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# Preventive Medicine, Properly Practiced

By SUSAN M. LOVE

**L**OS ANGELES — There are at least 6 million women in this country who are asking themselves, "What happened?" Over the last several years they have read books and magazine articles, listened to TV pundits and talked to doctors and friends ó all of whom assured them that taking hormone replacement therapy for the rest of their lives would keep them healthy.

Then one bright summer day, their world shifted. Their little daily pill carried not the promise of health but the risk of disease. How could this be?

What happened is that medical practice, as it so often does, got ahead of medical science. We made observations and developed hypotheses ó and then forgot to prove them.

We start with observational studies, in which researchers look at groups of people to see if we can find any clues about disease. But all this observation can do is find associations: it can't prove cause and effect.

With hormone replacement therapy, we did many observational studies. We found that women who were on hormone therapy had a lower incidence of heart disease, stroke, colon cancer and bone fracture. And we accepted these findings before we did the definitive research, overlooking the fact that these women were also more likely to see a doctor (which is how they were put on hormone therapy in the first place), and probably more likely to exercise and to eat a healthful diet, than women who were not taking the drug. It wasn't clear whether hormones made women healthy or whether healthy women took hormones. To answer this question we needed randomized, controlled research.

The latest study, sponsored by the National Institutes of Health, enrolled 16,608 healthy women from ages 50 to 79 and randomly assigned them to take hormone replacement therapy or a placebo. Much to everyone's surprise, after 5.2 years the study showed that the risks of hormone treatment outweighed the benefits in preventing disease.

Many are already arguing that the study was poorly designed or that its results are limited to one type of hormone therapy, or even that "bioidentical" hormones will be safe. In fact what the study really questions is the idea that we need to replace hormones in post-menopausal women for the long term. Menopause is normal. We need high levels of hormones to reproduce, but we shift down to a lower level for the second half of life. The symptoms of menopause are really not the symptoms of low estrogen but the symptoms of hormonal change ó puberty in reverse.

And, as with puberty, the symptoms are transient, usually lasting between three and four years. In one study following women through menopause, 50 percent of the participants complained about hot flashes but only 16 percent felt they were really bothersome. For these women, it is perfectly reasonable to take hormone therapy for up to four years. At that point, a woman can either stop cold turkey (50 percent of women will do fine with this approach) or taper off over several months.

There is a bigger issue than simply hormone therapy, however. There is a tendency, driven by wishful thinking combined with good marketing and media hype, to jump ahead of the medical evidence. In the 1950's, it was DES, a drug given to pregnant women to prevent miscarriages. It was many years later that a randomized, controlled study showed that it had no effect in preventing miscarriages. Finally, in 1971 it was learned that daughters of women who took DES were at increased risk of developing vaginal cancer.

In the 1990's, the bone marrow transplant ó high-dose chemotherapy with stem-cell rescue ó was proposed to treat aggressive breast cancers. It was widely used until four randomized, controlled studies showed it was no better than standard therapy, and had far more side effects. Arthroscopic surgery for osteoarthritis was commonly performed but just last week a controlled study showed it had no objective benefit. Hormone replacement therapy is just one more example of this phenomenon.

These examples show the importance of taking the time to determine the safety and efficacy of a particular therapy before we embrace it. This is particularly true in preventive medicine, since such therapy can create one disease in trying to prevent another that might not occur at all.

The foundation of prevention still should be lifestyle changes: quitting smoking, eating a healthy diet and exercising regularly. Drugs, whether to prevent heart disease, bone fractures or breast cancer, should be secondary. This is not necessarily an easy lesson, but we need to demand medicine based on solid evidence, not hunches or wishful thinking.

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