

Genetic Disease Research Project

You will be responsible for choosing a genetic disease to research. Currently, over 4,000 genetic diseases are known to afflict humans. You can find a good list at: <http://www.kumc.edu/gec/support/>. Use the list to get the basic information about the disease and then begin independent research to build your understanding. Most genetic diseases are rare and many cause serious health problems that oftentimes lead to death. One of the biggest incentives to study genetics is the hope of curing such serious diseases. In order to familiarize yourself with the problems, causes, treatments, and research about genetic diseases you will choose one disease to research. Using your research you will present your findings in a medium of your choice. Keep in mind you must meet the requirements of the assignment no matter which format you choose. The requirements for the assignment are described below.

Format Options

- Poster
- Powerpoint
- Prezi
- Movie
- Research Paper
- Poem

You must include all of the following sections in your project.

Cause of the genetic disorder

- Have researchers identified a bad or faulty gene? What is the name of that gene? What's the difference between the functional and nonfunctional genes?
- Have researchers identified a nonfunctional protein? Why is the protein nonfunctional? How does that protein affect the body or a human's health?

Symptoms

- What are the physical symptoms of the disease? What traits does the disease affect? Are there early warning signs of the disease? How do doctors diagnose or identify the genetic disorder?

Treatment

- Is the disorder treatable? If so how do doctors cure the disease or ease the symptoms? How effective are the treatments? What are the risks and/or side effects of treatments? What are other benefits and costs of treatments? Are they expensive, hard to find, controversial?

Prevalence

- How common is the disorder? What groups of people does it affect? Are males more commonly afflicted than females? Do certain races experience the disease at a greater rate? Is the disease more common in certain countries or geographic regions?

Additionally, you must choose two of the following sections to include.

Inheritance

- How does an individual acquire the disease? Describe the mechanism by which a person becomes afflicted? Is the disease autosomal dominant or recessive, X-linked, Y-Linked, codominant, pleiotropic, incompletely dominant or another form of inheritance?

History

- When was the disease discovered? Who discovered the disease? When was the gene and/or protein responsible for the disease identified? What person or group made discoveries such as treatments, proteins, or genes that relate to the disease?

Current Research

- Who is conducting research about the disease? Are there emerging or new treatments? Describe recent breakthroughs or the future direction of research.

Diagnosis

- What tests do doctors run to determine if an individual is afflicted by the disease? At what age do doctors look for the disease? When do the symptoms of the disease show up during a person's life?

Make Your Own Section

- Create a section that relates to the disease. Perhaps you could describe the role of a leading research group. Look at a medical blog and correspond with individuals involved with the disease. Maybe you could create a collage using pictures of symptoms. If you are unsure about an idea see your instructor for approval.

