

The Woodlands High School

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The Drastic Consequences of Plastics in the Twentieth Century

Don't be fooled! Plastics have been on this beautiful earth since the dawn of time. Originally, plastics came from mother nature by way of plants and animals. Medieval craftsmen used horns to make lanterns. As far back as a millennium and a half BC, the Olsecs played with rubber balls made from rubber trees. Eventually, however, the more naturalist plastics were replaced by the birth of modern plastics in the early 1900s. In 1907, according to the infographic The History of Plastic, "the first completely synthetic man-made plastic-Bakelite...a resin from coal tar resin...would take the shape of its own container"(A Standard Injection Molding Company). Then in the 1920s and '30s, Teflon was created, soon to be followed by plastic bags in the 1950s. During WWII the use of synthetic plastics became even more widespread because it was necessary to ramp up the manufacture of war supplies. When the war ended, in response to fiscal concerns, chemical manufacturers came up with the idea of using plastics in everyday homes (BBC.com). Nowadays, there are thousands of different kinds of polymers that are changed by the structure, texture, and color of plastic to produce millions of different plastic products. This is why most products today are made from plastic. The advantage of plastic products is that they last forever so they can be used over and over. Similarly, the disadvantage of plastic products is that they last forever and are not biodegradable, and therefore lasts for thousands of years without decomposing. This lack of decomposition means that plastics pollute the earth for thousands of years. During those years, dangerous chemicals leach from the plastic into the earth causing serious health concerns (BBC.com). Synthetic plastics pollute the earth

and cause cancer in people yet there is a limited governmental intervention or public awareness aimed toward understanding the dangerous consequences of plastics usage.

Two main chemicals, phthalates and BPA, found in plastics cause cancer and pollute the earth. Dr. Daniel Thomas says, “According to government reports, chemicals from plastics called phthalates are the single-most prevalent pollutant in the human body and...have been found to be a contributing factor in...cancer”(Par 3.). Everyday people use plastics without thinking about how the chemicals, phthalates and BPA leach through the plastic they use into their bodies. These chemicals are found in every aspect of everyday living. Plastics are in toothbrushes, hairbrushes, glasses, plasticware, containers, steering wheels, cell phones, computers, furniture, and many more daily appliances. And if any one of these products is heated naturally from the sun, or by dishwashers, ovens, and microwaves, the phthalates and BPA, leaches from those plastics through the skin and into people’s bodies corrupting their DNA and affecting their cells. There is simply no way to avoid being exposed to the dangerous levels of chemicals in plastic and participate in everyday living. According to Breastcancer.org, “Research also strongly suggests that at certain exposure levels, some of the chemicals in these products, such as bisphenol A (BPA), may cause cancer in people”(Par 1.). People are exposed to these dangerous chemicals without being aware of their exposure levels. It happens many times throughout each day, over weeks, months, and years. The more exposure to chemicals the greater the likelihood of cancer. Furthermore, a pictograph in The Truth About Cancer says, “Chemical companies promised to change the world with their plastics...and they did. They’re systematically destroying the soil, water, air, and our bodies.” Moreover, all the synthetic plastics people made from chemicals are left on the earth because they are not biodegradable for thousands of years.

These plastics have now penetrated the environment and have leached into the earth and water supply. The average person is unaware of this problem and its potential to cause cancer.

Plastics' role in cancer rates could be decreased by regulation of plastic production and a public education program on how best to avoid the dangers of plastics in everyday living. As a way to decrease the damage of plastics on the earth, Proshad, Kormoker, Islam, and Haque suggests, "Application of proper rules and regulations for the production and use of plastics can reduce toxic effects of plastics on human health and environment"(Par 1.). Right now there is limited regulation on the plastic industry to reduce the production of plastic. Furthermore, people have not adequately been made aware that synthetic plastic causes cancer. To help everyday citizens avoid plastics breastcancer.org suggests that, "While it's likely impossible to completely avoid all plastic products, try to use as little plastic as possible, especially if you're pregnant, and never use it around food"(Par 4.). Moreover, there is no regulation or public awareness education on the dangers of plastics for the most vulnerable populations. Pregnant women and children are exposed to plastic continually. Plastic is in diapers, bottles, pacifiers, bedding, and toys. Most products consist of plastic and there is no way to avoid it. Furthermore, plastic is heavily used around food all the way from plastic utensils to cups, and even food containers and coverings. Being aware through a public awareness campaign, however, of the dangerous effects may help people choose to avoid plastic whenever possible. Digging deep into the research on how plastics affect people, Thomas, MD finds, " Previous research has also found tiny plastic particles in tap water but on a smaller scale"(Par 4). At present, there is not even a public awareness program to let people know it is in the water supply. It's so insidious in people's everyday life that people drink plastic particles without knowing it because the earth's water

supply has been destroyed. If people know plastic particles are in their water supply and could cause cancer they may drink filtered water from glass bottles.

Although research suggests plastics damage the earth and cause cancer, there are still some researchers who believe this a myth but concede it is better to be safe than sorry, so advocate for the use of glass. In contrast to many leading researchers, CancerresearchUK believes, “ There is no good evidence that people can get cancer from using plastics. So, doing things like drinking from plastic bottles or using plastic containers and food bags won’t increase your risk of cancer”(Par 1). Since they find no link to cancer they contend it is not problematic. In contrast, there is a ton of research that suggests plastic is dangerous so it is alarming Cancer Research UK proposes it is not. Julie Wilkenson also says it’s a myth that plastics cause cancer when she writes, “ Experts agree that although most microwave-approved plastic containers are safe and will not leach toxins into your food”(Wilkenson). This opens up a pandora's box for everyday people because some people believe plastic is harmful while others do not. It makes absolute sense that people should proceed cautiously around the manufacture and use of plastics. Wilkenson concedes that it’s better to be safe than sorry when she says, “If you're unsure or still concerned about microwaving food in plastic, then just use glass dishes”(Wilkenson). It’s especially important to understand the dangers associated with plastics regarding microwave products because people ingest the food directly from the plastic containers they heat food in. Presently, plastic is a cheap and easy alternative to use when heating food up in a microwave. It makes absolute sense that people should proceed cautiously with their use of plastic especially in regards to food handling. Although there are conflicting viewpoints on whether plastic is safe and there are also concessions that when there is doubt people should consider using glass over

plastic. Cancer statistics globally are largely responsible for the uneducated people who develop it.

The lack of regulation and public awareness on the dangerous consequences of using plastics has led to damaging the earth and increased cancer statistics in people. Although plastics have many advantages, the disadvantages far outweigh their use. Chemical companies promised to change the world but they destroyed it by creating a chemical compound that doesn't decompose for thousands of years. The chemicals, phthalates and BPA, are the single largest pollutant found in the human body. Both of these chemicals contribute to increased cancer rates. Regulation of plastic production and a public awareness campaign regarding the dangers of plastics would reduce cancer statistics. At minimum, people would understand the dangers of chemicals leaching from plastics and exercise caution around them. Although some do not believe plastics cause cancer, the notion that plastic does not decompose and leeches chemicals into people when heated is enough for concern. There are ways to stay safe from plastics, like using glass. This can save the earth and thereby save people. After all, people depend on the earth for survival so what better place to keep alive than is the earth they depend on.

Works Cited

- Daniel. "The History of Plastic." *Infographic Plaza Where Information Meets Visualization*, infographicplaza.com/the-history-of-plastic/. Accessed 4 Feb. 2021.
- "Does Using Plastic Bottles and Containers Cause Cancer?" Cancer Research UK. 06 Jan.2020. Web. 22 Jan. 2021. <https://www.cancerresearchuk.org/about-cancer/causes-of-cancer/cancer-controversies/does-using-plastic-bottles-and-containers-cause-cancer#CRUK0>. Accessed 26 Jan. 2021.
- "Exposure to Chemicals in Plastic." *Breastcancer.org*. 11 Sept. 2020. Web. 27 Jan. 2021. <<https://www.breastcancer.org/risk/factors/plastic>>. Accessed 26 Jan. 2021.
- "Graphic Plastics Danger." The Truth About Cancer. The Truth About Cancer. Web. 20 Jan. 2021. . <https://thetruthaboutcancer.com/wp-content/uploads/TTAC-Graphic-Plastics-Danger.jpg>. Accessed 26 Jan. 2021.
- Knight, Laurence. *A Brief History of Plastics, Natural and Synthetic*. 16 May 2014, www.bbc.com/news/magazine-27442625. Accessed 4 Feb. 2021.
- Proshad, Ram, Kormoker, Tapos, Islam, Saiful, Haque, M.A. "Toxic Effects of Plastic on Human Health and Environment : A Consequences of Health Risk Assessment in Bangladesh." ResearchGate. Ram Proshad,2018. Web. 22 Jan. 2021. . https://www.researchgate.net/publication/321906991_Toxic_effects_of_plastic_on_Human_health_and_environment_A_consequences_of_health_risk_assessment_in_Bangladesh. Accessed 26 Jan. 2021

Thomas, D., Dr. (2018, May 7). Bottled water contaminated with tiny plastic particles. Retrieved January 20, 2021, from <https://www.thomashealthblog.com/?p=5485>. Accessed 26 Jan. 2021.