

# Child Maltreatment: New Frontiers in Research & Practice

How Child Maltreatment Gets Under the Skin: Exploring the potential role of epigenetics

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Child abuse and neglect have profound developmental consequences, increasing risk of poor mental and physical health across the lifespan. Yet, we still know remarkably little about the biological mechanisms mediating this pattern of latent vulnerability. Recently, studies suggest that adverse experiences may 'get under the skin' through so-called 'epigenetic' changes to gene expression – in other words, by altering the way in which our genes are switched on and off.

While adaptive in the short-term, these changes may increase vulnerability in the long-term by affecting the function of biological and neurocognitive systems necessary for healthy development.

In this presentation, I will provide a brief overview of what epigenetic processes are, how they may be altered by exposure to adversity, and how these changes may increase risk for poor health. I will also present evidence suggesting that the experience of abuse and neglect may have distinct effects on epigenetic processes, while also sharing a 'common' biological signature affecting the regulation of genes important for brain development. I will conclude by discussing current challenges, translational potential and clinical implications.