

Memories of positive associations get written onto DNA

Nerve cells communicate through short, fleeting pulses of electrical activity. Yet some memories stored in the brain can persist for decades.

Researchers have found that, based on their past activity, nerve cells can dictate which partners they make contact with or increase or decrease the strength of those connections—in essence, rewiring the brain as it develops and processes experiences. In addition, individual cells can make long-term changes in the genes that are active, locking specific behaviors in place. In a paper released by Nature Neuroscience, scientists have looked at the changes in gene expression associated with memories of positive associations and found that they are held in place by chemical modifications of the cells' DNA.

Read the full, original story here: [Memories of positive associations get written onto DNA](#)

Additional Resources:

- [“How an 1836 Famine Altered the Genes of Children Born Decades Later,”](#) io9
*This “deleted” excerpt from David Epstein’s *The Sports Gene* discusses a recent example of inherited epigenetic changes.*
- [“Mind-blower: epigenetics makes memories,”](#) University of Alabama at Birmingham
Learn more about the mechanics of epigenetics and memory in this explainer from UAB.