

Sometimes, evolution comes with negative side effects

From rashes to irritable bowels, people today face certain health challenges because our ancestors evolved the genetic variations associated with these conditions in order to benefit human health, a new study has found.

It's ironic that the genes responsible for certain health problems evolved to help us, but it's a reminder that physical traits are not always all good or bad. There are some cases, as the study published in *Molecular Biology and Evolution* points out, where the line is not so clear.

"The best example of this is sickle cell anemia," senior author Omer Gokcumen said in a press release.

Gokcumen, a University at Buffalo assistant professor of biological sciences, explained that sickle cell anemia causes red blood cells to take on a curved, crescent-like shape, which leads to anemia (a problem), but also protects against malaria by keeping parasites out of cells (an advantage).

The opposing pressures create a balance where the copy of the gene that causes the sickle cell anemia remains in the population in malaria-ridden geographies.

Gokcumen, lead author Yen-Lung Lin, and their colleagues found that other inherited disorders fall into the problem/advantage pattern of evolution too.

For example, Gokcumen said, "Our research shows that some genetic features associated with psoriasis, Crohn's disease and other aspects of human health are ancient."

Psoriasis, a chronic skin condition, can cause rashes that itch, burn and sting. Crohn's disease is an inflammatory bowel disease that can lead to abdominal pain, diarrhea, fatigue, constipation, weight loss and more.

If misery loves company, sufferers can at least take heart knowing that some prehistoric humans, such as Neanderthals and Denisovans, likely suffered from these health problems too.

The researchers found this out after comparing modern human genomes to those of other closely related species, including chimpanzees and the aforementioned archaic humans that lived thousands of years ago.

Read full, original article: Itchy Skin, Diarrhea Evolved to Promote Good Health