

## Podcast: Are you a genetic superhero? Finding the hidden powers in our genes



Geneticist Dr Kat Arney explores the science behind so-called '[genetic superheroes](#)', and explains why you might also have hidden powers within your genes.

Despite the catchy name, these superheroes don't have the ability to shoot webs from their fingers or save the universe, but something with a lot more real world relevance to human health: carrying genetic alterations that should make them seriously ill, yet they are apparently healthy.

The search for genetic superheroes started with a simple question with a complicated answer: not why do we get sick, but why do we stay well?

Instead of starting with people who already had a health condition then sifting through their genes, researchers are going the other way, sifting through DNA sequences from thousands of people looking for alterations known to be linked to serious diseases, then finding out whether any of the people with these harmful variations are actually ill.

Several research projects have now identified 'genetic superheroes' carrying what should be disease-causing faults in genes for conditions ranging from cystic fibrosis to skeletal abnormalities and lung disease.

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It turns out there are far more of these people out there than anyone first imagined, raising questions about how much we can predict about the risk of disease simply from studying someone's genes.

It's not just humans who can be genetic superheroes. There's also the case of [Ringo the Superdog](#) and his son Suflair, who should have developed the canine version of muscular dystrophy according to their genes, but were unaffected and completely healthy.

Arney takes a closer look at the quest to find genetic superheroes and understand the science behind their secret powers, what they can teach us about health and disease, and what their existence means for our understanding of genetics.

<https://geneticliteracyproject.org/wp-content/uploads/2021/03/405-How-to-be-a-superhero-Genetics-Unzipped.mp3>

Full show notes, transcript, music credits and references online at [GeneticsUnzipped.com](#).

**[Genetics Unzipped](#)** is the podcast from the UK **[Genetics Society](#)**, presented by award-winning science communicator and biologist Kat Arney and produced by **[First Create the Media](#)**. Follow Kat on Twitter **[@Kat\\_Arney](#)**. Follow Genetics Unzipped on Twitter **[@geneticsunzip](#)**, and the Genetics Society at **[@GenSocUK](#)**