Video: Humans and other mammals have a lot less hair today than tens of thousands of years ago. Here’s why

For decades scientists have been puzzled and intrigued by a most fascinating question, which is: why do human beings have so much less body hair than other primates, and most other land mammals in general? Genetic researchers have just published an article in the journal eLife that sheds significant light on this age-old query, and in fact their unprecedented findings may have actually solved this compelling mystery.

Undertaking an exhaustive genetic study, the team of American scientists discovered that human beings possess all the genes necessary to produce a complete coat of body hair. But it seems that over the course of hundreds of thousands of years of evolution, changes occurred that prevented these particular genes from being fully expressed.

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The ancestors of dolphins and whales, rhinos and naked mole-rats, along with other hairless mammals, also gradually developed regulatory regions in their genomes that shut off genes responsible for hair growth. These other species have the potential to grow hair all over their bodies just like humans, but at some point during their evolution they stopped doing so, just as humans did.

Evolutionary scientists have theorized that less hair could help species keep cool in hot climates, or move more smoothly and efficiently through the water if they live in aquatic environments. For land mammals less hair also makes vitamin D absorption from sunlight more efficient (vitamin D keeps bones, muscles and teeth healthy), and it can also reduce vulnerability to infestation by disease-causing parasites.

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