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***The link between serum cortisol levels within an American Indian community***

The purpose of this study is to understand the link between serum cortisol levels within an American Indian community. Stress levels can be determined by serum cortisol, which have a direct impact on the immune system. Historically, Native American communities suffer from various stress disorders related to generational trauma, mental, and substance abuse. This has resulted in increased frequency of infectious disease, autoimmune disease and various cancers. Native American communities, potentially due to high-stress levels affecting their immune systems, suffer from the highest incidence of health disparities. This study seeks to find if there is a direct link between stress-related hormones and an increased vulnerability to disease by comparison of self – reported depression amongst various bio-markers and socio-economic factors. This project fully began in the summer of 2015, canvassing local students and members of the community to engage in this project. Each participant was asked to complete a survey, and donate blood and saliva samples for direct cortisol testing. Analysis was performed of serum and saliva samples for direct cortisol testing. Analysis was performed on serum and saliva samples via Enzyme-linked Immunosorbent assays (ELISA). The assay is performed and analyzed to see the direct link of specific antigens or antibodies attaching to the surface of certain wells, within the ELISA test, to view cortisol levels within the system.

*Acknowledgements: Betty Matthews-Henderson, Billy Jo Kipp, and Delores Hoyt*