

## Living by Bread Alone - Some Myths of Preventive Medicine: Part I

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*"Man shall not live by bread alone, but by every word that proceeds from the mouth of God."*

In both the popular media and professional literature, prevention is the versatile tool for much of what ails us. We are told that prevention will lower medical costs. It will unclog the medical care system of many sick people requiring high-tech treatment. It will save lives. It will help balance the national budget (saving perhaps sixteen dollars for every one spent, if an ounce is truly worth a pound). For Christians who are imbued with the desire to be good stewards of all that we have, including our physical bodies, prevention is a natural choice. Further, for once, it seems that we have some common ground with non-Christians.

This article will critically examine some sacred cows in the preventive medicine pasture, delineating some systematic flaws in our near worship of prevention and offering some alternative formulations for prevention. There will be no attempt to produce a catalog of preventive techniques for various illnesses. Rather, a number of orthodox recommendations for prevention will be examined as examples of the conceptual flaws common among them. Correction will be offered from a Biblical perspective, redeeming some of the current techniques, trashing some, and rediscovering older avenues. The idea of prevention as a good choice will be preserved, but only after a fundamental re-definition.

To view the end of this argument from the beginning, preventive medicine, as it is currently conceived, treats health and disease as though they are best approached by the empirical methods of physical science. Pagans such as Stephen Jay Gould believe that the physical world is all that there is. Christians dispute this belief, asserting that there is a spiritual aspect to mankind, but

we do not usually function very differently from the pagans. An atheist may consistently approach health through bread alone, i.e., through the material aspects of health about which we know some useful things through the study of nutrition, physiology, microbiology, biochemistry, and the like. When, however, Christians in practice limit our approach to health to these matters of empirical data, we deny the functional reality of the spirit of mankind. We are to live by every word that proceeds from the mouth of God. We are to live and be healthy primarily through our comprehension of and obedience to God's revelation. Revelation and empiricism are not equivalent. The foremost equipment of a healthy person is a redeemed spirit and a regenerated mind. Flossed teeth and exercised muscles are decidedly secondary. Revelation comes first. Empiricism comes second and is in service to revelation.

"Health care" today has erroneously grounded itself in empirical data. This error is then compounded as the empirical data is very often inadequate to support the approaches that are sold to the public. Not only are we trying to live by bread alone, much of the bread is of very poor quality.

Prevention is often divided into two or three types. "Primary prevention" is "to prevent the occurrence of disease by modifying exposure to ill health behaviors or risk factors." An example of a primary prevention approach would be altering one's diet in order to avoid the development of colon cancer. "Secondary prevention" seeks "to identify a disease at such an early stage that application of a subsequent intervention" can positively affect the outcome compared to later intervention. An example of an approach to secondary prevention would be the use of a Schiotz tonometer by

primary-care physicians to find glaucoma before it has caused much eye damage. Some people further describe a type of "tertiary prevention" which seeks to limit the damage done by a disease, usually a chronic one, which is already recognized as present. An example of tertiary prevention would be splinting of paralyzed limbs to prevent contractures. This article will address mostly primary and secondary prevention.

Through the years there have been proponents of preventive measures for a large number of disorders, e.g., alcoholism, lead poisoning, hypertension, diabetes mellitus, osteoporosis, cervical cancer, colon cancer, thyroid cancer, syphilis. One pattern that turns up almost uniformly in studying the efficacy of preventive recommendations is, not surprisingly, that the persons who promote a preventive approach are those who have special interests in the target disorder. In addition to medical specialties and subspecialties organized around a particular bodily organ or tissue, there are advocacy groups and societies for many diseases. We have thus Alcoholics Anonymous, the American Social Health Association, the American Diabetic Association, the American Heart Association, the American Cancer Society, the American College of Obstetrics and Gynecology, and many other medical specialty groups. These special interest groups often constitute a major wellspring of the information available to the medical profession and to the public. The information promulgated is often of excellent quality. However, it normally lacks any attempt at perspective.

The organizing principle for these special interest groups is usually the organ systems or disorders themselves; there is rarely an attempt to relate the group effort systematically to any broader or higher purposes. The refinement of focus that is achieved by the special viewpoint is often gained at the expense of losing breadth of view. The disease or organ of interest becomes an end in itself.

Christians, however, cannot properly view *anything* in isolation from our position as God's children and as stewards of His talents, gifts, and commission. Christians comprehend the value of the physical body but may not accord it ultimate value (Matthew 10:17-28; 16:24-26; 1 Timothy 4:8; III John 2; II Corinthians

11:23-27). This is not to say that we cannot join or make use of advocacy groups, societies, or medical specialties; simply, we may not rightly participate in them without fitting our service in them into a Biblical viewpoint. Stewardship of our bodies is a part of our stewardship; it is not the whole. Empirical approaches are part of the answer; they are not the whole. Rare is the special medical interest which will concern itself with the place of the human spirit in prevention, or which will embed the special interest in a Biblical prioritization.

When a method aimed at prevention is promoted by someone, a Christian who acquires knowledge of the method needs to give some thought to the proposal from a Biblical perspective. Not all Christians are called to or capable of a Biblical analysis of what looks usually like rather technical "extrabiblical" matters. Indeed, it seems reasonable that the task is one to be performed by Christians whose vocational calling is close to the matter. It would seem, therefore, that a Christian physician would be one of the logical persons to develop a Biblical perspective for screening for cervical cancer. For obesity, a nutritionist. For diabetes, several specialists, such as endocrinology and nutrition.

The problems in such a development of the mind of Christ within the body of Christ include: (1) Christians have such a secular/sacred dichotomy that we don't even consider that there are connections between such things as Pap smears and the Bible, (2) We are overly influenced by the data provided by empirical (scientific) investigations, and inadequately instructed in theology, so that the former tend to rule, (3) We mistake our good intentions for good methodology, (4) We are co-opted by the lure of money, power, or prestige.

### **Pap Smears**

Our life before God, however, is one piece of cloth. The medical approach to prevention of cervical cancer will illustrate these four problems. Pap smears have long been considered a premier technique to prevent invasion of the body by cancerous or precancerous cells on the uterine cervix. It is a form of secondary prevention. The same medical profession which has promoted Pap smears for 30 years has failed to counsel against fornication at an early age with several partners,

which is a risk factor for later development of this cancer. Sexual purity is a form of primary prevention. Here, clearly, the "bread" of physical data and physical tactics has ruled where the "word proceeding from the mouth of God" on sexual purity has been explicitly pronounced impractical.

While a few physicians may verbally counsel against fornication, the words are often followed by a prescription for birth control pills, tacitly teaching that sexual purity is not really a practical answer. The birth control pill may prevent pregnancy, but the behavior it "protects" exposes the young woman to numerous sexually transmitted diseases (STDs). Even worse, the young woman is implicitly taught that prevention of pregnancy is the major issue, not the state of her spirit. That attitude is basically a theological statement that is opposed to the Bible. (Matthew 10:28; 1 Samuel 16:7) While both body and soul are important, the soul is the greater of the two. The increase in fornication and illegitimate pregnancy that has accelerated since the licensing of "the pill" in the U.S. should instruct Christian physicians of the truth of 11 Corinthians 10:3-4, which says, "For though we walk in the flesh, we do not war according to the flesh. For the weapons of our warfare are not carnal but mighty in God for pulling down strongholds." While the war against disease and poor pregnancy outcomes certainly has a legitimate fleshy component in medicine, it is foolishness to set this physical component in superintendence over our choices.

An unwanted pregnancy has thus become the "evil," while the fornication becomes protected behavior. Nowhere does Scripture regard a baby as an evil or a sin, though the baby may be a *consequence* of a sin. Christian physicians defend the prescription of "the pill" on the grounds of limitation of consequences, such as unintended pregnancies which have a greater chance of producing an abortion or a baby with congenital defects. That attitude incorporates the theological position that we are more accountable for the *consequences* of sin than for the sin. That, too, is unsupportable from Scripture.

As Dr. Lewis Hicks has pointed out, the physician who provides "the pill" for reasons of contraception to the

unwed makes money on both the front end and the back end of that transaction. There is the front end money paid for the contraceptive visit, which virtually always includes the sacrosanct Pap smear. Then there are the repeat visits which will ensue from some of the patients seeking treatment of STDs or infertility that resulted from these diseases. These visits generate more money. Though it is extremely doubtful that many physicians actually calculate the connection between the pill and their pocketbooks, the repeated experience of finding STDs and abnormal Pap smears, followed by the treatments we provide, reinforces to us that we are engaged in something good and valuable.

It is difficult with that kind of reinforcement to question the whole circuit. We are co-opted further when society at large turns to our profession for information and help with the scourge of STDs, low-birth-weight babies, and cervical cancer. Few consider whether our profession may have become a larger part of the problem than we are of the answer. After all, we *mean* well. Beyond the extra income there is also the prestige of being the profession of recourse when a reporter wants to know something about STDs or low-birth-weight babies. Being treated as experts because of our additional knowledge implicitly teaches us that we are, in fact, experts, whether we really have significant additional predictive or treatment prowess or not.

Not only are we inadequately instructed in the theological implications of cervical cancer and its prevention, we are overly impressed with our empirical power over the disease through the use of Pap smears as a technique. As example, according to Swedish investigators

Gustafsson and Adami, Sweden has had a tumor registry for over thirty years to which every malignant lesion, whether discovered by cytology or tissue specimen, must be reported. The registry is said to capture 99% of all the diagnosed malignancies in the nation, basing the data on the population as a whole rather than on the selected groups. Like the United States, the practice in Sweden since the 1950s has been to do Pap smears avidly. The incidence of carcinoma in situ skyrocketed not long after the widespread institution of Pap smears. This is the kind of

finding that tends to dominate our professional literature; it seems to support the usefulness of doing Pap smears. After all, through the use of this technique we found so much "disease" out there.

Interestingly, however, the incidence of *invasive carcinoma* did not change very much. Most curious of all, the *mortality* from carcinoma of the uterine cervix did not change significantly over a thirty-year span. If we are finding all this "disease," and if we have effective treatment for it, as we seem to, why after thirty years have we not had an impact, at least in Sweden? Are there more Swedes engaging in the (mis)behaviors which lead to cervical carcinoma, thus negating the effect of the Pap smears? If this were so, then it could be claimed that the mortality situation would have been worse, and the fact that it is unchanged indicates that the Pap smears have indeed worked. However, the ratios of in situ carcinoma to invasive carcinoma and mortality have remained rather stable for years.

From these data collected in Sweden we find rather that the natural history of carcinoma in situ is different from the alarmist portrayal it is ordinarily given in gynecological literature. The authors of the study calculated that only about 12% of new cases of carcinoma in situ actually progress to invasive cancer if left untreated, much less to death. The commonly accepted model of cervical pathology which assumes that carcinoma in situ never regresses naturally may well be in error. When the medical profession turns from its research to inform the general population about how it should then live in order to be healthy, the most powerful data would be that which reflects the whole population, rather than some fragment of it that ends up under the researchers' scrutiny by some selection process. The Swedish study has a signal advantage in being more nearly population-based. Further, almost without exception, longitudinal data showing trends over years to decades is more powerful in judging outcomes.

Returning to the issue of how Christian physicians tend to let the empirical (scientific) data dictate the recommendation, we may look at the power of Pap smears from another perspective. If we ignore the information from Sweden and take the currently orthodox view that the Pap smear does reduce

morbidity and mortality, we should be interested in *how much* it reduces them. Christians are not free to ground behavior on *any degree of benefit* for life, however small. To do that is implicitly to decide that the preservation of physical life and health is the highest values in God's kingdom. It is not. Further, even if it were, our life is like a "zero-sum game" in which the physical resources under our hand are finite. We must make decisions among several options known to us (Matthew 5:25-26; Luke 14:28-31). Not only that, there are also options that are *not* known to us, as well as effects of our choices that are not going to be accessible to us.

For most patients, Pap smears done infrequently may have nearly as much benefit, if there is indeed any benefit at all, as those done more frequently, though the cost per abnormality discovered is immensely different. For example, David Eddy, writing in the *Annals of Internal Medicine*, August 1990, estimated that the "marginal cost per year of added life expectancy" through screening for cervical cancer is as follows: \$10,000 per year of added life expectancy if smears are done every 4 years, compared to no screening, \$84,528 per year of life expectancy added by going to every 3 year screening, \$262,800 per year of life expectancy added by going to every 2 year screening, and over \$1 million dollars per year of life expectancy added by going to annual screening. The author's conclusion in favor of Pap screening as a bargain at only \$10,000 per year of life saved suffers terminally from his focus upon one disease. The lifetime average risk for a woman to die of cervical cancer is 0.7% (he says). It follows, therefore, that if \$10,000 is reasonable to reduce a risk of 0.7%, other causes of death with equal cost-effective screening and prevention methods should also be done. That would come to about \$1.5 million dollars per person for prevention sufficient to preserve one additional year of life expectancy, and that is calculated off his *lower* figure of \$10,000. In our medical system, it appears that no one is looking at the larger pictures.

### Cholesterol

Having practiced with the Pap smear, let us enter the pasture and examine some other sacred cows of

prevention. Here we find the cholesterol cow, responsible for massive research as well as nutritional and pharmacological interdiction of its supposedly terrible effects on human health. Is it so terrible as to merit all the attention it is getting? An "expert panel" produced its second report on cholesterol in 1993. Everyone knows that elevated cholesterol, especially certain fractions of it, is connected with a higher incidence of heart disease, if not also other vascular diseases. Further, the connection appears to be at least partly causal, since it is rather clear that lowering cholesterol reduces the risk of heart disease. At this point in our orthodoxy, we tend to stop. Perhaps it is one good answer to the question of heart disease. However, have we asked the right question? From the "expert panel's" report we find the following: "An important question is whether cholesterol lowering will also reduce total mortality in primary prevention. Individual clinical trials have not had the size or power to evaluate the issue of total mortality and have not provided a conclusive answer to this question. Neither individual clinical trials nor mesa-analyses of pooled data reveal a reduction in total mortality." Having buried that bomb in the report, the experts blithely proceed for pages describing how we ought to do what they have failed to show ought to be done, recommending among other things, that "serum total cholesterol should be measured in all adults 20 years of age and older at least once every 5 years."

It would seem reasonable that, since lowering cholesterol lowers heart attacks significantly, and since heart disease is considered the number one killer in the U.S. today, that lowering cholesterol should also lower net deaths. Alas! The data are recalcitrant. People just die of other causes in numbers sufficient to offset the cardiac mortality benefits of lowered cholesterol. Hence, the logical conclusion to draw is that lowering cholesterol, in its net effect on population longevity, will only change the *mode* of death, but not the certainty or the timing of death. That there may be quality-of-life benefits of lowering cholesterol that are not captured by mortality data is admitted. That, too, remains to be empirically demonstrated. The "deal" then that the health promoter has to offer patients is that one may, by dint of great effort and, sometimes, expense since the drugs are very expensive, change from dying of a heart attack

to some other cause.

In the matter of expense, the expert panel listed as one of the reasons that we should be interested in lowering cholesterol is "the aggregate cost of CHD in the United States," which they say costs "between \$50 billion and \$100 billion per year for medical treatment and lost wages. Prevention of CHD therefore could greatly reduce this economic toll."<sup>10</sup>

### The Economic Argument for Prevention

Calculations of economic costs of illness and the benefits of prevention are intricate and crammed with independent assumptions and estimates, most of which sound reasonable. If one assigns a generous probability of accuracy to each of these assumptions of, say, 95%, and then calculates the probability that the whole string of assumptions and estimates is accurate, one finds that the probability of the final calculation approaches zero. "It is appointed unto man once to die" (Hebrews 9:27). Even if control of cholesterol did work to improve net health and life expectancy from all causes taken together, the fact that coronary artery heart disease occurs generally toward the end of the productive life span has unfortunate consequences for the prospect of economic benefits. If prevention of CHD worked, it would deliver a larger portion of the population into even older age, where it will be subject to other diseases which have other costs. Defense of prevention of the degenerative diseases that strike near the end of the life span, therefore, is tenuous if argued on economic grounds. It is a paradox of prevention. If it works, you are delivered up from one cause of disease, disability, expense, and death unto other causes of the same. You are delivered up at an older age. You are delivered up at a less productive age. In general, it's cheaper in the U.S. today to die younger.

Few technical medical strategies for prevention are justifiable on economic grounds. Only those methods which: (a) do result in a net decrease of death or disease *and* (b) have their effects well within the productive years of life, *and* (c) are cheaper than doing nothing or doing something else will save money. The death rate is and will remain one apiece. Until the

*eschaton*, everyone will die. The failure of an economic argument is not in itself a destruction of *all* arguments in favor of prevention; it is only a destruction of the economic argument. A perverse fixation of medicine upon diseases tends to encourage hope in the economic argument for prevention, whereas a longitudinal view of a person's life span displays the common course of more and more dependence upon the medical care system, each disease being resisted more or less effectively, until finally one comes along that cannot be resisted, causing death. (See Figure 1.)

Mere rationale should bow before empirical evidence. That it doesn't may have something to do with the way that medicine is driven by an "expertise" which learns more and more about less and less until it comprehends almost everything about almost nothing. The Christian expert needs to retain that Biblical worldview which attempts to capture, albeit very imperfectly, matters from a divine perspective. The non-CHD deaths that occur in patients who had successfully controlled their cholesterol levels may still be felt by the cardiologists who were treating them as a kind of limited success since they did not die of the targeted disorder. That is, perhaps, a specialty success, but it is hardly a human success. One is reminded of the interns in Vienna who unwittingly infected women during delivery, causing lethal "childbed fever." The women, once ill with the infection, were transferred to another area of the hospital, out of the immediate view of the budding obstetricians. Thus the delivery was a "success," but the mother died.

### Prostate Cancer

Moving on in the pasture, we find the prostate cancer cow. This is a milk cow, being milked for millions in income. The public is being told in paid advertisements that there is benefit to their health if they come in for diagnostic testing for this disease. Retired men are being targeted in our area. The public is reminded that the disease is curable if it is caught in time. The public is not informed on whether or not finding and curing the disease actually matters. The invocation of the word "cancer" brings lethality to mind and brings the public in to be milked. Treatment of discovered disease costs from \$8000 to \$18,000, depending on the type of

treatment selected. The real milking machines, however, are not the treatments, but the screening procedures, the digital rectal examination, the prostate specific antigen test, and the transrectal ultrasonogram.

The "disease" is rampant in the population. Men in their 50s have a 10% chance of having microscopic foci of well-differentiated adenocarcinoma in their prostate gland, and the incidence doubles every decade of life, so that by age 80 or so, 70% of men have the "disease." Until recently, only 6% to 8% of men would have their prostate cancer detected in their lifetime, meaning, of course, that there are loads of undiscovered cancers out there to be found. Since the ultrasound and prostate specific antigen blood tests are rather sensitive, especially compared to the old standby digital rectal examination which finds only about 9% of those present, we are now finding huge numbers of new "cancers." "Nearly six times as many radical prostatectomies were performed in 1990 as in 1984, despite a lack of clear evidence that surgery actually saves lives." "Detection of prostate cancer grew by 16% over the previous year (1991), making it the largest increase ever reported for a cancer in a single year. ... These increases in diagnosed cases and in operations stunned cancer specialists because they reflected widespread use of a screening test that was unheard of four years ago. And, they said, the rising number of prostate cancer diagnoses showed no signs of letting up." The number of false positives found by these sensitive investigations is larger than the actual number of cancers, by a factor of two or three to one, depending on the youth of the population screened.

Since there is economic profit in merely looking, medical personnel can make out fairly well and still deliver "good" news to the worried man. Overlooked in this milking procedure is the fact that only one in every 380 men with the "disease" will die from it. An abnormal prostate specific antigen test, for example, occurs about 12% of the time that the test is done. This result then prompts you further into the diagnostic schema for a transrectal ultrasound. The majority of patients whose ultrasound was "positive" may also be actually negative by biopsy, depending again on the selection processes that precede the use of the ultrasound.

The quality of life of men who are treated for the "disease" of prostate cancer is worsened if they are over 70 years of age and undergo invasive treatment for the "disease." Despite these data, the American Cancer Society and the National Cancer Institute recommend that a digital rectal examination of the prostate be done on all men over age forty, annually. Has the focus on the disease of cancer disabled such special interest groups from appreciating the value of a larger scope of vision? Such an explanation appears possible, if not likely. For the Christian, does a disease that kills one man of every 380 want the kind of search-and-destroy mission we are currently able to launch, especially if one considers what else the money may be used for in the name of health or otherwise? Further, does the Christian, in the name of good stewardship of the body, press for discovery of this "disease" when the vast majority of men will neither die from it or become symptomatic from it even if untreated? Rather than good stewardship, is prostate screening being driven by fear and by physicians' desire to feel good because of our good intentions which just happen to coincide with remunerative procedures?

Cancer and heart disease prevention have seemed to illustrate some of the problems with the empirical approaches now dominating in the United States. There are a host of diseases of lesser prominence which suffer similar problems.

### Iron Supplementation in Pregnancy

Routinely, women have been advised to supplement their diets with iron when pregnant. While it appears to be true that women who take iron during pregnancy have a better outcome, it is *not* proven that they have a better outcome because of the iron. It is quite possible that the regular use of iron during pregnancy rather serves as a *marker* for women who, for other reasons, will have better outcomes during pregnancy. Long trouser legs serve as markers for tall stature, but do not bring it about. While iron is cheap, it is sometimes not well tolerated, and in the households of childbearing women is a potential hazard to toddlers, being very toxic. Advocates of prevention tend to focus on the disease of interest to them. A larger view of iron supplementation would subtract from any benefits of

iron, could they be found, the injuries and deaths to toddlers who inadvertently poison themselves when iron is made more ubiquitous in their households.

### Diabetes Mellitus and Secondary Prevention

The ravages of diabetes mellitus have long provoked calls for methods of (secondary) prevention. The long-awaited Diabetes Control and Complication Trial (DCCT) was reported out in 1993 and hailed as a success. Tight control of Type 1 diabetes reduced complications by 60% and "keeping blood-glucose levels as close to normal as possible should now be considered the new standard of care in treating Type-1 and Type

2 diabetics, according to the American Diabetes Association and the principal investigators of the DCCT." (Note, first, the *assumption* that the benefits for Type 1 apply to the far-more prevalent Type 2.) The diabetics were a group *selected* for their motivation to control their disease. They were initially *hospitalized* for instruction in the techniques, which included four or more daily blood-glucose tests, and *three* or more daily insulin injections, or an insulin pump. Further, the insulin doses were adjusted for glucose levels, meal content, and anticipated exercise. In addition to a doctor, the patients had the services of a *behavioralist*, a *dietician*, and a *diabetes nurse-educator*.

Having discovered some things about the *disease*, the experts who hail the DCCT trial provide only lip service to the difficulties of translating such information into practical service. A typical expert statement: "It is incumbent upon [doctors] to provide [intensive treatment] to their patients, either by learning how to do it themselves, or by working in concert with a special intensive treatment team."<sup>22</sup> Notice how the expert in disease glibly assumes that the material pathology of the disease is the main obstacle in control, omitting the spirit of diabetic person-where hourly choices are made about food, exercise, monitoring, and so forth from the equation. Notice how the expert in disease explicitly assumes that medical care is something provided *to* patients, rather than the model of physicians working *with* patients, if indeed the patients are even interested. Notice how the expert implicitly assumes that the major

problem with diabetes is one of knowledge instead of the human will. (Is this a form of scientific gnosticism?) Notice that the expert does not even consider the *cost* of trying to implement such intensive therapies. It is as if one had discovered that there was an element found only on Mars, which, when refined back on Earth from six tons of Martian ore, produces enough medicine to cure a thousand people from lung cancer. Exactly how valuable is such a discovery? Would it become the "standard of care"? Few would agree so, because the difficulties are stated in terms of the material barriers. Why does medicine persist in under-rating the barriers of attitude, of willful misbehavior, of aberrant priorities? It is because of our incorrigible avoidance of spiritual matters.

## Endnotes

1. Rakel, Robert E. ed., *Textbook of Family Medicine*, 4th edition. (Philadelphia: W.B. Saunders, 1990), p. 209.
2. Rakel, op cit., pp. 209-210.
3. As example, Dr. David Levine opines in *Cortlandt Forum* that legally mandated screening of schoolchildren is a defensible idea. In the face of the consensus of the U.S. Preventive Services Task Force against mandated screening, he offers his "feeling" on the matter. He is the Chief of Scoliosis at Cornell University and a past president of the Scoliosis Research Society.
4. The U.S. Department of Commerce has even printed a directory of rare diseases, the 1986 edition of which contained 138 voluntary organizations interested in issues from benign essential blepharospasm to ichthyosis. It is: *Rare Diseases: A Resource Director*, PB86-180262, available through the National Information Center for Orphan Drugs and Rare Diseases, P.O. Box 1133, Washington, D.C., 20013-1133.
5. Hicks, Lewis, M.D., "Ob-Gyn on the Battlefield," *Journal of Biblical Ethics in Medicine* 2 (April 1988), p. 33.
6. Gustafsson, L. & Adami, H.O., "Natural History of Cervical Neoplasia: Consistent Results Obtained by an identification Technique," *British Journal of Cancer* 60 (1989), pp. 132-141.
7. *Ibid.*, p. 135.
8. Summary of the Second Report of the National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel II), *JAMA*, (June 16, 1993), p. 3016.
9. *Ibid.*, p. 3017.
10. *Ibid.*, p. 3023.
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12. Gittes, Ruben, "Carcinoma of the Prostate," *NEJM* 324 (January 24, 1991), p. 236.
13. *Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions*, Report of the U.S. Preventive Services Task Force, Williams & Wilkins: Baltimore, 1989, p. 64.
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18. Fleming, Craig, et al., "A Decision Analysis of Alternative Treatment Strategies for Clinically Localized Prostate Cancer," *JAMA* 269, (May 26, 1993), pp. 2650-2658.
19. *Guide to Clinical Preventive Services*, op tit., p. 65.
20. *Routine Iron Supplementation During Pregnancy, Policy Statement of US Preventive Services Task Force*, *JAMA* 270 (December 15, 1993), pp. 2846-2854.
21. Hurley, Dan, "Diabetics in a Tight Spot," *Medical World News* (July 1993), p. 24.
22. *Ibid.*, p. 27.

**Part 2 will appear in a subsequent issue.**