

# Does Aspartame or Insulin Affect the Regeneration of Planarian Worms?

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The purpose of this research is to check the effects of aspartame and insulin on planarian regeneration. I am a diabetic and it has always interested me in how aspartame has raised my glucose levels and how bad the side effects of aspartame can be. One day I hope to find a cure for diabetes and this project is the first step to that research. My hypothesis, that planarian would be negatively affected by aspartame and insulin, was proven wrong. The experiment showed that aspartame killed the planarian, the aspartame and insulin combination killed the planarian as well, and the insulin planarian survived. The experiment was set up to test whole and regenerating planarian in aspartame, aspartame and insulin, insulin solution, and a control of distilled water. Separating the head and the body created a slight error with sterilization. The pancreas cannot detect the aspartame or other artificial sweeteners coming into the body. The cells do not even respond to these chemicals. With the information I discovered I created a new theory. The pancreas produces the insulin and the insulin binds to sugar but not to aspartame. Aspartame does not regenerate planarian worms or the stem cells in them. Could insulin regenerate the stem cells and if so, could that work to activate the damaged pancreas cells in a diabetic?