

# Risk Continuum

## Activity Overview

A group kinesthetic demonstration of what it means to be in a “risk group” for developing heart disease based on family history/genetics.

## Logistics

### Time Required

▶ **Activity Time:**  
15 minutes

▶ **Prep Time:**  
10 minutes

### Materials

Paper

### Prior Knowledge Needed

None

## Learning Objectives

- ▶ People can be assigned to a risk group for developing heart and other diseases based on family history/genetics.
- ▶ Lifestyle choices can positively or negatively influence the risk of developing heart disease.
- ▶ A higher risk means a greater chance of developing heart disease, not an inevitability of developing it.
- ▶ Though a lower risk means there is a reduced chance, it is still possible for members of this risk group to develop heart disease.

## Special Features You'll Find Inside

- ▶ Diagrams to help set up the demonstration.

# Risk Continuum

## Activity Instructions

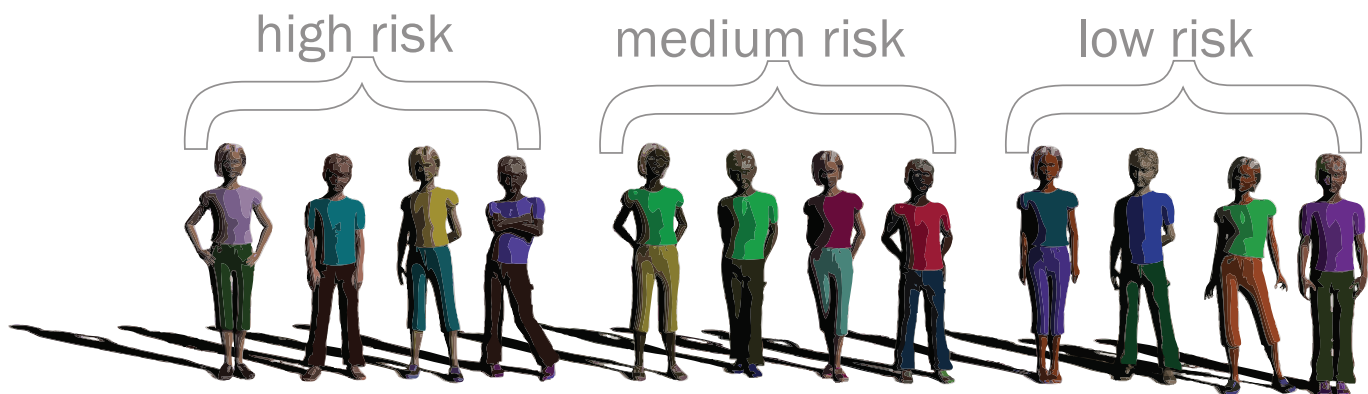
### Leader Action

1. Line your participants up standing in a single row, shoulder to shoulder, and facing the same direction.
2. Mark off two spots so that the line of participants are roughly divided into thirds.
3. Explain that the participants now represent a continuum ranging from those at the left who are genetically most at risk for developing heart disease, and those at the right who are least at risk. The “thirds” represent the broader categories of high, medium and low risk groups.
4. Explain that each risk group correlates with a certain *probability* of developing heart disease based on family history. Lifestyle choices involving diet, exercise and smoking can influence this risk.

### Quantities

#### Per Group of 30

- ▶ 10 copies of Lifestyle Choice Cards, cut to form individual cards, (30 total). Shuffle them and place them in a bag or other container.



### Participant Action

1. Starting with the participant most at risk (left) have each person choose a Lifestyle Choice card without looking.



# Risk Continuum

## Participant Action (cont.)

2. Adjust the continuum to reflect lifestyle choices:

A. Complete the following calculation:

$$\frac{\text{Total \# of participants}}{6} = \# \text{ of spaces to move}$$

B. Ask the first participant to read his or her Lifestyle Choice card and move the designated number of spaces (calculated above) in the following manner:

**Healthy** = move the # spaces to the right

**Neutral** = remain where you are

**Negative** = move the # spaces to the left

3. Have each participant repeat the above process until all persons are arranged into the newly formed continuum.

4. Have the participants reform into the divisions outlined in leader action steps 1-3 and note how their risk has changed after factoring in lifestyle choices.

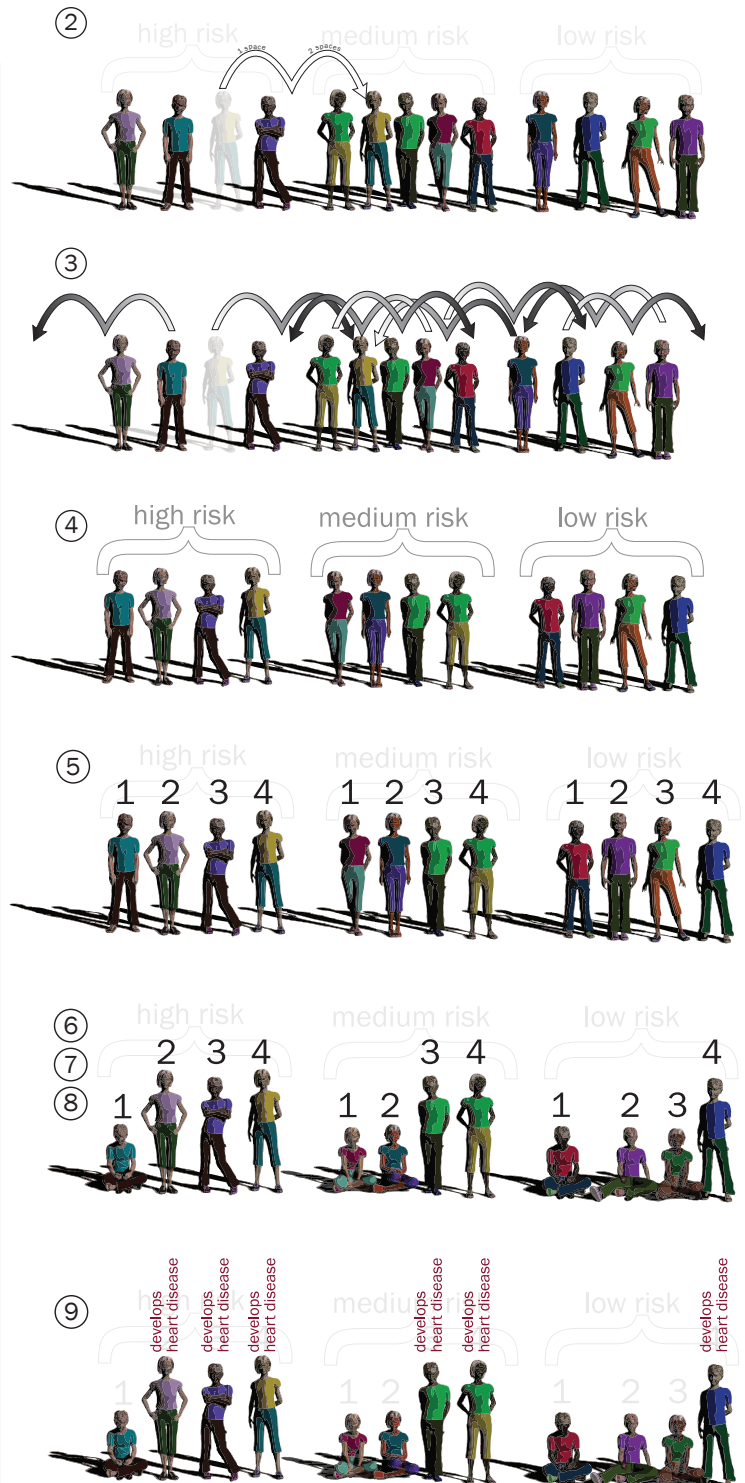
5. Within each of the thirds, the participants will count off 1 to 4.

6. In the “high-risk” group on the left, those who counted a 1 will be asked to sit down.

7. In the “medium-risk” group, those who counted a 1 or 2 will be asked to sit down.

8. In the “low-risk” group on the right, those who counted a 1, 2, or 3 will be asked to sit down.

9. Those standing represent the people that developed heart disease.



## Risk Continuum

### Discussion Points

- People in all risk groups develop heart disease with the largest percentage being from the “high” risk group.
- Not all people in the high risk group develop heart disease.
- Making positive or neutral lifestyle choices can influence your risk enough to prevent developing heart disease. (Ask participants for which this was true to raise their hands).
- Sometimes, people who make positive or neutral lifestyle choices still develop heart disease (Ask participants for which this was true to raise their hands).
- Some people who make negative lifestyle choices do not develop heart disease, even though their risk is increased.

### Adaptations

You can create a risk continuum for other diseases such as diabetes or cancer. Visit [learn.genetics.utah.edu/units/health](http://learn.genetics.utah.edu/units/health) for information about these diseases as well as more about heart disease.

### Credits

Molly Malone, Kevin Pompei, Louisa Stark, Harmony Starr, Brendan Nicholson (Illustrations), Genetic Science Learning Center

### Learn More

Visit the **Learn.Genetics** website to get more great resources like this one!

### Funding

Original funding:

Supported by the Utah Department of Health Chronic Disease Genomics Program through Cooperative Agreement Number U58/CCU822802 from the Centers for Disease Control and Prevention. The contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Funding for modification for use with non-school groups:

Grant U33MC00157 from the Health Resources and Services Administration, Maternal and Child Health Bureau, Genetic Services Branch. Partners in the Consumer Genetics Education Network (CGEN) include HRSA, March of Dimes, Dominican Women’s Development Center, Charles B. Wang Community Health Center, Genetic Science Learning Center at University of Utah, Utah Department of Health and the National Human Genome Center at Howard University.



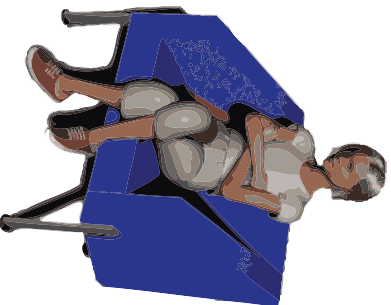
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## Lifestyle Choice Cards

### NEGATIVE LIFESTYLE



smoking



inactivity

### NEUTRAL LIFESTYLE

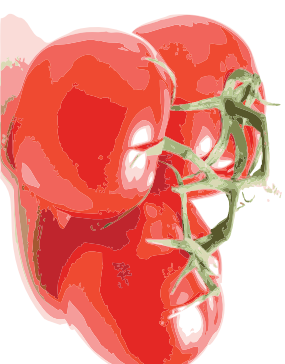


balanced diet



moderate activity

### POSITIVE LIFESTYLE



healthy diet



very active



## Tarjetas de Estilo de Vida

**ESTILO DE VIDA  
NEGATIVO**



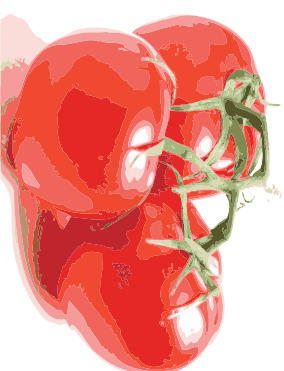
fumador

**ESTILO DE VIDA  
NEUTRAL**

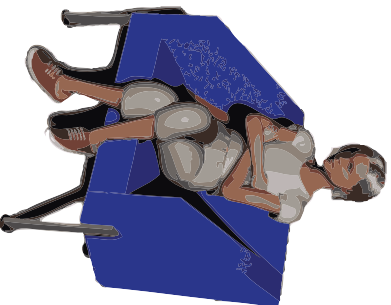


Dieta Balanceada

**ESTILO DE VIDA  
POSITIVO**



Dieta Saludable



Inactividad Negativo



Actividad Moderada



Mucha Actividad

