

ENV201 Writing Workshop

The Persuasive Essay

The following is a persuasive essay exploring the health risks associated with artificial sweeteners. It was written by a second-year science student. While this essay addresses a rather different subject from nuclear power, it takes a very similar form to that required by the upcoming ENV201 assignment. As such, it is a useful tool for learning about the rhetorical conventions associated with the persuasive essay in science. Read the essay and answer the discussion questions that follow.

Paragraph 1: As obesity now affects approximately two thirds of the adult American population, a growing number of people are replacing sugar with artificial sweeteners (Jhameson, 2011). Artificial sweeteners may be defined as any chemical or compound that is a substitute for sugar, the most popular being stevia, sucrose and aspartame. However, while the general public may be attracted to the apparent benefits of these non-caloric artificial sweeteners, people may be overlooking some of the potential health dangers associated with their use. Moreover, people may overindulge in foods with artificial sweeteners causing other health issues. The main focus for this investigation is to establish, then, whether or not artificial sweeteners are in fact harmful for human health, and to determine whether specific sweeteners examined are healthy substitutes for sugar. A comparison of the health benefits associated with artificial sweeteners and the documented risks associated with their use demonstrates that artificial sweeteners cause more harm than good, irrespective of the quantity consumed. Natural sugar consumed in moderation is the healthier, safer option.

Paragraph 2: One of the most dangerous effects of artificial sweeteners is the increase in appetite it precipitates in those who consume it. A recent study by Jones, Smith and Turnquist (2010) shows that the vast majority of those who have been exposed to artificial sweeteners had expressed an increase in appetite and hunger, which then lead to increased food consumption.

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People in the control group who were exposed to naturally sweetened foods had no such increase in appetite. This research demonstrates that while people consumed the diet drink to lose weight, most of them actually gained weight. A second health risk associated with artificial sweeteners relates to migraine headaches. Allehal and Tate (2009) confirm a positive correlation between migraines and those who regularly consume foods with artificial sweeteners; their study cites a long history of research documenting similar effects. Finally, patients in a study conducted by Gyllenhal (2003) were three times more likely to experience nausea and bloating after consuming artificial sweeteners; they also tended to report a significant increase in their abdominal pains. Taken together, these studies and the research they cite confirm that artificial sweeteners do negatively affect the human body.

Paragraph 3: There have also been many trials, however, that ultimately demonstrate that these artificial sweeteners are not damaging to human health. For example, Stamos, Lagoon, and Klubis (2009) conducted a study of 15,000 people over 10 years exploring whether there was any connection between the use of sweeteners and cancer of the stomach and pancreas; their data conclusively prove that there is no definite causal relationship. Smith (2012) studied whether artificial sweeteners altered blood pressure, glucose, and lipid levels in the body and the results of this research were inconclusive. Moreover, recent research has found that people with diabetes actually benefit from the use of artificial sweeteners (Bhati, 2007; Ghanneesha, 2008; Grant and Evans, 2011). This area of study has determined that diabetes patients enjoy artificially sweetened foods in ways they could not when they were sweetened naturally; this helps them maintain dietary requirements, without putting themselves in any risk. Grant and Evans (2008) have also established that some sweeteners prescribed to those patients with diabetes can be

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taken orally, which is much less painful and more convenient. Thus, artificial sweeteners would seem to have medical benefits for some portions of the population.

Paragraph 4: Artificial sweeteners have no calories or carbohydrates, and so they are attractive to people with eating disorders. Patients with anorexia nervosa, for example, tend to choose foods that provide the most orosensory stimulation with the fewest calories. The negative health effects for these people are often quite severe (Jones, Smith and Turnquist, 2010), certainly outweighing any benefits. While insulin levels are, indeed, lower in patients who consume stevia, they are elevated in those who ingested foods sweetened with aspartame and sucrose (Thompson and Virani, 2009). More research needs to be conducted to determine precisely why this is the case, but the available data suggest that artificial sweeteners may actually induce diabetes (Johnson and Arratia, 2012). Perhaps most alarmingly, Titius, Andois, and Bailey (2004) conducted a study where they provided the popular sweetener “Splenda” to rats in moderation over a twelve-week span. While the rats remained generally healthy, their stool samples contained an elevated level of pH, a condition associated with a wide variety of serious illnesses (Titius, Andois, and Bailey, 2004: 65-66). In short, the health benefits of artificial sweeteners seem relatively minor, and restricted to a small sector of the population. The risks and dangers associated with its consumption are, on the other hand, well documented and are associated with the entire population.

Paragraph 5: Only by comparing the risks and benefits associated with artificial sweeteners can one determine whether they should be manufactured, distributed, and consumed. The available evidence suggests that natural sugar consumed in moderation is the healthier, safer option. The majority of studies in this report demonstrate a significant, measurable health risk associated with the consumption of artificial sweeteners; while some studies see tangible

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benefits, these are for a small segment of the population, and point to the potential for these products to be a kind of medicine prescribed by a doctor rather than a food supplement.

Note: References have been omitted.

Discussion Questions:

- 1) A good problem-based introduction often has the following elements: 1) background; 2) relevance; 3) urgency; 4) problem; 5) past and current research; 6) gaps in the literature / thinking; 7) method; 8) thesis. Which of these elements are present in this student's paper? Consider how you might revise the paper to improve the introduction and / or include more of the traditional elements of a problem-based introduction.
- 2) What function is served by the second paragraph? Is this effective? Why or why not?
- 3) Is the topic sentence for the second paragraph strong? Why or why not?
- 4) How could you improve the presentation or discussion of the evidence in the second paragraph? Provide examples.
- 5) Does paragraph 3 contribute to the argument in the essay in a meaningful way? Would the essay be stronger or weaker without this paragraph? Why or why not?
- 6) Does paragraph 3 need more (or different) references to strengthen its argument? Explain.
- 7) What function is served by paragraph 4? How does it relate to the thesis? What is the author trying to do? How might you revise this paragraph so that it supports the thesis more effectively?
- 8) Comment on the strength of the conclusion. Is the final recommendation justified by the evidence presented in the body of the analysis? Why or why not?