Giardiasis

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Outline

I. Introduction
   A. Opening—Nearly eight million Americans are sickened with the waterborne disease known as giardiasis. A clean water act has been put into motion to help clean many countries; however, many cases of giardiasis are still active and affecting innocent children.
   B. Thesis—There are many good ideas and study cases to help resolve the giardiasis from spreading, but the governments are not taking action to help clean the water systems in the poor countries.

II. Body
   A. Background
      1. Giardiasis is a waterborne disease that is predominately common in children.
      2. The disease affects mal-nutriented children in the poor countries and cities.
      3. The Clean Water Act was put into motion by Nancy Stoner to end the horrible sewage pollution.
   B. Advantages
      1. The government should work these cases to have clean water available for innocent children.
      2. The clean water act could raise money and gather volunteers to help clean the streets and schools for children.
      3. There is a cure and medicine for giardiasis although some symptoms never stop.
   C. Disadvantages
      1. Developing countries do not access to the medicine for treatment.
      2. Study cases and experiments to test the parasite cost money and time consuming.
      3. Developing countries do not properly monitor water filtration systems and some foods could be contaminated.

III. Conclusion
   A. Giardiasis is a nasty parasite infection disease, seen more in children, that affects the small intestine. This disease can be prevented with medication and the help of government assistance.
   B. Study cases have proven the cause and the start of a cure. The governments are in full responsibility to take action and help these people worldwide.

Giardiasis is a waterborne disease that affects roughly eight million children and adults around the world. Most of these cases are seen in children within the elementary school age between four and six years. The parasite can live up to two months in water areas. A clean water act has been put into motion to prevent further cases of this disease, if at all possible. There are many good ideas and study cases that have formed to help resolve the giardiasis from spreading, but it is up to the government to take proper action for results.

Giardiasis is a waterborne disease that is predominately common in children more so than adults ("Waterborne Transmission of Giardiasis," 1979). Giardiasis is a disease that begins in the intestinal tract from a parasite *Giardia lamblia*. This illness can stream from contaminated water, uncooked fruits and vegetables, and even handling feces, as in diapers. This parasite can live in water for up to two months in cold-water temperatures. If the drinking water is contaminated with this parasite, this will cause an illness. Some of the symptoms that can come from the disease include diarrhea, nausea, bloating, and gas. Treatment is recommended although your body is able adjust after several days. There is no known prevention for giardiasis at this current time

Giardiasis is typically seen in younger children in elementary and middle school. Often times these kids are mal-nutriented, which causes the disease to affect their bodies. In a report from Havana, Cuba, test results indicated that the disease was hospitalizing children who either bite their nails or from eating unwashed vegetables raw ("Giardiasis; Reports Outline Giardiasis Research from J. Bello And Colleagues," 2011).

This worldwide pathogen disease is more predominate in the summer months. Seeing that more people are traveling and near bodies of water, more cases are seen with the

infection. Summer months also call for more water that people drink to stay hydrated. This disease is an oval-shaped pathogen that contains four nuclei that acts as a suction cup to the small bowel villi (Lebwohl, Deckelbaum, & Green, 2003). Symptoms from the infection may include diarrhea, cramping, bloating and nausea. Some of the symptoms can take several months or more to begin because they are caused by gradual changes in the lining of the intestine ("Giardiasis," 2010). Around two-thirds of people infected do not have symptoms. Those who do have symptoms typically show signs of infection after one to three weeks of exposure.

The studies are done by collecting stool samples and testing for the infection and how badly the human has been affected. Within these studies were feces samples that would were tested for cysts in the feces. Children were sent home with stool sample kit for their parents to collect and send back in the next morning. At least 43.8% of the students tested positive for the disease *giardiasis* (Duffy, Montenegro-Bethancourt, Solomons, Belosevic, & Clandinin, 2013). The findings came from the stool samples that were tested under a microscope one by one. After the second examination of the stools, seven other cases appeared.

According to epidemiologic analysis of giardiasis in the United States, the results suggest higher county-level rates of private well reliance are associated with higher rates of giardiasis (Schnell, Collier, Derado, Yoder, & Gargano, 2016). Global warming is increasing the treatment systems that the sewers must contend with. With this increase brings a threat to human and environmental exposure to sewage pollution (Stoner, 2005). Each year the sewage pollution worsens, and an estimated level will exceed the nation's highest by 2025. The way to ending this horrible sewage pollution is to start the Clean Water Act, according to Stoner. The federal

government has yet to establish a water quality standard that protects the public from these waterborne diseases, like giardiasis.

The Clean Water Act started to help clean and sanitize the water systems in the States. The problem that cities are having is that the water standards are becoming dramatically tougher (Allen, 1993). The cost to clean and filter the cities' water costs several billions of dollars to do so. The problem with the cost is that the people of the communities are not willing to pay more taxes. They feel that the government should take responsibility for the budget. Safe drinking water should be everywhere and not something that someone should worry about or have to tell others not to drink.

A case study was observed in 2005, which tested for levels of cytokines in children who had allergy complications. This testing would help rule out a treatment for giardiasis in children and allergies. The study started with 126 subjects, who were broken down into different categories of each diagnosis. The results indicated that the metronidazole-treated patients with giardiasis became 100% parasite-free ("Giardiasis," 2005). The initial testing was done to observe whether children with allergies or without had an effect with the disease giardiasis. Results confirmed that children with or without allergy complications did not affect the disease, but metronidazole treatment did cure the infection ("Giardiasis," 2005).

Most food-borne outbreaks are associated by direct food contamination by a food handler (Cacciò & Ryan, 2008). The disease is transmitted when someone comes into contact with fecal matter or contaminated water. This disease spreads by the changing of an infant's diaper and not washing hands afterwards. The disease is also commonly spread by raw foods that go unwashed before preparing a meal. This is why most cases are seen in poor countries

that do not have access to clean fresh water at all times. People who drink from lakes, streams, and rivers are also at risk for contamination (Cacciò & Ryan, 2008).

In some cases of giardiasis, the symptoms never fully go away. Yes, there is treatment, but the symptoms still appear in some people. Some of the common symptoms seen are fatigue and abdominal issues. The symptoms are considered just a reoccurrence of the infection (Robertson, Hanevik, Escobedo, Mørch, & Langeland, 2010). In developing countries, this is considered a problem, making it harder for treatment and healthier life styles to be maintained. There is still no reason as to why this disease can have a long-term issue for some people.

Giardiasis is a nasty and sneaky disease that affects many Americans still today, some not even realizing that they are infected. There are many uncomfortable symptoms that stem from the infection. This disease affects many children, adults too, in developing countries that do not have safe drinking water. The water filtration systems are simply polluted with sewage that absorbs through the body in the small intestine. There have been many study cases that are reported for testing and a treatment that follows. Although the treatment does not work for all cases, a diagnosis is made and plans for the patient. The Clean Water Act was put into motion to help clean the streets of our countries. This act cost billions of dollars, which some cities and states are not willing to budget for. The government is there to maintain a safe and healthy environment for the people; polluted water is an unnecessary situation that could be avoided.

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