

DISEASED: AN ARTISTIC DEPICTION OF PUBLIC HEALTH ISSUES AND THEIR CAUSES

by

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by

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## Background

As a senior Public Health Studies major in the Honors College, I chose to create a creative portfolio of drawings that would visually represent current public health issues, as well as allude to what causes them. Public Health is a preventative section of health advocacy that aims to educate communities and individuals before they make choices that could affect their health (Public Health Education). This can be done through educational programs, research, implementing public policies, or providing services. Educational infographics or brochures on diabetes, vaccines, social distancing orders, and even routine checkups at the doctor's, are all considered public health measures that aim to detect or prevent health concerns. Public health fields are not limited to just health educators, nurses, and physicians. Restaurant inspectors, social workers, nutritionists, and others in non-medical professions that strive to keep the population healthy are also examples. In addition, public health impacts everyone, as it focuses on future health and has a global reach.

The French writer Paul Valery once said "Science and art are crude names... to be true they are inseparable. I cannot clearly see the differences between the two" (Strosberg, 1999). As knowledge has evolved, science and art have grown with it, using each other as catalysts to advance. Leonardo da Vinci and Michelangelo both documented in depth anatomical drawings to further their artistic accuracy. Their drawings were groundbreaking in the medical field and are still used in textbooks today as they showed musculature and the circulatory system more accurately than anyone before. More recently Nadrian Seeman, the first person to produce DNA-based nanotechnologies, said that viewing art gave him new structural ideas about the DNA

(Schneiderman, 2019). Santiago Ramon y Cajal, the father of modern neuroscience, created drawings of brains that are now being used for research on Parkinson's and Alzheimer's Disease (The Beautiful Brain, 2019). Science to promote art, or in the case of this project, art to promote science, has proved effective through time and can be used as an education tool for public health.

### **Artist Statement**

As a public health major, in my health disparities class we were given a lengthy research article that included hundreds of health statistics, graphs, and references to other articles with “common knowledge” facts about the leading causes of death in the United States. My professor questioned us on why the topics discussed in the articles were still a large public concern when there was so much research on what not to do when it comes to staying healthy. Over the next few semesters taking more health classes, it became abundantly clear how privileged I am to not have questioned this before. So many people don't have access to computers, or televisions, or have the education level to understand medical terminology. In a later class a video explained how to teach patients to take their prescription medications. Some of the patients couldn't understand what they read on the labels or couldn't read them at all. When creating a health brochure we were taught to use a fifth grade reading level and words with no more than three syllables in order for the target population to understand the message we were trying to get across. Using what I learned about health literacy from my previous classes, drawings were the best way to educate my target audience. Not only do images transcend language, but they are more engaging to the viewer than paragraphs of text and can more easily explain complex concepts. The drawings allow the viewer to easily connect the condition to the cause. Working on this project gave me a new perspective on how some people perceive and interpret

information regarding health. This new way of understanding people will help me connect with and educate future patients.

### **Explanation of Work**

Works of art in this project depict many prominent health conditions in society, including many of the leading causes of death in the United States. The diseases are portrayed to suggest their causes.

#### *Bronchitis*

Lower respiratory diseases such as chronic obstructive pulmonary disease (COPD), asthma, and bronchitis, are the fourth leading cause of death in the U.S. For this drawing I chose to focus on bronchitis and its common cause, smoking (Centers for Disease Control and Prevention [CDC], 2018). A healthy bronchiole tube is shown, and at the bottom the viewer looks down the tip of a cigarette, where the interior is an inflamed bronchiole tube, showing that smoking can cause bronchitis.

#### *Coronary Artery Disease*

Heart disease is the number one cause of death in the United States. While heart disease is an umbrella term for many different conditions, the focus is on coronary artery disease, the causes of which are also causes of many other heart conditions under the “heart disease” umbrella (CDC, 2019). Eating foods high in saturated fats, a lack of exercise, and again smoking, can all contribute to an individual developing coronary artery disease (Mayo Clinic, 2018). Therefore, this image of the coronary artery is shown clogged by cigarettes, unhealthy foods such as french

fries, and a couch to signify inactivity. The artery is wrapped around the heart, squeezing it and showing the strain that unhealthy habits can put on the heart.

### *Liver Cirrhosis*

While alcoholism and liver cirrhosis are not one of the top ten leading causes of death in the United States, they can still have serious health consequences (Galbicsek, 2019). Liver cirrhosis is a condition that involves scarring of the liver tissue that can build up and prevent blood flow. This can cause cancer, bone diseases and liver failure (National Institute of Diabetes and Digestive and Kidney Disease [NIDDK], 2018). Cirrhosis of the liver can be caused by excessive alcohol consumption, which is why alcoholism was the subject for this image. For this drawing the liver has a spongy texture and can be seen lying in a puddle of alcohol. Though the liver's job is to filter the blood, absorbing too much alcohol on a daily basis consistently, has negative consequences.

### *Obesity*

Obesity is a common condition in America and is caused by a buildup of fat in the body (Mayo Clinic, 2019). While the condition can be inherited, often external factors play a role in developing it (CDC, 2019). Obesity can increase chances of getting heart disease and high blood pressure, and is more likely to develop as a result of poor dietary choices and a lack of physical activity (National Heart, Lung, and Blood Institute, 2019). The drawing of the fat cells define the disease. The cells are shown in place of the hamburger patty of a Big Mac from McDonalds, well

known for their unhealthy foods. A big Mac contains 33 grams of fat, 1,007 milligrams of sodium, and 563 calories, all of which are shown in a nutrition label on the left side of the page.

### *Mental Health*

Suicide is the tenth leading cause of death in the U.S. (CDC, 2017). There is a link to a number of mental health conditions such as depression, bipolar depression, and anxiety. While there are other reasons people commit suicide, mental health is the focus of this drawing as it strongly impacts everyday life. In this drawing there are two heads depicted, each showing the brain inside. The brain on the left is seen exercising on a treadmill while looking healthy and bright, with a clear headspace. This is to indicate that regular exercise improves mental health (Diaz-Silveira, 2020). The brain in the head on the right is seen sitting on a couch, watching television in a dark gloomy headspace. It is indicated that inactivity can negatively impact mental health (Diaz-Silveira, 2020).

### *Sexually Transmitted Infections*

STIs, specifically gonorrhea and chlamydia are visualized as bacterial cells. Both STIs are fairly simple to treat, but if left untreated they can have serious health consequences such as pelvic inflammatory disease (PID) in women and infertility (CDC, 2014). Known as “silent STIs”, an individual could have them but not know because they can show no signs (CDC, 2014). Because of this, the drawing for gonorrhea and chlamydia shows a normal looking man with no external abnormalities. There is a screen in front of his reproductive organs, however, that shows the chlamydia and gonorrhea bacteria in his body. This emphasizes the need to get screened if an

individual isn't practicing safe sex habits like using a condom (U.S. Food and Drug Administration, 2018).

### *COVID-19*

The most relevant condition in the world at this point in time is the COVID-19 pandemic. Current cases exceed 1.7 million and current deaths exceed 100,000 worldwide (CDC, 2020). As it is the largest public health concern at the moment, it felt imperative that it be included as a drawing. While social distancing measures and entire country lockdowns have been put in place, the spread continues around the world, and no cure or vaccine have been found. For this drawing a COVID-19 cell is depicted, but the body of the cell has been replaced with the Earth. The spike proteins on the outside are shown attached to countries with the virus. The bases of the projections, the proteins, are meant to look like parasites insidiously spreading on the ground of the earth. Indicating that, like most viruses, the cells cannot survive long without a live host, but people continue to go out in public, giving it the opportunity to spread. This drawing in particular indicates the urgent need for the public to follow safe health practices and public health policies.

### **Appendix**

Images of the drawings can be found in "The Drawings" supplemental file.

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