

Abigail Negley

Junior Division Medicine & Health

The Effect of Pain Killers on the Healing Process of Planaria

My experiment was to find out how three over the counter pain killers, Tylenol, Advil, and Aleve, would affect the healing and regeneration process of Planaria. My hypothesis that the control group would regenerate faster was proven wrong. For the experiment, I performed three serial dilutions, 1: 10,000, 1:100,000, and 1:1,000,000. I then cut my Planaria in half and put three specimens in each jar. I found that Tylenol healed the Planaria the fastest, and made them stronger, the Advil allowed the Planaria to fully regenerate, however they lost function of their mucus membranes and darkened in pigment, the Aleve group died completely, and my Control group regenerated completely. My conclusion was that, I found that my testable question of, what are the effects of over the counter painkillers such as Ibuprofen, Tylenol, and Aleve on the healing process of Planarian, had a different answer for every type of analgesic. My hypothesis that if I put Ibuprofen, Tylenol, and Aleve in different baby food jars in different strengths of ten, then the planarian without an analgesic will heal the fastest was proven wrong. Tylenol made the Planaria regenerate faster, and made them stronger; the control group came right behind.