Saving a Life
Your Family's Health History

Donna M. Moughty
14909 Secret Harbor Place
Lakewood Ranch, FL 34202
Email: moughty@mac.com Website: https://www.irishfamilyroots.com
Facebook: DonnaMoughtyGenealogy Twitter: @DMoughty

I'm sure you've seen drug advertisements which talk about how health problems can be caused not only by the environment, but also through heredity. For years, health professionals have known that many common health problems such as diabetes, heart disease and some cancers run in families. The more you know about your family health history, the more you can do to reduce your risk of serious illness. As genealogists and family historians we routinely collect information about our ancestors and the causes of their deaths but putting the information together in a documented health history can not only assist your physician, but may save your life. Passing this information to your children or other family members may also provide them with life saving information.

This lecture is designed to provide information on compiling your health history, even if you have never done any family history research. It will look at how to collect the information, including the types of documents to look at, as well as how to report the information to your physician and family. As a disclaimer, I am not a health professional, but a genealogist very interested in this topic, so it is important to share this information with your health professional.

Basic Genetics

Most of us have become very comfortable with DNA testing for genealogy. Genes are the unit of heredity that are passed from parents to children and are sections of the DNA found on chromosomes. The nucleus of every human cell contains 23 pairs of chromosomes; half inherited from the father and the other half from the mother. Some genes are dominant, which means when two different genes appear on a pair of chromosomes the dominant one will win out. Brown eyes are considered dominant over blue eyes, so if an individual carries two brown eye genes their eyes will be brown; if they carry two blue eye genes, their eyes will be blue, but if they carry one brown and one blue, their eyes will likely be brown.

Some genetic traits that carry diseases are referred to as Dominant or Recessive. In a dominant situation, typically one parent carries the dominant gene, so there is a 50% chance with each child that they will have the trait and therefore the disease (Bb). An example of a dominant disease would be Huntington's Disease.

	Mother B	Mother b
Father b	Bb	bb
Father b	Bb	bb

	Mother B	Mother b
Father B	BB	Bb
Father b	Bb	bb

With recessive inheritance both parents must carry the gene in order for the disease to manifest itself. There is a 25% chance with each pregnancy that the child will receive the trait from both parents and therefore inherit the disease (BB). In two cases, the child will carry the trait, but have no symptoms of the disease (a carrier), and there is a 25% chance that the child will not carry the trait. Some recessive diseases are Cystic Fibrosis, Tay-Sachs and Sickle Cell Anemia.

Another type of genetic disease is linked to the X chromosome and can be carried by the father or mother, but only passed to male children. Hemophilia is an example. Queen Victoria carried this gene and passed it to her son, who lived long enough to pass it on to his daughter. She also passed it on to her daughters who spread hemophilia into many of the ruling families of Europe.

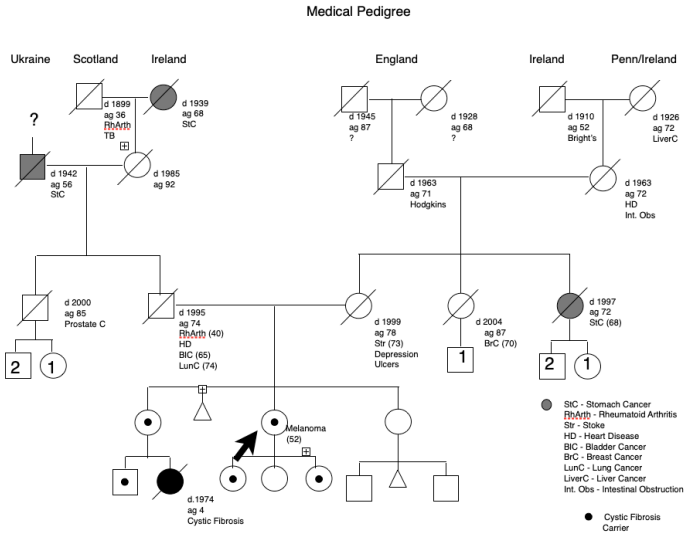
Finally there are multifactorial diseases which have both a genetic and an environmental component. In these cases, the genes don't cause the disease by themselves, but create a predisposition. Multifactorial diseases include diabetes, high blood pressure, coronary artery disease, some mental illnesses as well as a number of cancers. If, for example you know you have a family history of diabetes (Type 2) you can make an effort to keep your weight down, exercise and possibly keep yourself from developing the disease.

Collect Information

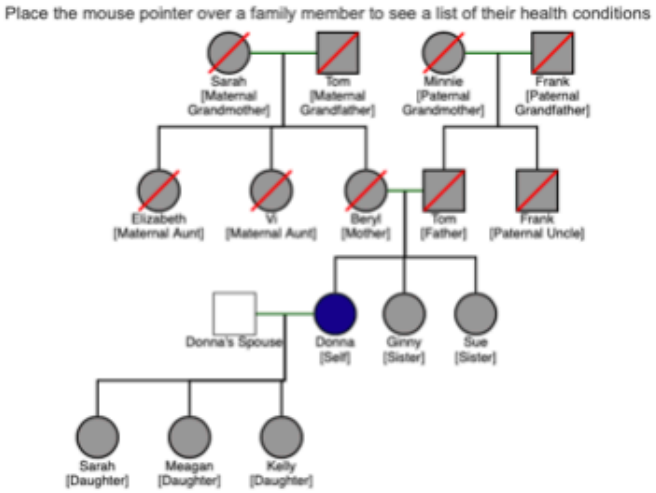
To document your health history you use the same tools as you would for any genealogical research. Start with yourself and work back. Make sure you include all extended family. Interview relatives, collect death certificates, coroners' or medical examiner reports and obituaries. Check census records for any notations regarding health, and the mortality schedules for people who died within the 12 months prior to the census. Civil War pension records also include extensive medical reports. Save all of the information in the medical notes field of your genealogical software. Try to determine the cause of death for all individuals in your database, but especially for those who died young.

Create a Medical Pedigree

Medical pedigree charts use symbols to represent individuals and relationships. They usually contain no names for privacy reasons. You should note that the symbols used in medical pedigrees are different from those used in genograms (which trace psychological and family interactions). You want to try and include every individual in three to four generations and also include the area of origin as geography can also be connected to some diseases. For each individual with a medical condition indicate the age at onset, and for those who have died, the year and their age at death. If you use abbreviations, define them in a key.



The chart above was hand drawn, but there are multiple ways to present the information. It can be as simple as a spreadsheet, or you can use an online tool such as My Family Health Portrait from the Surgeon General. (Note: the information is stored on your computer and not saved online.)



Since I first delivered this lecture in 2012, a great deal of new health related options have become available. In 2009, I tested with 23andme, not for genealogy (it would be a few years more before I figured out genealogy DNA) but for health. I received extensive reports about my carrier status (at that point I already knew I was a carrier for CF), as well as health risk reports and traits. Since then, Ancestry and MyHeritage have added a Health option to their offerings. FamilyTree DNA offers third party options. Third party options are also available. Promethease (which has recently been purchased by MyHeritage) will allow you to download your autosomal DNA data from the major companies and upload it to Promethease to connect it to the scientific findings cited in SNPedia.

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