Why Family History is Important for Your Health

Office of Genomics and Disease Prevention
Centers for Disease Control and Prevention
Both of Shirley’s parents had developed Type 2 diabetes by the time they were 60.

Should she be concerned about her family history of diabetes?

Shirley is overweight. She is 5 feet 4 inches tall and weighs 160 pounds.

Should her family history of diabetes combined with her weight concern her?
What determines your risk for disease?
Risk Factors

A risk factor increases your risk of developing a disease or health problem

- Environment
- Behaviors and lifestyle
- *Inherited characteristics
  - *Inherited – passed down from parents to children
Environmental risk factors include exposures to harmful agents in food, water and air.
Risk Factors for Disease

Lack of Exercise

Only 26% of adults engage in physical activity as recommended

30 minutes of moderate activity at least 5 days a week

OR

20 minutes of vigorous activity at least 3 days a week

Source: Behavioral Risk Factor Surveillance System
Risk Factors for Disease

Poor Diet

Less than 25% of people eat recommended servings of fruits and vegetables.

5-9 servings each day

Source: Behavioral Risk Factor Surveillance System
Behavioral Risk Factor Surveillance Survey

Obesity

Among U.S. adults:
59% are overweight
22% are obese

Risk Factors for Disease

Overweight
Obese
Normal weight

59%

Behavioral Risk Factor Surveillance Survey

CDC
Risk Factors for Disease

Smoking

Comparative Causes of Annual Deaths in the U.S.

Genes provide the directions for building all of the proteins that make our bodies function. Because genes are passed down by parents, family members share many genes.
Risk Factors for Disease

Genes, environment, and behaviors interact with each other to cause disease.
Risk Factors for Disease

Family history helps capture the effects of these interactions on disease risk.

Behaviors

Family History

Genes

Environment
What is family history?

A family’s combination of shared genes, environment, behavior, and culture
Family history is a risk factor for diseases throughout all stages of life.

- Birth defects
- Blood disorders
- Diabetes
- Depression
- Alzheimer's disease
- Osteoporosis
- Infants
- Children
- Adolescents
- Adults
- Older adults
- Asthma
- Autism
- Cancer
- Heart disease

CDC (Centers for Disease Control and Prevention)
You can protect your health.

Health = Genes + Environment + Behaviors

can’t be changed

These can be changed!
Family history can help you...

- Learn about diseases that run in your family
- Take advantage of screening tests (i.e. blood pressure, mammography) that may help to detect problems early
- Change unhealthy behaviors such as smoking, inactivity and poor eating habits
We all have a family history of something!

- depression
- asthma
- heart disease
- leanness
- high cholesterol
- cancer
- kidney disease
- obesity
- diabetes
- stroke
- allergies
- emphysema
- blue eyes
- Alzheimer’s
- high blood pressure
- arthritis
- acne
- athleticism
- osteoporosis

[Image of a family with text related to family history of health conditions]
How can you collect your family history?

- Ask questions
- Talk at family gatherings
- Draw a family tree
- Write down the information
- Look at death certificates, family medical records, etc.
What information do you need?

- Major medical conditions and causes of death
- Age family member developed disease and age at death
- Ethnic background
- General lifestyle factors like heavy drinking and smoking

*Example:*

Uncle Bill – smoked cigarettes since he was a teenager, had a heart attack at age 52
Who are the most important relatives to include?

- you
- children
- siblings
- parents
- grandparents
- aunts and uncles
- nieces and nephews
What should you do with the information?

- Organize the information
- Share it with your doctor
- Keep it updated
- Pass it on to your children
How doctors organize family history: pedigrees

To learn to draw a pedigree like this, go to http://www.nsgc.org/consumer/
What will your doctor do with the information?

• Determine your risk for disease based on:
  - Number of family members with the disease
  - The age when they were diagnosed
  - How relatives with disease are related to one another and to you

• Consider other disease risk factors

• Recommend screening tests and lifestyle changes
Shirley’s Family History

Shirley has heard that diabetes can run in the family, so she asked her doctor to assess her family history risk.

<table>
<thead>
<tr>
<th>Family history</th>
<th>Shirley’s doctor recommends:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes:</td>
<td>Strong Risk</td>
</tr>
<tr>
<td>mother, 43 yrs</td>
<td>- losing weight, eating a healthy diet and increasing physical activity</td>
</tr>
<tr>
<td>father, 59 yrs</td>
<td>- blood sugar screening</td>
</tr>
<tr>
<td>uncle, 50 yrs (father’s side)</td>
<td>- possibly refer to a specialist</td>
</tr>
<tr>
<td>aunt, 59 yrs (father’s side)</td>
<td></td>
</tr>
<tr>
<td>Heart Disease:</td>
<td>Moderate Risk</td>
</tr>
<tr>
<td>mother, 66 yrs</td>
<td>- losing weight, eating a healthy diet and increasing physical activity</td>
</tr>
<tr>
<td>uncle, 68 yrs (mother’s side)</td>
<td>- regular cholesterol screening</td>
</tr>
<tr>
<td></td>
<td>- regular blood pressure screening</td>
</tr>
<tr>
<td></td>
<td>- possibly take aspirin regularly</td>
</tr>
</tbody>
</table>
How did Shirley’s family history help her?

She learned that she had increased risk for diabetes and heart disease. Her family history was a risk factor, in addition to her weight.

Shirley started getting more regular screenings for
• blood sugar
• blood pressure and
• cholesterol.

She talked to her doctor about losing weight through healthy eating and physical activity programs that were right for her.
Prevention is Primary…
Create Your Family’s Future!

www.cdc.gov