

Effects of Acute Ethanol Exposure on Learning in Zebrafish

By: Brooke
Dominski



Introduction

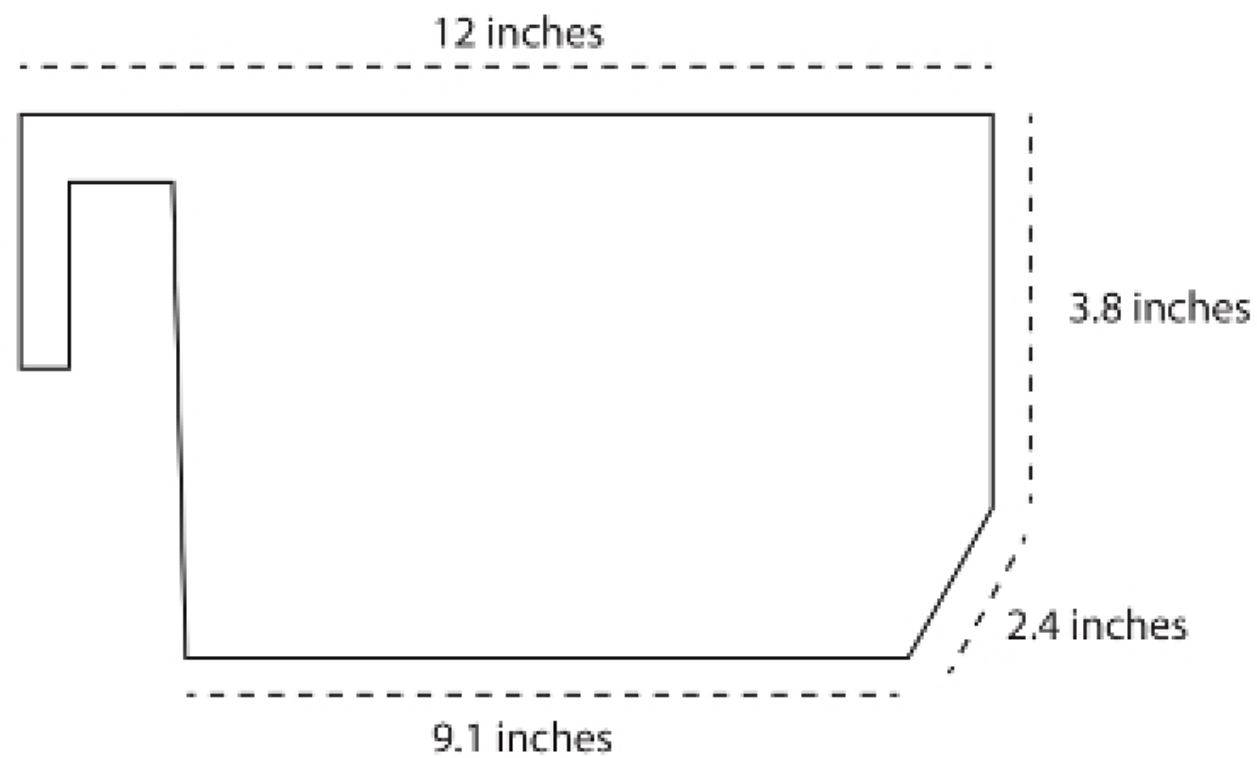
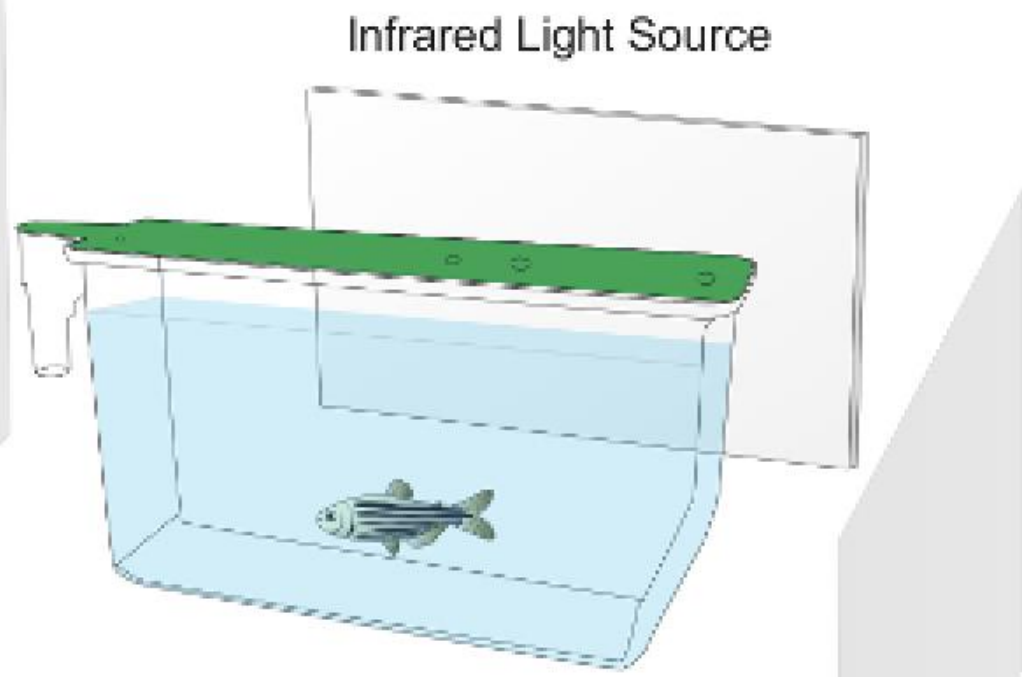
Backgro und

- Associated Learning – a form of conditioning that states behavior can be modified or learned by a stimulus and a response
- Ethanol – the same type of alcohol found in alcoholic beverages, not harmful for humans or animals (with low dosing)

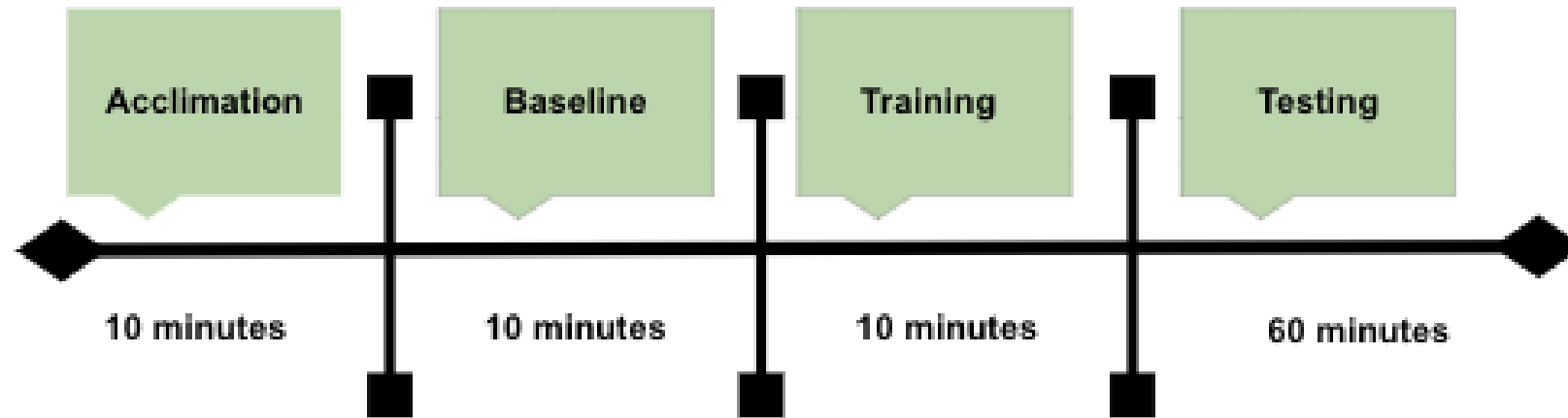
Hypothesis

- Fish exposed to greater concentrations of ethanol will have more difficulties learning the conditioned behavior as reflected in patterns of freezing, triggering shock, and the speed of locomotion during both the training and testing period

Methods

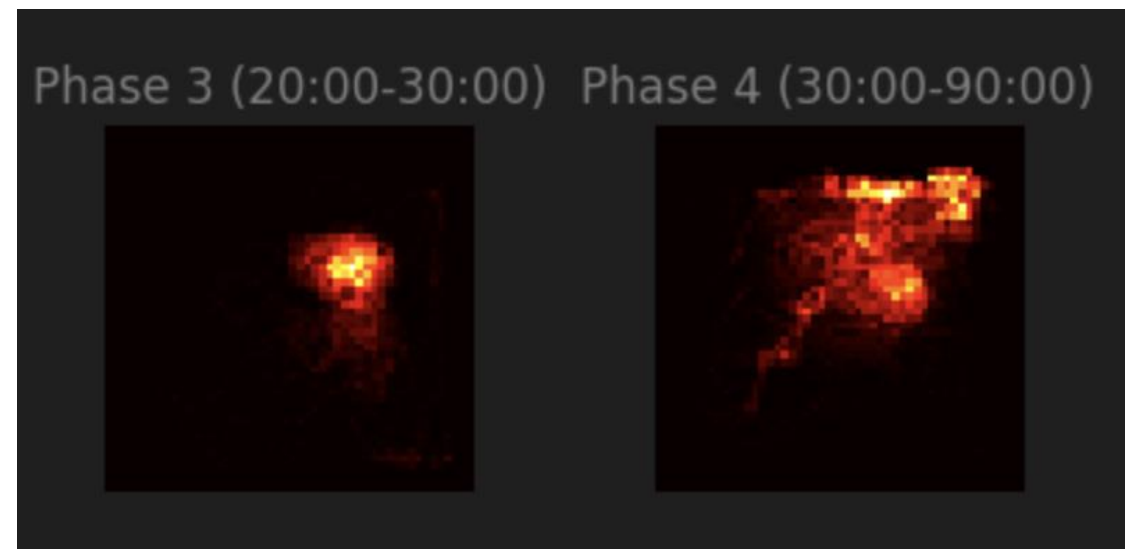
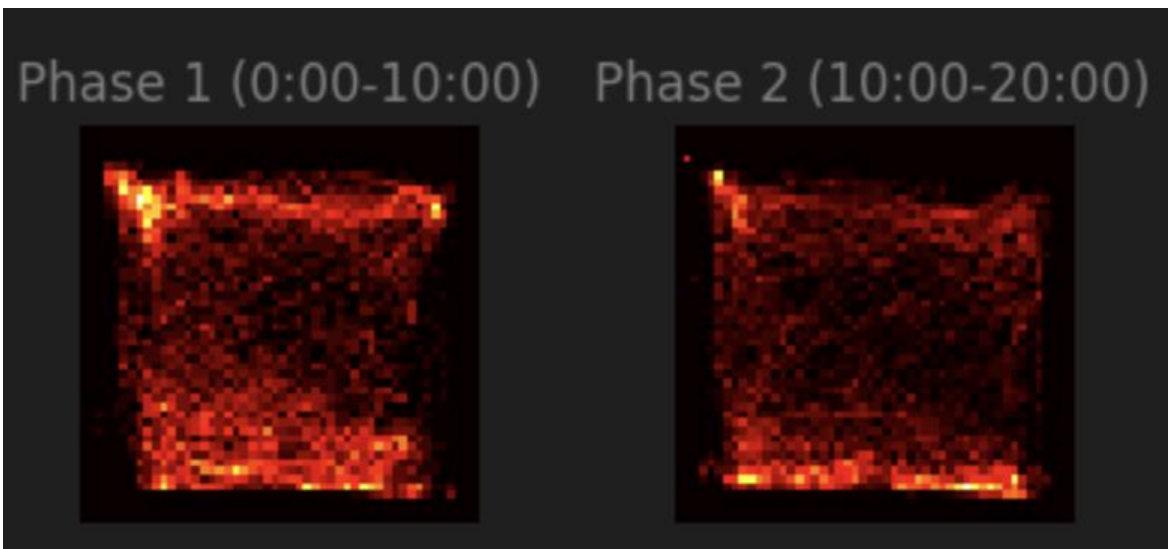


Methods Continued...

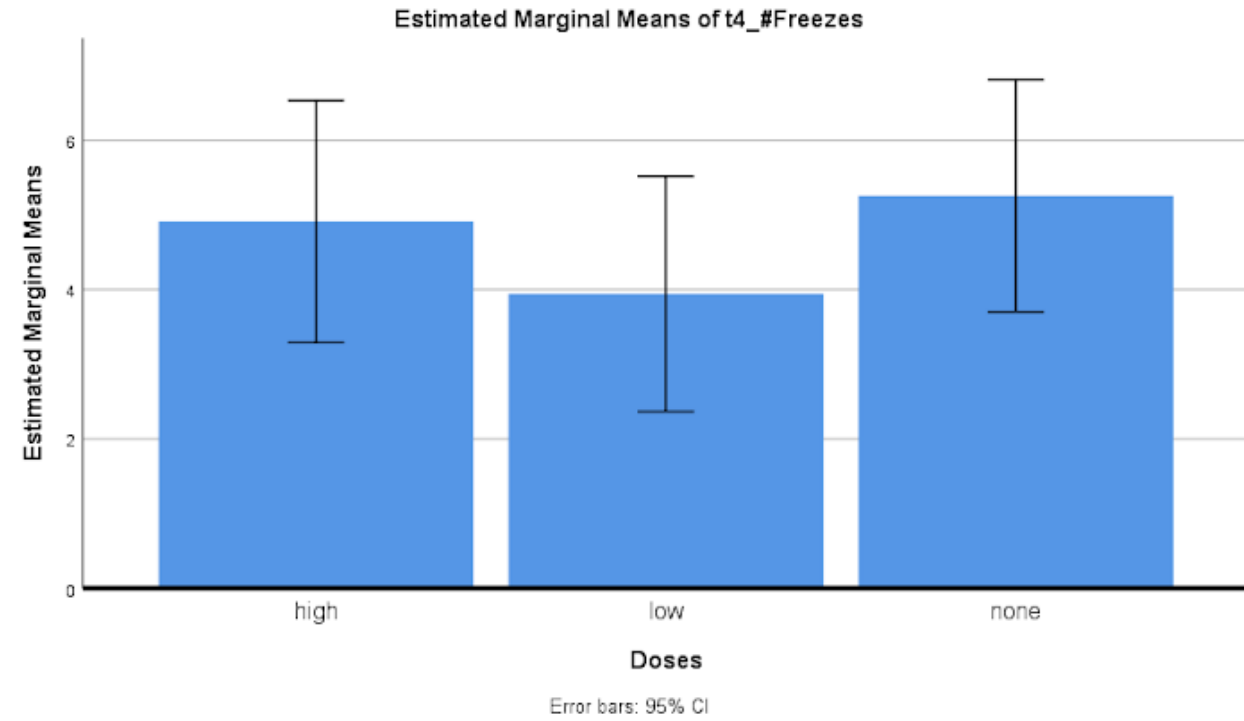
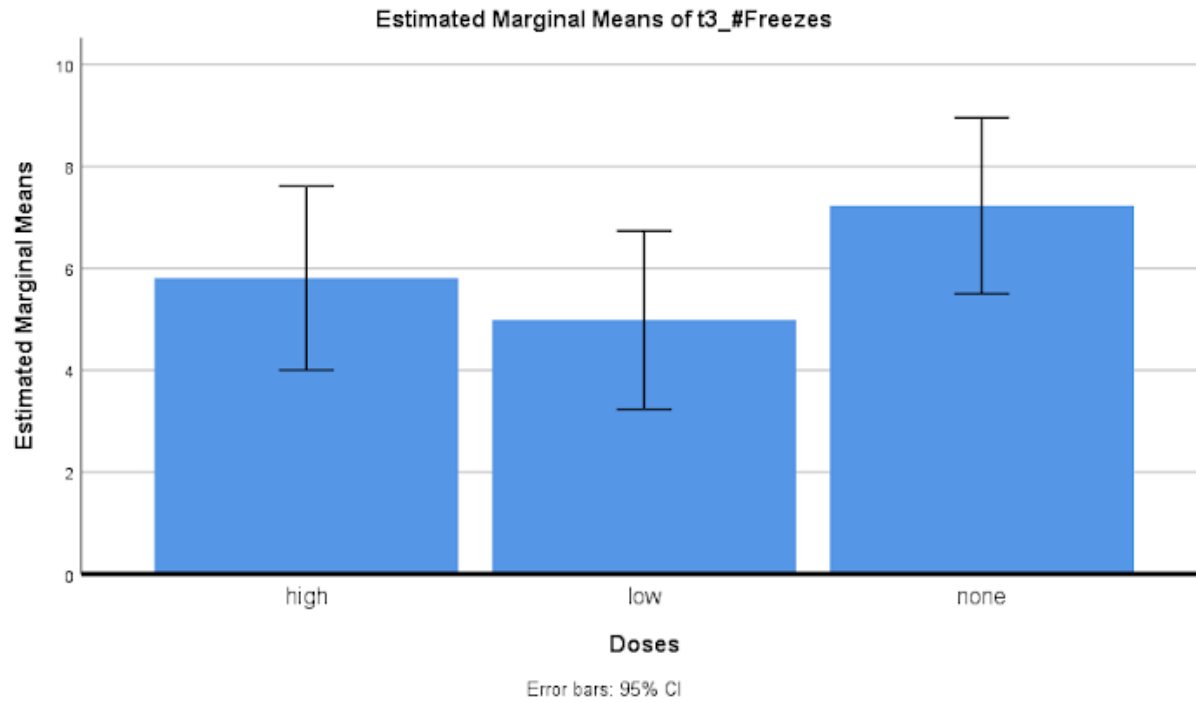


Data

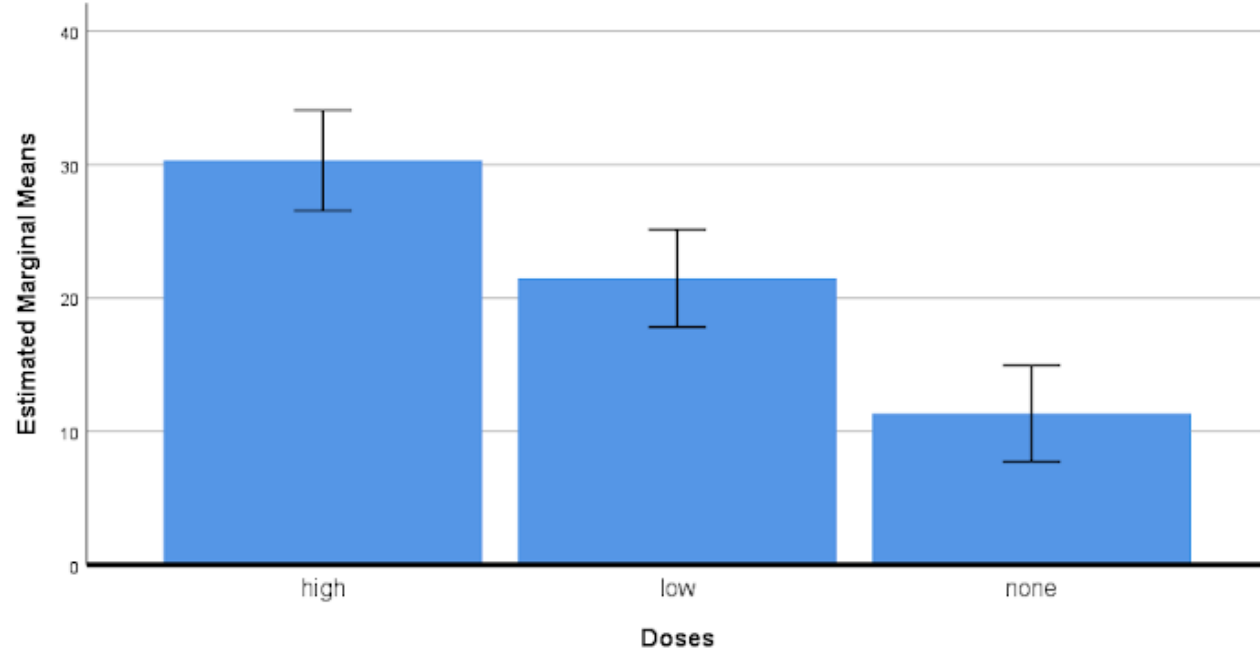
- Heat maps through infrared tracking



Freeze Data

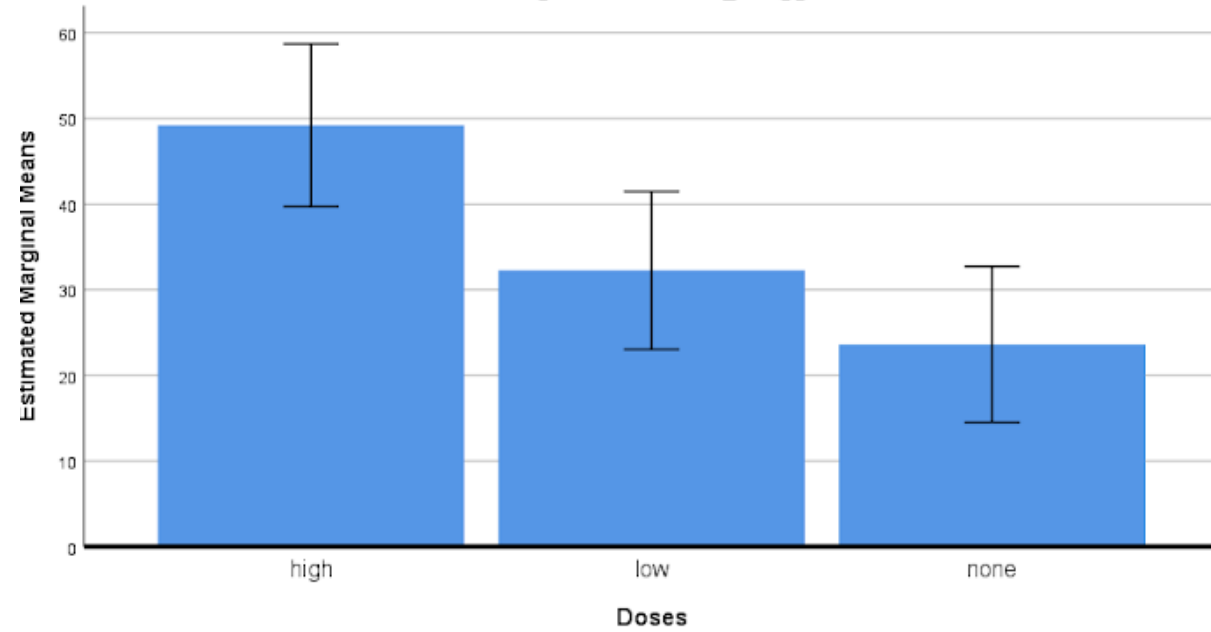


Estimated Marginal Means of t3_#Triggers



Error bars: 95% CI

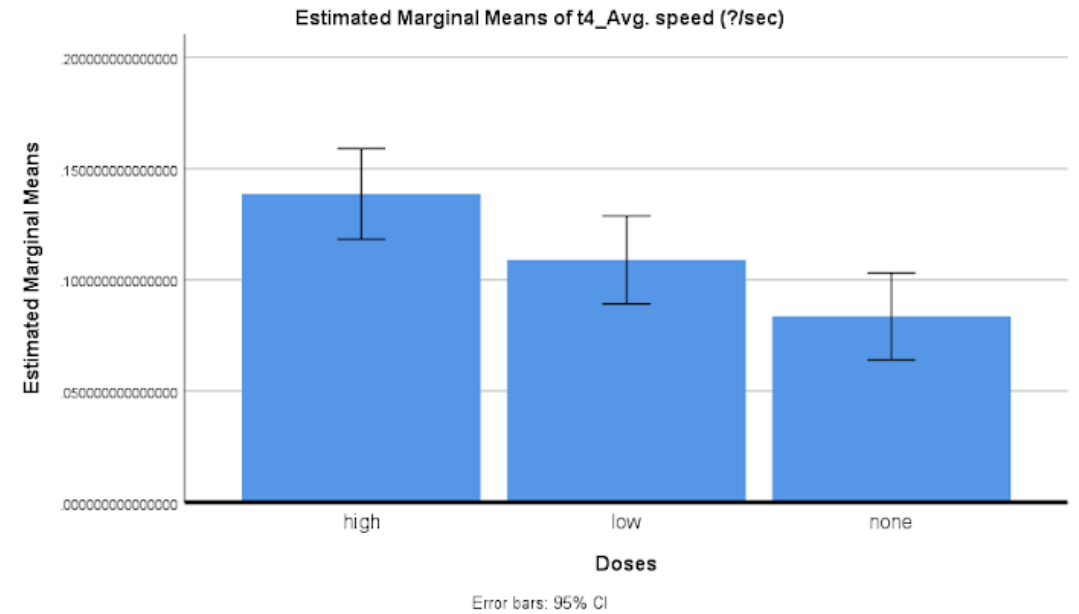
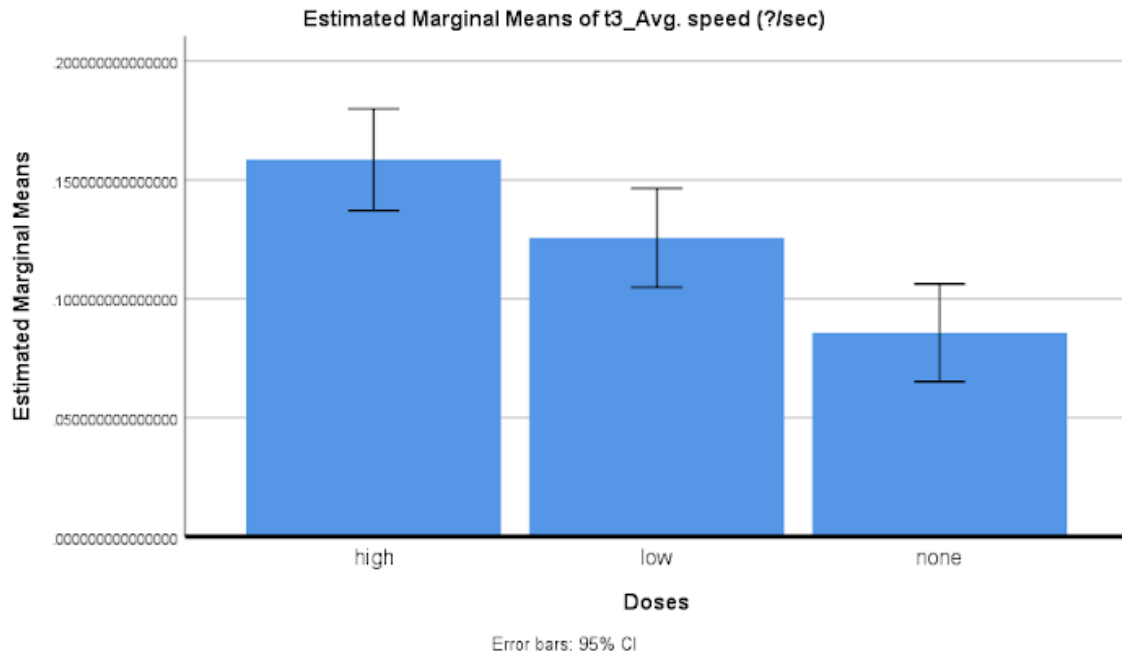
Estimated Marginal Means of t4_#Triggers



Error bars: 95% CI

Trigger Shock Data

Speed Data



Conclusi on

- Evidence for...
 - Triggering
 - Average Speed of locomotion
- No evidence for...
 - Freezing

Acknowledgements

- Dr. Brad Sheese
- IWU Psychology Department

