

Sexual reproduction is good for the human genome

Theories on the genetic advantages of sexual reproduction abound within the biological sciences community, but there has been scant evidence at the molecular level to reinforce such hypotheses.

The production of offspring from one generation to the next pushes human evolution forward ever so slightly through genetic recombination events between parental chromosomes. For many years scientists have been aware that these recombination events do not occur in a uniform fashion. Some areas of the genome have a high-frequency of recombination while others very low or not at all.

Interestingly, the Canadian researchers found that the regions of the human genome with low recombination frequency had a higher proportion of disease-causing mutations. Moreover, the accumulation of mutations within these regions increases until a recombination event occurs. This led the team to the conclusion that our genetic code deteriorates before it begins to improve by shuffling of genes through sexual reproduction.

“Since these mutations rest on less dynamic segments of our genome, the process can potentially take many hundreds of generations,” explains Philip Awadalla, Ph.D., associate professor of population and statistical genomics at the University of Montreal, director of the CARTaGENE project and senior author on the study.

Read full, original story: [Make Love, Not Disease](#)