Despite media hype, no evidence trauma is inherited in genes

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis.

Recently, the Guardian published a story based on a scientific paper that claimed the stress experienced by Holocaust survivors somehow was detectable in their children through a process known as epigenetics. The paper was riddled with flaws: they had an absurdly small sample size of 32 people, a tiny eight-person control group, who didn't really look like good controls, and produced a contorted argument for why their data supported their original hypothesis. The paper probably shouldn't have made it through to the scientific literature, and it certainly shouldn't have made it to your Saturday breakfast reading.

The scientific paper and newspaper story point to a rising interest in epigenetics. This is a seductive but rather slippery word that has come to mean a variety of things in relation to how molecular structures close to DNA work, in particular modification of DNA bases by methylation.

Trans-generational epigenetic inheritance – that is, environmentally-induced changes passed down from one generation to the next – is seen relatively often in plants. But it is far less common in mammals where its mechanism remains elusive. It is particularly difficult to show true trans-generational inheritance in humans. One reason is that a female fetus that is growing in the womb already carries its full complement of eggs. This means that there is physical DNA of any future grandchildren present inside every pregnant mother. This DNA is potentially being exposed to changes in the pregnant mother's environment, so you need to look at least four generations down the line – to great grandchildren – to study true trans-generational inheritance in females.

Read full, original post: Why I'm skeptical about the idea of genetically inherited trauma