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EDITORIAL

Equity in Biomedical Research

Research on the health of women is expanding fundamental biological and clinical knowledge that will have a positive effect on global morbidity and mortality patterns of women. This research seeks to better understand conditions that are unique to women, as well as those that affect both sexes. Learning if and when differences exist between genders and their potential consequences for health should influence policies to improve the health status of both women and men.

In many cultures, women's health has been viewed traditionally in terms of the reproductive system. This view is yielding to a more comprehensive definition of women's health, so research must encompass other conditions and transcend scientific disciplines and the conventional fragmentation of women's health care.

Although women constitute a greater proportion of the elderly population in developing and developed countries, their longer life expectancy does not guarantee better health or quality of life than men. Women, in general, suffer more acute symptoms, chronic conditions, and short- and long-term disabilities. By virtue of their longer lives, women are more susceptible to emerging conditions that affect the aged. Research to elucidate genetic, hormonal, and other mechanisms that differentiate aging and longevity in men and women could lead to reductions in the economic burdens of illness and frailty.

Information is evolving from ongoing research, but further studies are needed to discover optimal preventive measures and interventions to reduce risk factors and improve health outcomes for women when there are gender differences in disease presentation; progression, or response to therapies. The debate over the merits of gender analyses and the inclusion of women in clinical studies has led to changes in traditional assumptions that tolerated gender bias and a narrow definition of women's health. Gender is now recognized as a parameter that must be appraised if results are to be generalized to whole populations.

In a 1994 report, "Women and Health Research," the Institute of Medicine in the United States identified two forms of gender bias in clinical research: male bias in designing and conducting studies, and the tendency to use males as the norm or standard. The report concluded that these biases impede research and produce findings that are not valid for large segments of the population. Increasing the number of women researchers who are involved in the formulation of scientific policies can alleviate male bias, but the inclusion of female participants in clinical studies is necessary to augment health care standards originally formulated on the male model with standards appropriate for women.

Although data on the actual numbers of female participants in past clinical studies have not always been available, ample evidence exists that many large clinical trials did not include women in numbers adequate to allow for analysis of the results by gender. Data are particularly lacking for pregnant women. For a variety of reasons, including purported protection for women who are pregnant or of childbearing age, women were often excluded from research on conditions that affect both genders. Women, however, have not routinely been excluded from the clinical applications of such research. Thus, studies of the effects of sex hormones and comparisons of gender variations in the pharmacokinetics and pharmacodynamics of drug metabolism are needed. Standards of medical care and public health policies must be developed that recognize biological and psychosocial gender differences.

Policies and programs have been developed to ensure that research fills gaps in our knowledge of women's health. As an example, the Office of Research on Women's Health at the U.S. National Institutes of Health (NIH) has contributed to the formulation of comprehensive, multidisciplinary approaches to expand basic, clinical, and applied research and ensure that women are appropriately represented in biomedical and behavioral studies.

The challenge now inherent in women's health research is to establish a scientific knowledge base that will permit reliable diagnoses and effective prevention and treatment strategies for all women, including those of diverse cultural and ethnic origins, geographic locations, and economic status. The ultimate objective is good science to enhance biological wisdom and inform the development of policies and medical standards from which women and men can benefit equally.

Vivian W. Pinn

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