result that appears to be of the highest obtainable precision but is error-ridden, and possibly quite unreliable. ... A careful, thorough, thoughtful, old-fashioned narrative review by somebody who really understands the subject is often a much better way to go at it."

Even one of the developers of modern meta-analysis, Oxford epidemiologist Richard Peto, worries about the Cochrane Collaboration's effort to do meta-analysis on an industrial scale. Good meta-analysis, he says, takes painstaking attention to detail and often requires involving the authors of the original studies. "You get the data from them," he says, "you go over the data in detail, do a lot of to and fro getting rid of errors, and then you get them involved in the interpretation both of their own study and the overview. This just isn't possible in the Cochrane Collaboration."

Members of the Cochrane Collaboration respond that a systematic, standardized analysis of the available evidence, whatever its warts, has to be better than no analysis at all, and that the collaboration has put a lot of work into setting up protocols to minimize the potential problems. "We've got a handbook of how to do [the reviews] that's about 3 inches thick," says Rennie. And even when mistakes creep in, he says, they have a good chance of being rooted out, because the collaboration will be subjecting its conclusions to what might be called perpetual peer review and refereeing. With conventional journal articles, says Rennie, later criticism—even evidence that an article is worthless—may have little effect. "It's as if the *Titanic* hit an iceberg but went sailing on," he says.

In contrast, the San Francisco center, run by Rennie and health policy researcher Lisa Bero, is setting up a system that should allow anyone reading a Cochrane review to e-mail criticisms to the center for relaying to the authors. If necessary, says Bero, the authors will revise their original review, which could mean coming to entirely new conclusions on the basis of new evidence. "It has to be done," says Rennie. "An archive is dead if it doesn't change and doesn't have ongoing review, criticism, and quality control."

At the very least, both critics and enthusiasts of the Cochrane Collaboration say the reviews should provide important information about what isn't known in medicine. Or, as Naylor puts it, "The wonderful thing about the systematic approach of reviewing available evidence across every imaginable aspect of clinical practice is that it will, one hopes, nail down those areas where we just don't know what we're doing"—whether blood-thinning or clot-busting drugs are beneficial in acute strokes, for example.

It should also tell doctors when a procedure is so well documented that it should become a part of standard practice. Says Dickersin, "The Cochrane reviews should finally tell us when we have enough evidence to believe something."

–Gary Taubes

WOMEN AND TENURE

No Women Chemists at Women's College

When Joan Valentine studied chemistry at Smith College in the mid-1960s, it didn't seem strange that all her professors were men. "That was the norm" in the sciences, Valentine says, and the elite women's college in Northampton, Massachusetts, was no exception. Today, however, it is. While Valentine went on to become the first tenured woman chemist at the University of California, Los Angeles, and the five schools comparable to Smith—the so-called "sister colleges"—now have between one and five tenured women chemists apiece, Smith, in the past 38 years, has had none. In February, the school extended this streak, rejecting physical chemist Sharon Palmer's tenure bid, despite unanimous support for her from the department.

The rejection—due to what the school says is a poor publication record—has prompted distress both on and off campus. That a women's college can't seem to find a qualified woman is "really sending the wrong message," says Rebecca Pinto, a senior chemistry major at Smith who has helped to circulate petitions in support of Palmer. "She is what we aspire to be, and she didn't get tenure—it's really dispiriting." Valentine, too, is pained about her alma mater. "I couldn't possibly, in good conscience, recommend that any young woman go there" to study chemistry, she says. And the case has renewed many concerns about the demands for extracurricular commitments that seem to come between women scientists and their research.

Because Palmer, 37, is the senior of two tenure-track women in her eight-member department, "women students identify with her, and there is a lot of advising she has to do because the students go to her first for certain sorts of problems" such as career decisions or conflicts with other instructors, says George Fleck, a tenured chemist in the department. Palmer is also "extremely strong" at guiding undergraduate research projects, says Petra Turowski, the department's other untenured woman. "And when you spend almost all of your time training students, you get very little [publishable data]."

"SIX SISTERS" FULL-TIME COLLEGE CHEMISTRY FACULTY

	Tenured		Tenure-Track	
	Women	Men	Women	Men
Barnard	1	1	2	2
Bryn Mawr	2	2	1	0
Mount Holyoke	3	1.4	1	2
Smith	0	6	2	0
Vassar	3	1	0	4
Wellesley	5	4	3	4

"Committee assignments and service work that draw [women faculty members] away from research" is a serious problem that hasn't faded as more women have entered science, says Marge Cavanaugh, a program director in the National Science Foundation's division of chemistry. Valentine adds that for protection from these ballooning demands, young faculty members need good advice from colleagues and department chairs. "If Smith's chemistry department fell down in getting the message to Palmer that 'this is what will be required for promotion,' then something very strange was going on," she says.

Smith chemistry chair Robert Linck says Palmer "did indeed receive guidance" on setting aside time for her own research. And he along with Smith's five other senior chemists—all men—recommended her for tenure. Still, the school's tenure committee balked, saying that only three of Palmer's 13 published papers had been produced during her 8 years at Smith.

John Connolly, dean of the Smith faculty and a member of the tenure committee, would not comment specifically on Palmer's case. He did say "there is adequate support at the college for all untenured members of the faculty to develop both their teaching and their research. ... That's not to say these means work equally well for every candidate." He adds that most departments at Smith employ roughly equal numbers of men and women, and indeed three of the college's four tenured physics professors and five of its 13 tenured biology professors are women. The chemistry department, undergoing a scheduled review this month, "has already raised this as a problem," Connolly says.

Palmer has until next spring to pack her bags, but says she's considering filing a grievance with the college over the handling of her tenure case. "I've had students tell me, 'I always wanted to be an academic scientist, but having seen what you go through, now I don't,' " Palmer says. "I should be showing them that it can be done."

–Wade Roush