duce C-reactive protein levels, and noninflammatory conditions such as aging (possibly because of oxidative stress) and obesity. In this view, C-reactive protein itself could be the principal acute-phase contributor to vascular disease. Of the acute-phase changes mentioned previously, however, elevations in interleukin-6, triglycerides, secretory phospholipase A2, ICAM-1, circulating leukocytes, and fibrinogen have also been associated with an increased risk of coronary events in epidemiologic studies of healthy adults, as have acute-phase responses such as elevations in the blood levels of serum amyloid A and decreases in high-density lipoprotein (HDL) cholesterol. C-reactive protein can enhance cholesterol uptake by human macrophages as well as their expression of tissue factor, and it may be found with complement in atherosclerotic lesions. Plausible roles in atherothrombosis can also be proposed for the prothrombotic changes noted above and for the decrease in, and remodeling of, circulating HDL that results from the acute-phase response. How much any acute-phase protein actually contributes to the formation of atheromas or coronary thrombosis in humans is uncertain, however.

The observation that the reductions in C-reactive protein levels and lipid levels induced by statins do not correlate with one another suggests that, in addition to their ability to reduce LDL, statins may also inhibit the inflammatory or noninflammatory processes that induce acute-phase responses. The biochemical mechanism of an antiinflammatory effect is uncertain; the depletion of cholesterol in the membranes of inflammatory cells or the reduced isoprenylation of signaling proteins in those membranes are the chief possibilities. Whereas various statins can reduce C-reactive protein levels, their effect on acute-phase proteins such as fibrinogen and PAI-1 has been inconsistent, raising the possibility that they inhibit some components of the acute-phase response (perhaps the most dynamic) more than others.

The two viewpoints are obviously not mutually exclusive, and both mechanisms could operate in the same person. Recent studies suggest that statin therapy may also prevent diabetes mellitus, osteoporosis, and Alzheimer's disease. In each of these conditions, as in coronary disease, the beneficial effect of the drugs might be attributed to their LDL-lowering activities, their antiinflammatory activities, or both. If statins inhibit the acute-phase response by diminishing the intravascular deposition of cholesterol and phospholipids, more potent statin treatment will probably not interfere with acute-phase responses to infection, injury, and other types of stress. If they broadly inhibit the acute-phase response, on the other hand, the ultimate preventive effect of these remarkable drugs could be limited, at least in part, by their ability to attenuate the beneficial functions of that response. The data presented by Ridker and colleagues should stimulate further exploration of the effects of statins. The authors' results also call for prospective, randomized trials to determine whether C-reactive protein testing can be used to identify persons whose coronary risk can be reduced by statin therapy and, if so, what the magnitude of this reduction is likely to be in persons with defined, stable levels of C-reactive protein and lipids.

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ECOLOGY IN EVOLUTION

“CURRENT discussions about medical care appear largely concerned with two questions: Is the burgeoning harvest of new knowledge fostered by immense public investment in medical research being delivered effectively to the consumers? Is the available quantity, quality and distribution of contemporary medical care optimum in the opinion of the con-
We lack comparable data from earlier eras. Perhaps the proportion of people who considered seeking health care but did not visit a doctor has been even larger in the past. Furthermore, people with symptoms who do not see their doctors are almost surely less severely ill than those who do. Some cynics might argue that barriers to care in the case of people with mild symptoms are a good thing, since physician visits for all these people would further increase the costs of health care.

However, patients today are increasingly unwilling to live with the perception that their needs are going unmet. In the United States, the baby-boom generation has transformed every institution with which it has come into contact. Education is only one example. As this generation ages and begins to have chronic diseases, we can expect health care to be next. The baby boomers have made consumerism a way of life; hints of their impact can be found in data demonstrating that the length of office visits is actually increasing, despite a widespread belief to the contrary.

One of the most powerful demands is for information. Patients want to know the meaning of their test results, the side effects of their medications, the implications of a report that was in the news, and the worst possible disease that could be the cause of a symptom that began that day. Physicians often consider responding to patients’ questions in any format outside of an office visit an annoyance — and one for which they are virtually never compensated. Many physicians tell patients, “I’ll contact you if any of your results are abnormal.” In the silence that follows, some patients wonder whether their test results actually were normal or were merely overlooked. Few offices devise systems to answer patients’ questions beyond having the doctor return telephone calls in spare moments. The provision of information to patients is managed by limiting access to busy doctors.

When physicians’ offices do not meet patients’ needs for information, patients turn to other resources, including the Internet. The information they receive varies in quality and is often difficult to interpret. Today, however, the provision of information to patients is increasingly recognized as a basic part of health care. To encourage physicians to meet this need, some insurers are evaluating an approach in which patients are virtually never compensated. Many physicians tell patients, “I’ll contact you if any of your results are abnormal.” In the silence that follows, some patients wonder whether their test results actually were normal or were merely overlooked. Few offices devise systems to answer patients’ questions beyond having the doctor return telephone calls in spare moments. The provision of information to patients is managed by limiting access to busy doctors.

The new generation of patients also wants access. They do not want to wait two months for an appointment; in fact, they do not want to wait at all. The computer age has changed expectations of service industries: people expect to have their needs met 24 hours per day, seven days per week. Patients who have questions they would like answered and requests for prescription renewals, referrals, and appointments do not see why these issues cannot be raised on a weekend. Sometimes, patients would like to talk to a hu-
man being, not a computer masquerading as a receptionist, and they do not want to wait 30 minutes for a harried nurse, nurse practitioner, or doctor to return their call.

To improve access to care, office practice is being redesigned.\(^5\) New scheduling strategies allow most patients to be seen the day they make an appointment. Physicians’ time is protected through the use of other approaches (e.g., group visits and set telephone call-in times) to meet patients’ needs for information and education.

How quickly the health care system will evolve to meet these needs is uncertain. Nevertheless, the next examination of the ecology of medical care will almost surely include a range of new measures. Perhaps it will report the rates of e-mail communications between physicians and their patients, the levels of enrollment in disease-management programs, and the rates of use of other forms of care supplied by a range of nonphysician providers. The aging of the baby boomers and the emergence of the Internet make up a powerful combination that should accelerate the rate of change in the American health care system.

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