

Transgenerational Epigenetic Inheritance & Systemic Racism in America Report Summary

What is transgenerational Epigenetic Inheritance?

It is how the negative effects of adversities and traumas in one generation can be passed down to affect the health and well-being of future generations. Grandchildren and great grandchildren can be negatively impacted by ancestral traumas -- even when they have not been directly exposed to any harm themselves.

How does this happen?

The negative effects of ancestral traumas can be passed down – or inherited -- through epigenetic modifications to the genes. Epigenetic modifications are chemical modifications to the genes that affect the likelihood of a given gene product being made -- with gene products being things like proteins and hormones that our bodies need to stay healthy. Epigenetic modifications are NOT gene mutations. Gene mutations interrupt the codes used to make the gene products so they may not be built correctly. Epigenetic modifications just turn genes on and off, but do not affect the codes used to create the gene products.

What sort of negative health effects have been linked to trauma?

It is not just mental and substance use disorders that are linked to trauma. Experiences of trauma – especially in childhood – increase risk for a whole host of health problems including obesity, diabetes, heart disease, liver disease, breathing problems, and even cancer.

How do we know trauma in one generation can affect the health and well-being of future generations?

Most of the research to date has been done in animals (e.g., mice), but studies in humans have shown ancestors exposure to trauma, poor nutrition, and toxic chemicals can impact the health of descendants across several generations. Some of the epigenetic (e.g., chemical) modifications noted in the animal studies have also been reported in humans.

What does transgenerational epigenetic inheritance have to do with systemic racism in America?

The health and well-being of African Americans is negatively impacted by the history of slavery, Jim Crow, lynchings, and more – and further harmed by systemic racism today. It appears experiences of discrimination can “get under the skin” and increase risk for the broad range of mental and physical health problems associated with other adverse childhood experiences.

How do we break the cycle of harm?

On an individual level -- trauma-informed services, Afrocentric culturally-grounded prevention and intervention programs, adopting a healthy lifestyle, and positive education, sports, and art experiences can help reverse the effects of historical trauma and various lifetime negative experiences.

But change is needed on a societal level to dismantle the systems that perpetuate disadvantage, adversity, and trauma among African descendants.

The cost to the individual and society is enormous. The time to act is now.

Report Citation. Kaufman, J., Khan, M., & Mancini, J. (2021). Transgenerational Epigenetic Inheritance and Systemic Racism in the United States: A Report Prepared for the National Coalition of Blacks for Reparations in America (N’COBRA). Center for Child and Family Traumatic Stress, Kennedy Krieger Institute; Department of Psychiatry, Johns Hopkins School of Medicine, Baltimore, MD