



Individualized Medicine

The importance of understanding gender (and other) differences in illness.

About 10 years ago, I was asked to speak at a conference in New York City on women's health issues. The first speaker opened the conference by saying, "No wonder we have so many questions about important differences that may exist between men and women in the diagnosis and treatment of a number of diseases—even the lab rats are white males!" She was clearly speaking tongue-in-cheek, but nonetheless, the point she raised had more than a grain of truth to it.

One of the things we teach our medical students and residents is how important it is to make medical decisions based on *evidence* and not just experience alone. That means for each patient we see, we consider the medical research findings and use those findings to guide our recommendations about necessary testing and possible treatment options. A very basic part of this is a concept called "generalization." This means that the patient you are advising needs to be similar to the research subjects studied to reasonably assume that the patient will respond in the same way the research subjects responded.

We know, for example, that children are not just "little adults." Their bodies and organs are still growing and maturing, and drugs do not have the same effects in children as they do in adults. That means that we have to do research involving children if we want to really know how to best treat children. As people age, their metabolism changes and so do the effects of many drugs. We also know that women and men can have different responses to drugs, and it is actually much more complicated than just the obvious hormonal differences.

For many years, medical research, especially clinical trials of new medications, only enrolled men. There were many reasons for this: Those hormonal effects were thought to possibly "contaminate" the results; researchers were afraid that women might get pregnant during the research study and that the study drug might harm the baby; and many more. The problem is, we need research that includes all of types of individuals so we understand

who will benefit from the treatment, the correct doses to use, and the side effects to expect.

I am happy to report that there has been considerable progress made on understanding gender differences in medical conditions over the last 10 years, including some studies that were for women only, like the Women's Health Initiative. In this issue we report on an important new stroke awareness campaign supported by the American Academy of Neurology, the American Stroke Association, and the American College of Emergency Physicians. Research has shown that 70 percent of deaths from stroke occur in women, and the rate of stroke in middle-aged women has tripled! Of course, this important campaign urges everyone—men and women of all ages—to think of stroke as a **brain attack** requiring rapid action.

Also in this issue, we highlight issues surrounding women with epilepsy. These range from an increase in seizures around the time of menses (those hormonal effects again) to possible adverse effects of anti-epileptic drugs on the developing fetus, to special problems with breast-feeding. I'm not sure how those white male lab rats could help much here!

The next time you talk with your doctor about a new medication, consider asking her about whether anything is known about the effects of that medication in a person like you (man, woman, young, older, pregnant, menopausal, etc.). While we don't have detailed information on every group for each medication, more and more information is becoming available all the time that helps in making the best individual medical decisions possible for all of us.



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My very best,

Robin L. Brey, M.D.
Editor-in-Chief