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*Hydra Reproduction Rates in Correlation with Their Environment*

Hydras are small cnidarians that live fresh water. They take five to ten days to mature, but afterwards show no signs of aging. By studying hydras we could possibly find the cure to aging and cancer. But there is one problem: hydras are very sensitive and hard to grow. Hydra will quickly perish in low quality water; they will not tolerate any chemical pollution, but might not reproduce best in store bought spring water because it limits their food sources. Before we study hydra for medical purposes we need to be able to culture the hydra effectively. I reproduced hydra in five different solutions to figure out which was best suited for hydra reproduction. I used store bought spring water for my control group, and melted snow, store bought spring water with algae, melted snow with algae, and store bought spring water with algae and a snail for my experimental groups. I used these solutions to mimic their natural environment. I fed the hydra brine shrimp every day. At the end of a two week period the container with melted snow increased its population the most. The population reached seven hydras near the end of the test period. Melted snow with algae and store bought spring water were the worst. During the trail the hydra population never increased. Now that I the best way to reproduce hydra I could conduct future experiments regarding the aging of hydra.