

Small contributions from Neanderthals, Denisovans had huge influence on modern human genome

Our ancestors were not a picky bunch. Overwhelming genetic evidence shows that *Homo sapiens* had sex with Neanderthals, Denisovans and other archaic relatives. Now researchers are using large genomics studies to unravel the decidedly mixed contributions that these ancient romps made to human biology — from the ability of *H. sapiens* to cope with environments outside Africa, to the tendency of modern humans to get asthma, skin diseases and maybe even depression.

The proportion of the human genome that comes from archaic relatives is small. [The genomes of most Europeans and Asians are 2–4% Neanderthal](#), with [Denisovan DNA making up about 5% of the genomes of Melanesians](#) and Aboriginal Australians. DNA slivers from other distant relatives probably pepper a variety of human genomes.

But these sequences may have had an outsized effect on human biology. In some cases, they are very different from the corresponding *H. sapiens* DNA, notes population geneticist David Reich of Harvard Medical School in Boston, Massachusetts — which makes it more likely that they could introduce useful traits. “Even though it’s only a couple or a few per cent of ancestry, that ancestry was sufficiently distant that it punched above its weight,” he says.

Using de-identified genome data and medical records from 28,000 hospital patients, researchers looked for differences in traits and medical diagnoses between people with a particular Neanderthal gene variant and those with the *H. sapiens* version of the same gene. They found that the Neanderthal variants seemed to slightly increase the risk of conditions such as osteoporosis, blood-coagulation disorders and nicotine addiction.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Neanderthals had outside effect on human biology](#)