Risk Communication for Hypertension

One major health concern associated with high blood pressure is increased risk of heart attack or stroke. One's blood pressure is an aspect of their risk profile. When a person has high blood pressure, other important biological factors are age and sex; increased age contributes to one's risk profile, and males have more risk than females. For an average 55-year-old man, the risk of having a heart attack or stroke in the next 10 years is 3%, which means that 3 out of 100 people with the same risk profile will have a heart attack or stroke in the next 10 years. For women, the baseline risks are lower (approximately 1% with the same risk profile), and the risk increases with age (baseline risk for men with the same risk profile increases to 6% at 65, 12% at 75, and 19% at 85).

Your blood pressure serves as another contributing factor to heart attack and stroke risk, as your systolic blood pressure increases, your risk of heart attack and stroke also increases. For someone whose systolic blood pressure is within the goal range (130mm/Hg), their baseline risk of experiencing heart attack or stroke is 3%. If systolic blood pressure increased to 145 mm/Hg, which is outside the goal range, the risk of heart attack and stroke increases to 4%. Imagine the blood pressure increases to 160 mmHg, further outside the goal range, the risk of heart attack and stroke increases to 5%; see figure below for illustration.

Your risk of heart attack or stroke in the next 10 years based on your average blood pressure is 5%, which means 5 out of 100 people with your average blood pressure will have a heart attack or stroke in the next 10 years. This information is summarized visually below.

- 95 out of 100 people will NOT have a heart attack or stroke in the next 10 years

- 3 out of 100 people will have a heart attack or stroke in the next 10 years

- 2 more persons out of 100 people will have a heart attack or stroke because of high blood pressure (the additional risk caused by uncontrolled hypertension)

10-Year Risk of Heart Attack and Stroke