

# Practical Genomics for the Public Health Professional

Keys to Collecting and Using Family History Information



# Medical Pedigrees

 "The family tree has become the most important genetic test of all. The more you know, the more tools you have to practice preventive medicine." Donna Russo, CGC, NY Presbyterian-Columbia Hospital



# Pedigrees: Purposes

- To diagnose a current medical condition
- Risk assessment to anticipate and/or prevent potential medical conditions
- Risk assessment for family planning and pregnancy screening purposes



# Help Your Clients!

- Educate them about the importance of family health history to their own future health
- Help teach them how to collect pertinent family health history
- Suggest they share their information with primary care providers

Instructions for collecting family health history:

www.nsgc.org, www.ashg.org

www.geneticalliance.org



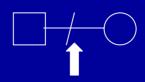
#### Standard Pedigree Symbols





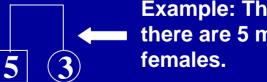






This line is used to show parents who are divorced/not together

➤ If you do not know names and ages of family members, but do know the number of males and the number of females, you can do this:



Example: This shows that there are 5 males and 3 females.



# Standard Pedigree Symbols



Pregnancy loss. Include number of weeks, if known. If you know the number of children in a sibship but do not know the gender, do this:



Stillbirth (SB). Include number of weeks, if known.



Example: This shows that there are 8 children.



P

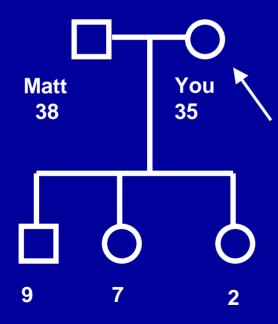


P stands for current pregnancy, either unknown sex (diamond), boy (square), or girl (circle)



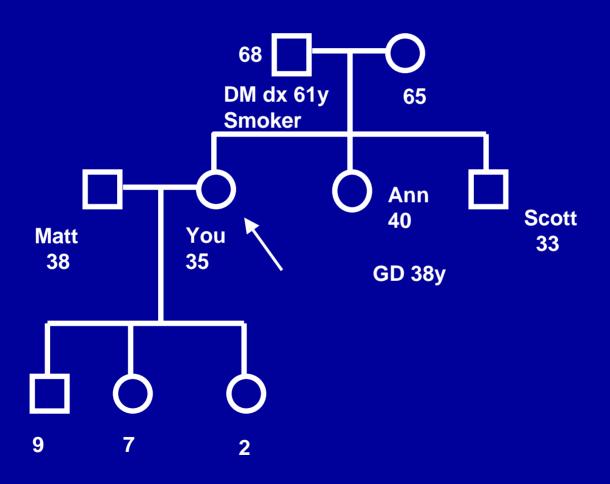
#### Drawing Your Own Pedigree

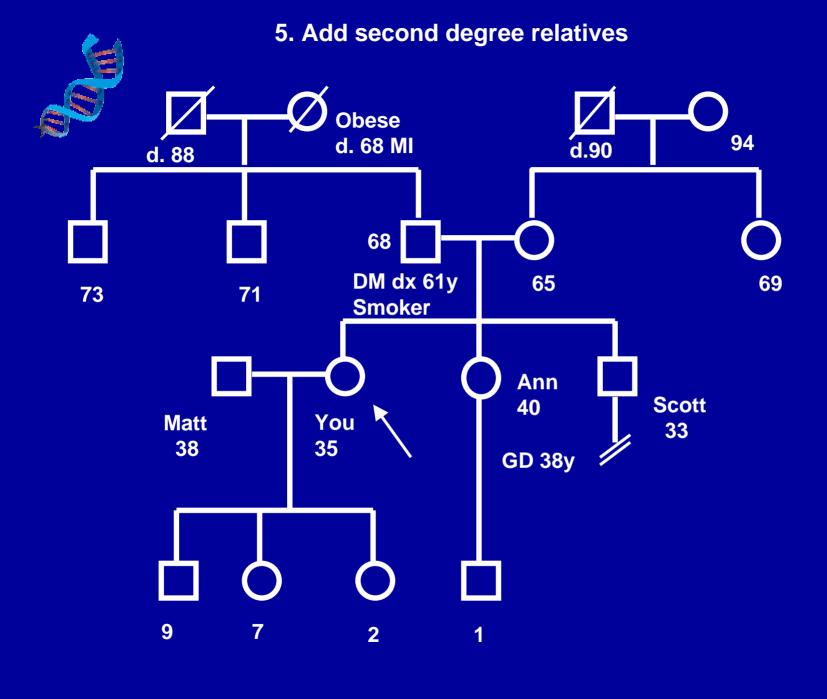
- 1. Start with yourself you are the "consultand" so draw an arrow to your symbol.
- 2. Then add your spouse and children





- 3. Add your parents and siblings
  You now have all of your first degree relatives
- 4. Add relevant medical and lifestyle information

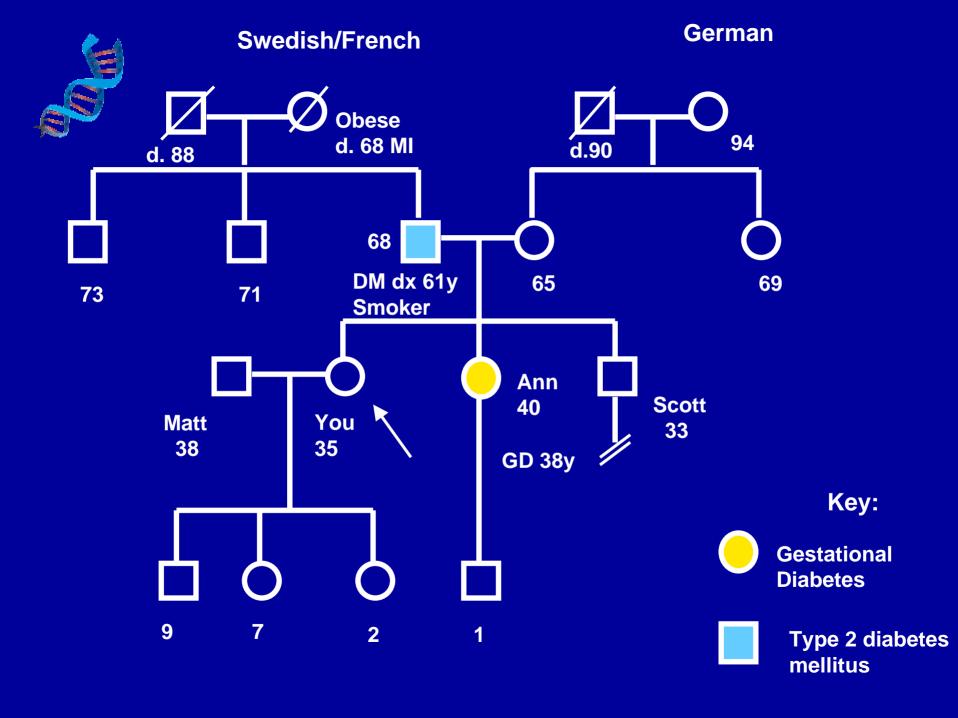






#### **Final Touches**

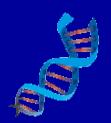
- Add ethnic background on both sides of the family
- 7. Add designations for pertinent medical conditions and a key
  - Use colors, patterns and/or sections within each symbol to designate specific medical conditions
  - E.g. Yellow = Type 2 diabetes; Blue = Gestational diabetes





#### Family Information to Collect

- Learning disabilities, mental retardation, developmental delays
- Birth defects, multiple anomalies
- Stillbirths, miscarriages, infertility, neonatal death, SIDS
- Chronic childhood illness, known inherited conditions, metabolic disease



### Family Information to Collect

- Common diseases with multifactorial etiology
  - Heart disease, stroke, clotting disorders
  - Mental illness, alcoholism, substance abuse
  - Diabetes, gestational diabetes
  - Cancer
  - Asthma/chronic respiratory disease
  - Vision/hearing loss
- Age of onset. If deceased age at death
- Environmental or contributing health factors

