Know your Genes

A guide to taking a family health history
A Pedigree is a medical family tree, or a graphic representation of a family’s health history and genetic relationships.

Genetic counselors draw out a pedigree for each of their patients and look for patterns or indications which may be helpful in diagnosing or managing an individual’s health.

Try it for yourself!
Step 1: Talk to your Family

- Ask questions about the health of each individual in your family (be specific) and write down anything that seems important.

- Make sure you ask people who are reliable family historians, or people who you think would know the most about the family’s health history.

- Consider all your first and second degree relatives (and third degree, if you are ambitious enough!)

- *Added bonus*: talking to your family about health may spark interesting conversations about other aspects of your family, such as its traditions and stories.
Who should you ask about?

- **First-degree relatives**
  - Your children
  - Your parents
  - Your siblings

- **Second-degree relatives**
  - Your grandparents
  - Your grandchildren
  - Your aunts and uncles
  - Your nieces and nephews
  - Your half-siblings

- **Third-degree relatives**
  - Your first-cousins (i.e., your aunt’s child)
  - Your great-aunts and uncles (i.e., your grandparents’ siblings)
  - Your great-grandparents or great-grandchildren
What questions should you ask?

- What is the person’s name and their relationship to you?
- What is the person’s current age, or how old was he or she at the time of death?
- What was the cause of death, if applicable?
- Did the individual have any medical conditions, and what age were they when diagnosed?
  - Chronic illnesses (ie, heart disease, diabetes)
  - Cancer, see aside
  - Mental retardation/learning disabilities
  - Physical disabilities
  - Birth defects (ie, heart defect, cleft lip)
  - Known genetic diseases (ie, muscular dystrophy, cystic fibrosis)
  - Mental illness
  - Multiple miscarriages
  - If ill, do they lead an unhealthy lifestyle (ie, smoking, alcohol)?
- Cancer
  - Where in the body was the cancer detected (ie, breast, lung, stomach)?
  - How old was this person when the cancer was diagnosed?
  - Any information on pathology
- What country did each side of the family comes from (ie, their ethnicity)?
- Are the two sides of the family related to each other by blood? (Were your parents or grandparents cousins?)
Step 2: Draw it Out

Common symbols to know, with examples:

- **Male** (12 years old)
  - 
  - 12 y

- **Female** (3 months old)
  - 
  - 3 mo

- **Gender unknown**
  - 

- **Deceased** (at age 45, from a stroke)
  - 
  - d. 45, stroke

- **Affected** (with cystic fibrosis)
  - 
  - Cystic fibrosis

- **Identical twins**
  - 

- **Fraternal twins**
  - 

- **Miscarriage** (at 12 weeks)
  - 
  - 12 weeks

- **Termination of pregnancy** (due to heart defect)
  - 
  - Heart defect

- **Current pregnancy**
  - 
  - P

- **Adopted into family**
  - 

- **Multiple individuals**
  - 
  - n

Draw it freehand, or use an online tool such as My Family Health Portrait: [https://familyhistory.hhs.gov/FHH/html/index.html](https://familyhistory.hhs.gov/FHH/html/index.html)
- Draw yourself first
- Put an arrow by you because you are the “patient”
- Add in relatives and note any medical problems under their symbols

Family Tree:
- Your maternal grandfather
- Your maternal grandmother d. 85 heart attack
- Your mom, breast cancer, diagnosed at 43 y
- Your dad
- Your older brother
- Your older sister
- Your younger sister
- You
- Your younger brother
- Your younger sister
- Your nephew
- Your aunt
- Your first cousin, cystic fibrosis
- Your daughter
- Your son
- Your nephew
Step 3: Recognize the Signs

- Are there multiple individuals with the same medical condition?
- Is there cancer at a young age? (younger than 50)
- Did a family member have a serious birth defect?
- Is there any infant death or multiple miscarriages in the family?

*Does something just look suspicious or concerning to you?*
Step 4: Get Help, if needed

- If there is something that looks concerning, contact your physician or make an appointment with a genetic counselor.

- To find a genetic counselor in your area:
  
  [http://nsgc.org/p/cm/ld/fid=164](http://nsgc.org/p/cm/ld/fid=164)

- Remember…
  - … your genes are not your destiny. Many (but not all) genetic diseases are treatable or preventable.
  - …you share your genes with your relatives. Sharing genetic information about yourself with your family members may help save lives.