

The Correlation between Cortisol Induced PTSD and Diabetes as Seen in *Rattus norvegicus*

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The purpose of this experiment was to investigate the correlation between cortisol-induced PTSD and diabetes in *Rattus norvegicus*. The six live rats used in this experiment were handled by a professional veterinarian, and data was provided for analysis. No more than momentary pain or distress was caused. Half of the rats were subjected to recorded sounds of a dog's bark, which served as a stressor. Blood glucose levels were obtained thirty minutes after initial exposure to the recording. When compared to their baseline levels, there was a spike in blood glucose, indicating a release of the hormone cortisol. All test subjects showed a significant increase in blood glucose levels, indicating elevated cortisol. The control group not exposed to the treatment had decreased levels compared to the baseline levels obtained. Data from this experiment suggests that *Rattus norvegicus* is a useful animal model for studying the correlation between cortisol-induced PTSD and diabetes.