



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> Sydney L. Crews	<b>Project Number</b> <b>J2403</b>
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<b>Project Title</b> <b>What's in the Gut?</b>
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<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this project was to determine the best alternate solution (instead of surgery) that would decrease the size of an enterolith to the greatest degree. An enterolith is like a kidney stone, only in a horses gut. When a horse ingests a foreign body, such as a piece of plastic, it starts rolling around in the stomach and eventually rolls into a ball. When leaving the colon, frequently it becomes stuck. When this occurs surgery is needed. Without surgery, nothing can pass through the colon and eventually the horse will die.</p> <p><b>Methods/Materials</b> The enterolith materials include- 1 piece of plastic 1cm/1cm, hay 1in/1in, grain 1/3 cup, dirt 1/3 cup, and water 3 Tbsp. Other materials- gloves, 9 Tupperware bowls, vinegar, apple cider, oil of pepper, ruler, hammer (crushing up grain), and measuring cups. After making the simulated enteroliths, every 24 hours I poured 1 tablespoon of each substance onto its specific enterolith. I did this for three days each week. The next trial, which was a week later, I used different enteroliths.</p> <p><b>Results</b> There was no particular winner. The data had no trends. In comparison with the data, each substance decreased the size of the enterolith.</p> <p><b>Conclusions/Discussion</b> I believed that the best substance or method of decreasing the size of an enterolith was to pour one tablespoon of vinegar on it daily. I believed the vinegar was the most acidic, although my data was inconsistent. For example, in trial three, the first day I poured vinegar on the enterolith it decreased zero centimeters. While on the second and third day it decreased one and half centimeters each day. My hypothesis was neither rejected nor supported.</p> <p>By using the same ingredients, and method, I made each enterolith fairly the same, but in the real world every enterolith is different. I believe the data results occurred as they did because of the difference of each individual enterolith. Without the ability to throw up, I didn't want to over medicate the horse, hence the three day trials. I wanted this project to be as close as possible to the real world. In this economy most people are searching for alternatives to expensive surgery. In conclusion, all three solutions are equally viable alternatives to surgery.</p>
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<b>Summary Statement</b> Can an enterolith be decreased in size by using easily accessible solutions as an alternative to expensive surgery.
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<b>Help Received</b> Dad was a helping hand while making the simulated enterolith; Mom bought the materials
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