

The background features a light green grid. In the corners, there are white line-art diagrams of molecular structures, consisting of circles connected by lines, representing chemical bonds.

How Do Chemicals in Processed Foods Affect Our Health?

By: Elena Shen, Meimei Hagt, and Lucia Camilli

Purpose:

The purpose of this project is to show people that the chemicals in the food we consume daily can be harmful to our bodily health.

Procedures:

- Feed the planaria once a week: Control group - single piece of egg yolk, MSG group - single piece of egg yolk soaked in of MSG, one group egg yolk soaked in 0.1% solution of food coloring
- After 3 feedings, cut each planarian in half
- Observe how long it takes for them to regenerate

Pictures:



Feeding the MSG group



Feeding the control group



Cutting the planaria



Planaria after being cut

Results:

The planaria in the food coloring group died after the first feeding. We used the scientific standard for diluting chemicals (the dilution rate that several biology experts agreed upon) to soak the egg yolk in, but they still were not able to withstand the harmful effects of the food coloring, and did not make it to our check-in a couple of days later.

The control group planaria seemed to eat more than the MSG group planaria. Both the MSG and control groups were (all) able to be cut in half and survive the first several days. By the date of March 23rd, we will have a substantial amount of evidence on how the two surviving groups have regenerated, and can make conclusions based on this data.

Analysis:

The egg yolk for the food coloring group was soaked in a 0.1% solution of food coloring, same as the MSG group, but the food coloring group disintegrated, so the food coloring must have been a lot more harmful to the health of the planaria.