

First genome 'surgery' performed on DNA's 3D structure

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American researchers have performed the very first [‘surgery’ on the human genome](#), in a development that could one day provide a cure for those suffering from genetic diseases.

It wasn't surgery in the conventional sense – the genome is present in every cell in the body, so large scalpels and saws are no use. But the way the gene was manipulated bears a resemblance to traditional surgical techniques.

Scientists have manipulated genes before, but only in one dimension. Now, scientists have discovered a way to change how the genes are arranged in cells, manipulating them in three dimensions, allowing them to alter DNA patterns on specific places on a chromosome.

The results of the study were reported in the *Proceedings of the National Academy of Sciences* journal, and they explain that the genome is folded in different ways, in order for it to fit inside the cell.

There is a DNA sequence that signals when a long string of DNA should fold and turn back on itself – Erez Lierberman Aiden, director of the Centre for Genome Architecture at Baylor College of Medicine, describes it as similar to origami.

Read full, original post: [American researchers perform the very first ‘surgery’ on the human genome](#)