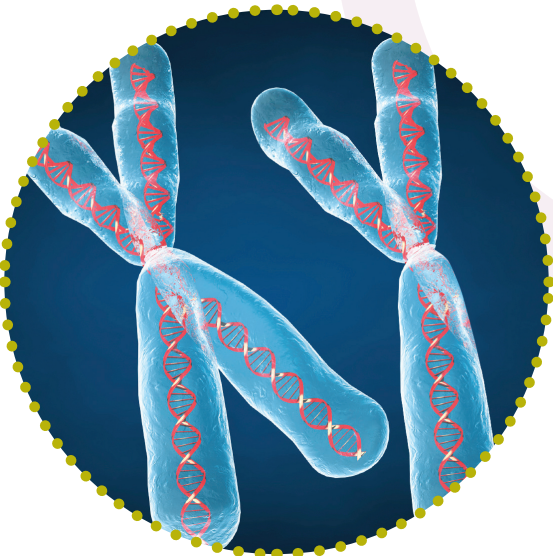


"As we enter an era of genomics and personalized medicine, we're looking much more at individuals and groups of individuals; we're not just delineating men and women," Dr. Ramsay says. "Certain types of patients respond to certain types of drugs. We need to get much more specific."



**RESEARCH POLICY CHANGED**

While guidelines for the inclusion of women in clinical research were first issued by the National Institutes of Health (NIH) in 1986, these guidelines were not enforced until Congress passed the NIH Revitalization Act of 1993, which, after a policy revision in 1994, required the inclusion of both sexes and minorities in NIH-funded research studies.

"There is now recognition that women respond differently to some drugs than men, and with some of the drugs that we use, the initial studies were done primarily in men and there haven't been further studies," notes Janine Austin Clayton, M.D., deputy director of the Office of Research on Women's Health, Office of the Director, NIH, who feels optimistic about the major strides being made in research and awareness.

"It's now legally mandated that women be included in clinical studies in a number that is scientifically appropriate for that particular disease," Dr. Clayton continues. However, she says, there is still a long way to go. "There are still large studies done where there are not enough women included to look at women and men separately. Also, the diversity of women included needs to be taken into account, because there are differences based on race, ethnicity and socioeconomic status. We're doing a good job in some areas, but we have more work to do."

**DIFFERENCES IN DISEASE**

Of course, there have always been diseases that are specific to sex based on anatomy - ovarian cancer is particular to women, just as prostate cancer is to men. Other diseases are more prevalent in women or men. Breast cancer, osteoporosis, eating disorders and autoimmune diseases occur with greater frequency in women, and rates of depression and anxiety are higher for women than men. Of increasing concern to the medical establishment is that being overweight is a risk factor for many diseases, and while this is a growing problem in the population as a whole, it is increasing more for women than for men.

But beyond questions of prevalence, men and women experience many diseases in fundamentally different ways, with significant differences in symptoms, responses to treatment and outcomes. Cardiovascular disease is a prime example.

*Continued >>>>*

## Increase Your Awareness of Heart Health in Women: Realize Risk and Recognize Heart Attack Symptoms

**TOO MANY WOMEN DON'T KNOW ENOUGH ABOUT THE PREVALENCE OF** heart disease in women or of their own personal risk, and both women and health care providers are not sufficiently aware of heart attack symptoms in women. As the American Heart Association's Go Red for Women Campaign puts it, the fact that heart disease is the leading cause of death for women is "a fact most women still do not take to heart."

Awareness is a crucial first step in reducing the occurrence of heart disease. The next steps are knowing your personal risk, understanding the need for prevention and making lifestyle changes to reduce risk.

The good news is that awareness levels of cardiovascular disease risk have been growing - a national study published in the journal *Circulation* in 2006 found that 55 percent of women realize that heart disease is the number-one cause of death. However, women under 55 who have heart attacks typically don't recognize the warning signs, according to researchers at Yale School of Public Health.

**RECOGNIZE HEART ATTACK WARNING SIGNS**

The majority of heart attacks begin slowly, with mild pain. This is particularly true in women, who often have fewer of the classic symptoms of heart attack and often think they have indigestion or heartburn. "What we've realized in the past decade is that women present differently when they're having a heart attack," explains Jennifer H. Mieres, M.D., cardiologist at New York University School of Medicine and spokesperson for the American Heart Association's Go Red for Women Campaign.

Recognizing heart attack warning signs and getting help quickly are crucially important. Signs of a heart attack include:

- Chest discomfort, usually pressure, fullness, pain or squeezing in the center of the chest that either goes away and returns or lasts more than a few minutes
- Discomfort in other parts of the upper body such as the arms, back, jaw, neck, shoulder or stomach
- Shortness of breath with or without chest discomfort
- Nausea, vomiting, lightheadedness, cold sweats
- What feels like indigestion or heartburn
- Weakness or fatigue

Women, like men, most often experience chest pain or discomfort, but are more likely to have other symptoms such as shortness of breath, nausea/vomiting and back or jaw pain. Anyone experiencing these symptoms should get help right away by calling 9-1-1.

