inherit 25% of each grandparent's DNA. However, this process of recombination means that inevitably some of their **genetic make-up** will be lost along the way. This could mean that the genes you inherited from your grandparent, could be completely different to those your cousin received.

Those studying **genealogy** should also be aware that modern DNA testing might not give you an accurate idea of your ancestry as it is tested against a current, but incomplete database. Many of the genetic samples come from North America and Western Europe. The genes passed down from your ancestors is sampled and matched with people who **originated** from a certain area. However, without enough samples from the Middle East or Africa, the results may be inaccurate.

Dr. Prosanta Chakrabarty says that only 1% of our genetic make-up is unique to us, and that it is an incomplete mash-up of our ancestors'. So, the next time someone says you look a bit like you're from a certain country, you may well be. But it might not show up in your tests.

词汇表

genes	基因
ancestors	祖先, 祖宗
inherit	经遗传而得
sperm	精子
egg	卵子
chromosome	染色体
reproductive cell	生殖细胞
forbearers	祖先
genetic reshuffling	基因重组
genetic recombination	基因重组
primogenitor	祖先, 始祖
lineage	血统, 家系
genetic makeup	基因组成
genealogy	家谱学
originate	起源于, 来自

测验与练习

1. 阅读课文并回答问题。

1. Why does Dr. Prosanta Chakrabarty say that your sister could be 10% more 'French' than you?

2. How many chromosomes are in each sex cell?

3. Why is the database potentially incomplete?

4. How much of our genetic code is unique to us?

5. What is another term for 'genetic reshuffling'?

2. 选择意思恰当的单词或词组来完成下列句子。

1. I reckon I _____ my looks from my father.

inherit	inheriting	inherits	inherited
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2. Where did your grandfather _____ from?

origin	originated	originate	originates
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3. The male's sex cell is known as a _____.

sperm	egg	chromosome	genetic
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4. _____ is the study of your family genetic structure.

Genealogy	Chromosome	Reshuffling	Lineage
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5. _____ is not a synonym of ancestor.

Precursor	Primogenitor	Lineage	Forebearer
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答案

1. 阅读课文并回答问题。

1. Why does Dr. Prosanta Chakrabarty, say that your sister could be 10% more 'French' than you?

This is due to genetic recombination.

2. How many chromosomes are in each sex cell?

In each sex cell there are 23 chromosomes.

3. Why is the database potentially incomplete?

Because there are not as many samples coming from certain regions.

4. How much of our genetic code is unique to us?

According to Dr Chakrabarty, around 1%.

5. What is another term for 'genetic reshuffling'?

Genetic recombination.

2. 选择意思恰当的单词或词组来完成下列句子。

1. I reckon I **inherited** my looks from my father.

2. Where did your grandfather **originate** from?

3. The male's sex cell is known as a **sperm**.

4. **Genealogy** is the study of your family genetic structure.

5. **Lineage** is not a synonym of ancestor.