

Your genes: Part dad, part mom and a dollop of mother's bacteria

A good mom always knows to pack a little something extra — even when it comes to genetic material. According to a new study published online in *Nature*, the DNA of a mother's bacteria may be making its way into the genes of her offspring. This bacterial DNA may in turn affect the strength of our immune systems, the researchers report.

The study adds to a growing body of research that suggests there is much more to DNA than just what we get from our parents. It also shows that bacteria and viruses, often labelled as villains of health, may deserve more credit for the role they play in protecting our bodies and shaping our health.

The researchers wanted to know why some mice were more susceptible to a gut-damaging chemical than others, and why that susceptibility seemed to spread so quickly between a community of mice. They traced the effect to a bacterium that suppresses a specific antibody that might otherwise equip a mouse to fight off the chemical's effect.

"We wanted to understand how an alteration of the immune system (immunoglobulin A in the gut) that is normally caused by genetic mutations in the host (in this case mice) could be present in 'normal' mice," coauthor Thaddeus Stappenbeck, a developmental biologist at Washington University in St Louis told Mic. "We found that the key genes driving this were located not in the host, but in bacteria. We then found that these bacteria could essentially be inherited from the mom," he added.

Read full, original article: [Your Genes May Be Part Mom, Part Dad and Part Bacteria](#)