Probability of having twins hereditary?  [1]

Dear Alice,

I heard a rumor that if a couple has twins, then the higher probability of having twins skips a generation. My grandparents had twins? my two uncles. Does this mean that my generation now has a higher probability? Or is this rumor not true?

Signed,
Anticipating Twins

Answer

Dear Anticipating Twins,

Finally, a question about twins that has nothing to do with Mary Kate and Ashley! To answer your question, the propensity to bear fraternal twins does run in families, but one generation doesn't necessarily have a higher probability of having fraternal twins than another. Fraternal twins occur in about 12 of every 1000 births. There is no evidence that the likelihood of having identical twins is impacted by genetics. Identical twins occur in approximately 4 of every 1000 births, and are no more common in any one group of people.

As you probably know, twins come in two types ? fraternal and identical. Fraternal twins are produced from two different eggs that are each fertilized by different sperm, which results in two embryos with different genetic make-up. Identical twins are produced when a fertilized egg divides in two, and both "halves" grow into identical twins that have the same genetic make-up.

Fraternal twinning is caused by a gene on the X chromosome. This gene may cause hyper-ovulation ? when a woman's ovaries release more than one egg per ovulation cycle. A woman can inherit the hyper-ovulation gene from either of her parents. However, if she inherits it from her father, the gene will appear to "skip a generation" because men cannot affect whether his partner's ovaries will release multiple eggs. Thus, a man with a family history of fraternal twins is not more likely to father twins himself. But, if a man has fraternal twins in his family, he can pass the twin gene on to a daughter.

The probability of fraternal twins is, therefore, impacted by whether a particular generation has more males or females. If your grandparents had all boys, none of them would contribute to multiple births in the next generation. But if your grandparents had daughters along with your twin uncles, those aunts would have an increased probability of having twins too.
There are other factors that appear to influence the probability of a woman releasing more than one egg per cycle. Women of African descent are two times more likely than Caucasian women to have twins, and four times more likely than Asian women. Women who are well-nourished, who are between the ages of 20 and 35, or who have had children before all have a higher probability of having fraternal twins.

So, if you are female and your uncles were fraternal twins, you would have a higher probability of having twins than many other people. But no need to run out and buy the double baby carriage yet, because the chance that two little bundles of joy will appear at once is still pretty small!

Alice!

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