How the environment shapes our genetic code

The fascinating field of epigenetics studies how different environmental influences actually have the power to change gene expressions in our DNA. Recently, a team of researchers discovered that mothers who experienced a physical hardship such as famine undergo a change in their DNA, which they pass on for up to three generations.

In their study, recently published in the online journal *Cell*, a team of researchers from Israel and America explored the genetic mechanism that allowed the body's response to starvation to be passed on through several generations. In their exploration, the team identified a mechanism called "small RNA inheritance" to be responsible for passing on the memory of starvation, according to a recent press release. "To the best of our knowledge, our paper provides the first concrete evidence that it's enough to simply experience a particular environment — in this case, an environment without food — for small RNA inheritance and RNA interference to ensue," explained Dr. Oded Rechavi, one of the researchers involved in the study.

The researchers speculate the mechanism functions as a way for parents to "prepare their progeny for hardships similar to the ones that they experience." This would give them a better chance at survival and more importantly a better chance at passing on DNA.

Read the full, original story: Starvation and Epigenetics: <u>DNA can hold onto the memory of</u> starvation for three generations, and now researchers know how