



UNDERSTANDING HEALTH RISKS

Improve Your Chances for Good Health

Health risks can sometimes be confusing, but they're important to understand. Knowing the risks you and your family may face can help you find ways to avoid health problems. It can also keep you from fretting over unlikely threats. Knowing the risks and benefits of a medical treatment can help you and your doctor make informed decisions.

“Understanding health risks is key to making your own health care decisions,” says Dr. William Elwood, a psychologist and behavioral scientist at NIH. “It gives you perspective on potential harms and benefits, so you can make smart choices based on facts and not fears.”

A health risk is the chance or likelihood that something will harm or otherwise affect your health. Risk doesn't mean that something bad will definitely happen. It's just a possibility. Several characteristics, called risk factors, affect whether your health risks are high or low.

**EXERCISE
& A HEALTHY
DIET CAN LOWER
YOUR RISK OF
DEVELOPING
HEART DISEASE.**

Your personal health risk factors include your age, sex, family health history, lifestyle, and more. Some risks factors can't be changed, such as your genes or ethnicity. Others are within your control, like your diet, physical activity, and whether you wear a seatbelt.

When you see health statistics, consider the types of people being described. If they're not similar to you, or if the category is very broad, then your risks may be different. A general statement like “More than half of Americans over age 45 will develop heart disease at some point” is based on statistical averages across the entire U.S. population. If you're younger than 45, your heart disease risk will generally be much lower. The more risk factors you have—such as smoking, high blood pressure, or diabetes—the greater your risk. Exercise and a healthy diet, on the other hand, can make your chance of developing heart disease lower than for most other people.

TALKING ABOUT YOUR HEALTH RISKS

Talking about health risks can seem intimidating. Even doctors sometimes have trouble with risk concepts. That's why NIH supports research to improve how medical staff and others communicate health risks and prevention strategies to patients and the public.

“Math in general is hard for a lot of people. Yet math is often hidden in everyday activities that affect our health,” says Dr. Russell Rothman, a physician and scientist at Vanderbilt University in Nashville. Rothman's research focuses on helping people understand and work with numbers, so they can reduce their risks for diabetes and excess weight, including childhood obesity.

Studies show that the way we hear and understand health statistics can be influenced by how the numbers are described, or how they're “framed.” Different descriptions can affect how clear the information is and also what emotions it stirs. For example, the statement: “More than 20% of Americans will eventually die of cancer” might sound less scary from a different perspective: “Nearly 80% of Americans will not die of cancer.”

To understand the potential risks or benefits of a medical treatment or behavior change, it helps to focus on a math concept called “absolute risk.” Absolute risk is the chance of something happening, such as a health problem that might arise over a period of time. For example, a disease might affect 2 in 100 middle-aged men over their lifetimes. If a certain drug lowers their risk for the disease to 1 in 100, the drug has reduced their absolute risk by 1 person in 100, or 1%. Another way to think of it is that you'd need to treat 100 people with this medicine to prevent just 1 additional person from getting the disease.

Often, however, you might hear numbers that use a related concept called “relative risk.” Relative risk compares the absolute risks of one group to another. In the example above, you could also say that the drug reduced the risk of disease by 50%, since 1 is half of 2. Looking at relative risk alone, you may mistakenly think that the drug is highly effective.

Asking Your Doctor About Health Risks

- What are my personal health risks? Are these risk over my lifetime or over a shorter period?
- What steps can I take to reduce my health risks? (such as through exercise or a healthy diet)
- What are my options? (for treatments, screening tests, or making healthy changes)
- What will the results of this test or therapy tell us about my risks?
- What are possible benefits and side effects? What are the chances these might affect me?

Speak up if there's something you don't understand. It's the health care provider's job to explain health risks in a way that makes sense to you.

