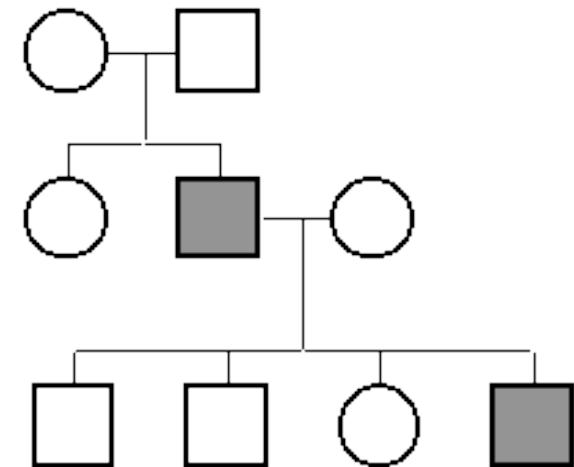


Know your Genes

A guide to taking a family health history

The Pedigree

- ▶ 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



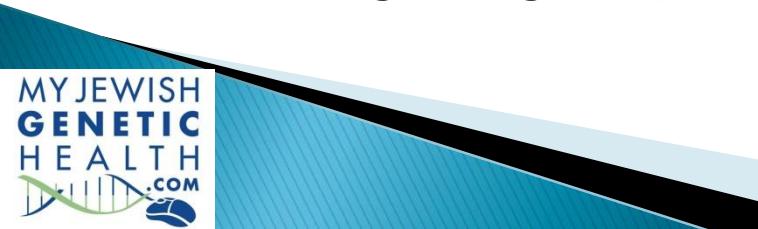
Try it for yourself!

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 (ie, your aunt's child)
 - Your great-aunts and uncles (ie, your grandparents' siblings)
 - Your great-grandparents or great-grandchildren

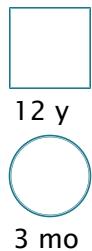


What questions should you ask?

- ▶ 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

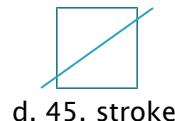
Common symbols to know, with examples:



Male (12 years old)



Gender unknown



Deceased
(at age 45, from a stroke)



Affected
(with cystic fibrosis)

Cystic fibrosis



*Identical
twins*



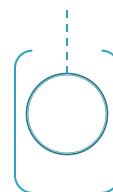
*Fraternal
twins*



Miscarriage
(at 12 weeks)



*Current
pregnancy*



*Adopted
into family*



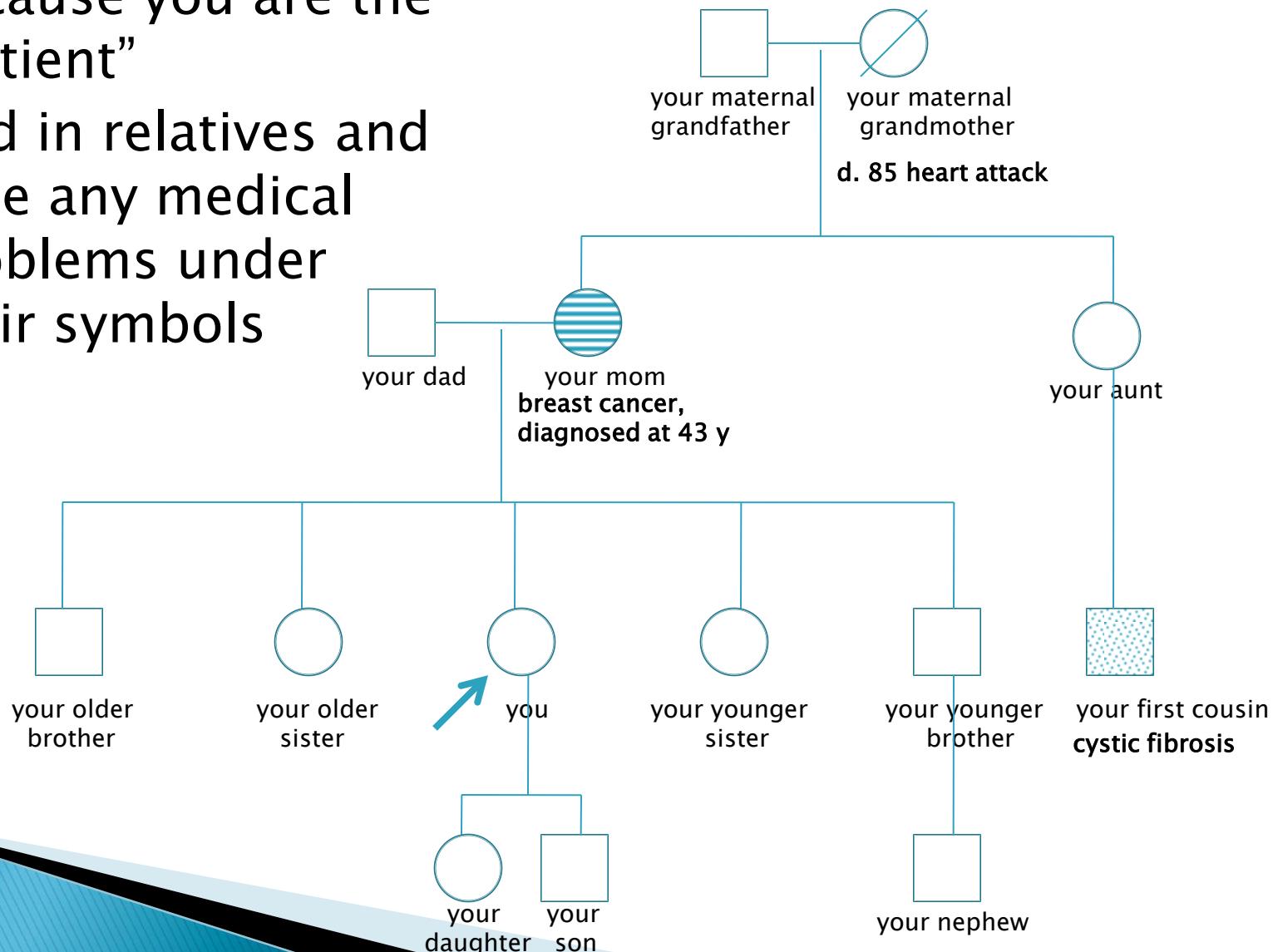
*Termination
of
pregnancy*
(due to heart defect)



*Multiple
individuals*

Draw it freehand, or use an online tool such as My Family Health Portrait: <https://familyhistory.hhs.gov/fhh-web/home.action>

- ▶ Draw yourself first
- ▶ Put an arrow by you because you are the “patient”
- ▶ Add in relatives and note any medical problems under their symbols



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://www.nsgc.org/FindaGC/tabid/64/Default.aspx>
- ▶ 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.