

*New Journal  
"Current Problems  
in Cardiology"*

*MS & comments  
net 4/23*

April 22, 1976

W. Proctor Harvey, M.D.  
Director, Division of Cardiology  
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3800 Reservoir Road, N.W.  
Washington, D.C. 20007

Dear Friend,

I have prepared a draft of comments on the Kannel article which will get to you shortly. Aside from the comments I will make as a guest and friendly editor, I believe another kind of editorial pencil should be brought to bear on this manuscript. It is a splendid production but could stand considerable shortening, tightening, and elimination of repetition. In particular, the section on estimation of coronary risk (page 29 to 32) is almost entirely redundant to earlier sections.

I must say that I have some reservations about enclosing the entire Framingham-AHA Coronary Risk Factor Handbook. They're widely available from any Heart Association. I think it would be appropriate to include a page or two of it for illustrative and educational purposes, but question the cost-effectiveness of republishing this whole thing. In my own private survey, I've never found anybody using it, and have suggested to the Heart Association that they initiate a survey of its use. In terms of actual or absolute risks it is surely inaccurate. In terms of estimating risk for the purpose of motivating patients, there are more useful ways of doing so, including estimates of coronary risk before reaching retirement age, estimates which may mean more than the 8 year rates involved in Framingham charts. I know that you want to give your authors wide latitude, but you might want to consider suggesting to him that he provide only the source of the coronary risk brochure to interested readers.

I wonder if Dr. Kannel might not be prevailed upon to omit the section on the therapy of hypertension. This is much more adequately and appropriately considered in many other publications and his one page treatment of it on page 67-68, though I happen to agree with most of the pragmatic approaches, is a bit superficial.

There are also numerous typos and misspellings and grammatical errors such as agreement of case, as well as the use of the term "like" rather than "as"

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April 22, 1976

which presumably the copy editor will consider. Anticoagulant is almost routinely misspelled throughout. There are several redundancies and word-for-word repetitions, including para. 2, page 45 and para. 3, page 37. The whole could be vastly sharpened and reduced from 80 to 60 or 70 pages with little or no trouble at all. There are many errors of spelling in the references which should be entirely gone over, and I mention in passing misspelling of Turpeinen and Karvonen in reference 20, possibly Hughes in reference 23, Buskirk in reference 25, reference 26, possibly Schaefer in reference 30, possibly Krueger in reference 33. Reference 10 is incomplete.

I very much enjoyed reading this outstanding article. The figures did not accompany it and I have had my secretary contact your publishers in an effort to obtain them.

Best regards.

Cordially yours,

Henry Blackburn, M.D.

HB:jp

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15 April 1976

figures put  
in mail  
on 4-20-76 -

Reply a page

Henry Blackburn, M.D.  
2108 Oliver Avenue  
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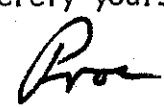
Dear Henry:

Enclosed please find a photocopy of page proof of the first issue of CURRENT PROBLEMS IN CARDIOLOGY. The "finished product" is due to come out about the 21st or 22nd, and Debbie McBride of Year Book will send you a copy. Since you will be working on Bill Kannel's manuscript, I thought it would be helpful for you to see how flexible we can make the format and how we bring in Editors' Comments at appropriate places. You, as Guest Editor, will be encouraged to add comments as you see fit, and the other editors will add few comments since none of us have yours and Bill's knowledge of this problem. I would appreciate having your comments double spaced. Please indicate where the comment should come in. I am hoping to get the completed manuscript with your comments and mine in to Debbie at Year Book by the first part of May.

We all appreciate your efforts and look forward to receiving your "editorializing". Please let me know if you have any questions.

Best personal regards.

Sincerely yours,



W. Proctor Harvey, M.D.  
Professor of Medicine  
Director, Division of Cardiology

WPH:jm

P.S. The enthusiasm for this new journal, as judged by the subscriptions, is quite high.

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1 June 1976

*file to ms. file.*

Henry W. Blackburn, M. D.  
1801 Olive Avenue  
South Minneapolis, Minnesota 55405

Dear Henry:

Just a note to thank you for your efforts as Guest Editor on Bill Kannel's manuscript, "Prevention of Cardiovascular Disease". Your comments were excellent and pertinent, and will greatly add to this issue. You will be hearing from Debbie McBride of the Year Book Publishers concerning some of the details, one of which will be that we would like a photo of you to be used in the journal.

Again, many thanks.

Sincerely yours,

*Pro*

W. Proctor Harvey, M. D.  
Professor of Medicine  
Director, Division of Cardiology

WPH:jm

*Send photo please.*

EDITORIAL COMMENTS ON ARTICLE BY WILLIAM B. KANNEL  
"PREVENTION OF CARDIOVASCULAR DISEASE"  
for Current Problems

Insert #1, page 4: To this powerful statement of Dr. Kannel indicating the necessity for a preventive approach to atherosclerosis and its complications I would add a small but important extension. The question, I believe, is not only to identify within our practices those individuals at elevated risk, according to American standards of risk, but to recognize that in the American culture we are generally at elevated risk. Consequently, the institution of multiple preventive measures in eating, smoking, exercise and other hygienic aspects of behavior may better be thought of as a more or less universal need. If one waits for some preconceived indicated level of "high risk" before instituting a preventive approach, part of the battle is already lost. The author discusses this question later under considerations of public health approaches, professional and personal approaches. However, the attempted early prevention by sound, safe hygienic counsel on weight, blood pressure, serum lipids, smoking, sedentary activity, glucose tolerance and so on, may be simpler and more promising than "corrective preventive measures" instituted later, when "high risk" is established.

Insert #2, page 5: This is an important estimate of the power of simply-measured risk characteristics to estimate and concentrate future cardiovascular events. It should be exploited to the fullest in professional education and in patient motivation. However, the limitations of the risk factor concept are exemplified in these very figures which indicate, for example, that 60% of future coronary disease events will not be touched under a preventive program based on this useful high risk profile. This refers back to our initial editorial point - that there is a universal need for recommendations to prevent as well as reduce the elevation of risk characteristics.

Insert #3, page 6: It is an important concept that minor, usually-considered negligible risk characteristics, "within the normal range" (for this country) are, when several are present, associated with an equivalent risk to that clearly recognized by the profession when one factor is highly elevated. The uncertainty still surrounding the eventual results of preventive efforts is illustrated by the author's appropriate use of the term "timely intervention -- could have major effect...". Some academic purists, as well as some practitioners, adopt the view that no preventive action is indicated unless or until it can be proved that intervention actually reduces risk. I find it a strange paradox in medicine that experimental proof is required before recommending stopping smoking or modest change in eating or exercise habits, while at the same we espouse with enthusiasm less documented pharmaco-therapeutic and surgical procedures. It may be that we tend to require a different and higher level of evidence for treating people by simple, safe, palatable and hygienic modifications in lifestyle, than we do for prescribing our usual pills and invasive diagnostic and surgical procedures.

Insert #4, page 8: This fascinating piece of new information again argues for the important impact of socio-cultural factors over and above such inherent factors as sex and heredity. Obviously, this requires further study to determine what environmental factors may differ in the spouses of coronary victims and how much.

Insert #5, page 9: I share the author's concern about the difficulties in getting Americans cholesterol levels below 200 mg% - using diet alteration and weight loss in individuals. But one should attempt what is reasonably obtained with the given patient. Further reduction in serum lipids by the use of medications, or in the extreme case, by ileal by-pass surgery, should not be advised in practice until much more evidence is in of the benefit-toxicity ratio. The author touches on this later.

Insert #6, page 11: I happen to share the view of the author about the relative prognostic value of triglyceride and cholesterol values and of the rare necessity for more detailed lipid phenotyping. Certainly in mass screening, or as a first stage office screening procedure, serum cholesterol is the most efficient measure. But might not the author's suggestion be just a little academic here: that triglyceride determination is primarily valuable with a cholesterol over 300 mg.%? Triglycerides can clearly be of value in understanding and the management of many cases, irrespective of its independent prognostic significance. Moreover, the HDL-cholesterol relationship to prognosis is not clear, and its availability in clinical laboratories is not yet generalized.

Insert #7, page 11: Personally, I find the term "normal diet" as nebulous and limiting as the term "normal cholesterol". The expression suggests that the usual American diet is some sort of "ideal norm". This tends to minimize what I consider the important public health concept and a main issue in preventive cardiology — mass hyperlipidemia is the real American problem and this, in turn, is largely determined by habitual diet and activity patterns. If elevated plasma lipids are to be considered an "abnormal response" or a "metabolic defect" then this response and this defect are most likely socio-culturally determined and not intrinsic, when it comes to the population at large.

Insert #8, page 12: The author refers here presumably to the populations he has studied in Hawaii and Puerto Rico which are characterized by relatively low blood cholesterol levels and relatively high triglycerides. These most interesting findings require more analysis and understanding. But the conclusion made here should not ignore many other situations throughout the world, particularly in the Mediterranean Basin and the Orient, where low serum cholesterol values are associated with low

triglyceride levels, and these in turn with habitually low fat, high carbohydrate diets (and also low coronary disease incidence).

Insert #9, page 14: Sometimes I feel it may be better to stick with observable facts rather than to speculate about mechanisms; the contribution of atherosclerosis to peripheral arterial resistance is at best a dubious concept.

Insert #10, page 15: A 10% decrement in blood pressure or in serum cholesterol level may seem a trivial goal to the physician dealing with an individual high risk patient. But consider the potential impact of an average lowering of blood pressure in high risk Americans, across the board, on reducing disability and premature death. Some computations suggest that a 30% decrement in amount of cigarettes smoked, and a 10% decrement in blood pressure and serum cholesterol level, might over a period of years in a large population of higher risk middle aged individuals, result in as much as a 50% reduction in death rate from coronary disease.

Insert #11, page 15: Many others have also found similar sharper relationships of systolic blood pressure to disease than diastolic. It is still an open question, however, how much this is due to measurement precision, and to correlation of systolic with the diastolic level, or on the other hand, how much the systolic pressure itself might be "causally" involved. At any rate, criteria for treatment of hypertension are so widely and totally based on diastolic criteria that this finding about the systolic pressure is not likely to, and probably should not, displace customary criteria for blood pressure management.

Insert #12, page 16: This concept is the embodiment of the multifactor concept and makes great good sense. In practical terms it means that the urgency of stopping smoking is even greater in an individual with elevated cholesterol and/or blood



pressure, or that the need for effective control of blood pressure is more compelling in those with elevated serum lipids, etc. Consequently the degree of therapeutic effort to be made, the risk of the therapy itself, and the level of risk characteristic at which active intervention is begun - should all be influenced by the presence of multiple characteristics, including a positive family history.

Insert #13, page 18: This is valuable information on the prognostic importance of diabetes, alone and in conjunction with other risk characteristics. However, it might suggest that more vigorous intervention is required to control blood glucose levels for the attempted prevention of subsequent atherosclerotic complications. But as everyone knows, that question is not settled: i.e., whether precise control of glycemia with oral hypoglycemic agents or exogenous insulin prevents vascular complications of adult diabetes. It would clearly imply, however, that vigorous hygienic measures, including weight control and exercise, changes in fat content of diet, smoking habits and so forth, might be particularly appropriate among those having impaired glucose tolerance.

Insert #14, page 18: It would be misleading to infer that our Minnesota findings that body mass does not improve the prediction of coronary disease, over and above that of other risk characteristics, imply that obesity is healthy. The Minnesota group would not deny that modification of overweight might have a salubrious effect on the individual and the public health. Cultural change in the population distribution of obesity might very much influence coronary mortality, as well as overall survival and longevity. But in general populations of the Seven Countries Study the contribution of obesity and overweight to risk of infarction and coronary death was weak.

Insert #15, page 20: However, the message is clear. Obesity clearly doesn't appear to be beneficial; reduction of weight has a significant impact on other risk characteristics; it is not possible to have a healthy self-image in the presence of obesity; a positive self-image is essential to the hygienic living pattern and therefore prevention and reduction of overweight are important for the prevention of cardiovascular diseases.

Insert #16, page 21: I happen to share the author's view on this matter of behavior pattern. However, we must be consistent. When a risk characteristic is demonstrated to have independent predictive importance, it is not essential, or necessarily good medicine, to wait for definite experimental proof (which may not be feasible) 1) that behavior can be changed effectively, and 2) that this changed behavior will reduce the actual risk. Rather, it is as much a part of good preventive practice to counsel patients to modify stupidly aggressive, hostile and time-urgent behavior as it is to modify other patterns of life which seem to bode harm. Such behavior undoubtedly also contributes to overeating and smoking and drinking, so that effective intervention on other risk attributes will require consideration of behavior pattern.

Insert #17, page 22: I'm not sure that the author's speculation here about the mechanisms of hypercholesterolemia is widely held, or that it is necessary to his general view. Certainly, the implied central role of dietary cholesterol is unlikely to be responsible for mass hypercholesterolemia. The author later indicates that several experimentally derived prediction equations have related changes in dietary cholesterol and fatty acid composition of the diet to observed changes in serum cholesterol. They indeed established that the principal contributor to hyper-

cholesterolemia in the population at large is the absolute and relative amount of saturated fats (the most ubiquitous of which is palmitic acid fat). Moreover, the contributory role of very early and prolonged exposure in the masses of people to high saturated fat diets is unknown, but is possibly a very important determinant of mass hypercholesterolemia.

Insert #18, page 22: The author should be careful here to specify that the relationship is "elusive" only in questionnaire diet measurements among free-living affluent general populations characterized by homogenously high saturated fat diets and high serum lipid levels. Elsewhere clear diet-lipid relationships have been found.

Insert #19, page 23: A series of negative or inconclusive results from lipid-lowering clinical trials has produced a cynicism among some in the profession about the importance of cholesterol-lowering diet. I consider this probably a serious misconception. For example, what grounds have we scientifically to expect at all that intervention on one risk factor, a presumably longterm acting mechanism, at older ages, at relatively advanced stages of atherosclerotic disease, could have a strong impact on the coronary death rate? Most such trials in high risk or in clearly diseased populations give us little reason to expect that a short-term intervention, on serum lipids alone, a mechanism related to remote and initiating pathogenetic influences for atherosclerosis, will produce prompt results on mortality from sudden death. Recently reported studies among relatively low risk Minnesota mental hospital populations suffer from the converse problem; the number of CHD events achievable in a reasonable period of observation is so low that such studies have inadequate power to demonstrate any real effect of diet.

Insert #20, page 24: The author makes no suggestion here about regulation of salt intake. The practitioner could, however, act effectively in this regard in several ways. In borderline hypertensives<sup>in</sup> which he does not want to start life-time medication hastily, moderate salt restriction and use of salt substitutes along with weight reduction are appropriate attempts at preventive therapy. Advice to mothers and wives concerning salted baby food and the salting of foods in their preparation, along with the avoidance of the main highly salted foods, is all very appropriate, and especially so in families having a history of hypertension, particularly Blacks. Finally, as in the case of the habitual American diet excess of fat and sugar, there is no physiological advantage for the great excess of salt in the American diet. Salting is a socio-cultural attribute which we can help modify by steady, consistent and level-headed advice to patients, i.e., to avoid frequent eating of highly salted foods and to avoid adding salt at the table.

Insert #21, page 24: On the contrary, there is a vast amount of information about the general relationship of habitual physical activity to the risk of coronary disease. The author is correct in that there is inadequate information based on experimental change in the state of physical conditioning. The feasibility of recruiting, staffing, operating and analyzing a primary prevention study of effects of progressive physical conditioning on atherosclerotic diseases has been repeatedly examined and found impractical. Extrapolations may have to be made from the effects of conditioning in cardiovascular rehabilitation; hopefully this subject will soon be studied in a definitive way.

Insert #22, page 26: The author may miss here an opportunity he has often seized elsewhere to suggest that diminished physical activity of work has been one of the major cultural changes in man in the past century. Actually, there is evidence that

as a peoples we are eating far fewer rather than more calories now than we did in the early part of this century. Habitual calorie consumption is a good reflection of the habitual activity pattern of a culture. Though in my opinion a definitive experiment will not be done in our time to effect change in activity and measure coronary disease incidence, the general importance of exercise in the control of weight and other coronary risk characteristics could be emphasized here. Recommendations for labor-using rather than labor-saving techniques are needed. Involvement of large muscles in walking or cycling or swimming is considered desirable. The precautions and proscriptions made here by the author relating to jogging, running and heavier physical exertion in middle-age are quite appropriate.

Insert #23, page 35: This editor concurs with the views of the author that the most effective long-range approach to sudden coronary death is primary prevention of atherosclerosis. However, there is an increasing ability to identify vulnerable populations both before and after overt coronary manifestations appear. Systematic preventive efforts in each stage of cardiovascular risk and disease are indicated. No one is entirely sure where intervention would be the most "cost-effective." It has been demonstrated in Gothenburg, Sweden, that sudden death rates in post-infarction patients randomly assigned at the time of the acute episode, may be significantly attenuated by 1) stopping smoking and 2) beta adrenergic blockade. The reduction of short term mortality observed was on the order of 50% which suggests that further investigations during this early convalescent period would be fruitful.

Insert #24, page 47: Unexpected results such as these inverse relationships to claudication sometimes lead to useful clues about disease mechanisms. More often, however, they are explained by sources of bias in the data and by variability in

the measurement. Here, for example, the method of measurement for habitual physical activity in Framingham, as well as elsewhere, are notoriously imprecise. We have observed that the proportion of angina to infarct cases among the total of coronary events is higher in physically active populations, which may relate to the demonstration here that active people are more likely to complain of intermittent claudication. This could mean that activity has little or nothing to do with the underlying process but has a very great deal to do with whether and when the ischemic manifestations are evoked.

Insert #25, page 47: It is quite remarkable that adequately controlled studies have not been made on surgical vs. medical management of intermittent claudication and many other manifestations and degrees of peripheral vascular disease.

Insert #26, page 53: The author has very helpfully trichotomized the strategies of prevention into 1) public health, 2) personal hygiene, and 3) preventive medicine approaches. Such classifications serve to clarify where are the main thrusts of the preventive attack. But if the preventive practicing physician has also a broad public health awareness, and understands the necessity for public health measures, to that extent will his preventive effectiveness in individual practice be enhanced. To the extent that the physician practices hygienic measures himself in his personal life, to that extent will his private preventive practice be emulated. To the extent that the physician extends the practice of prevention to all professional and personal contacts, and speaks out in a straightforward manner concerning the advantages of a balanced hygienic life, rather than limiting his practice to the ill or even the highly vulnerable candidates, to that extent will his impact in the community be the greater.

Insert #27, page 54: Where the practicing physician supports public health or is a public health proponent or activist and inspires others to be involved,

there is likely to be the most exciting experience in prevention. The North Karelia study in eastern Finland is a unique example. After years of hearing that their part of the world had the highest rate in the world of fatty artery disease, and complications, the leaders, both medical and political, requested the aid of their government, heart association and the World Health Organization to establish a huge natural prevention experiment to try to reverse the trend of ischemic cardiovascular diseases. The medical profession in Finland actively supports this effort and participates in special high risk clinics and hypertension clinics. Allied health personnel such as public health nurses are actively involved in screening and follow-up of hypertensives. Community organizations such as the women's home economics organization, "Martha", are actively involved in working with housewives to change eating patterns. Public health officials are active in the province-wide antismoking campaign and screening. They and the medical leaders have persuaded the local dairy and meat industries to provide alternative choices of reduced fat products, where never before were low fat dairy products and meats available. The whole community is working together toward the public health. The three preventive approaches of the author are there melded into one highly effective program--changing health behavior and risk status significantly.

Insert #28, page 54: Everything is difficult if one does not try it, and then, try again with innovative approaches where old ones fail. Evidence from national preventive trials such as MRFIT, HDFP and LRC indicates that there is a large body of high risk people quite prepared, within a framework of an active hygienic campaign, to change their living habits promptly and significantly. Suppose this were only 15 to 25% of the population so "ready". Such a success rate in this proportion of the general population would be far in excess of the success rate obtained in many other conventional treatment procedures that we physicians rely upon daily in the treatment of cancer and vascular disease. On a broader

community base, it has also been demonstrated to everyone's interest by the Stanford Three Community Project that masses of the public can be induced to change living patterns through a well-directed, well-integrated and persistent campaign of health education.

Insert #29, page 55: The author certainly speaks here for the majority of practitioners. But I like to consider the analogy with the dentist who, until a very few years ago, was not spending a great deal of time in preventive dentistry or dental hygiene. We now find the public willing to pay and invest time in several hours of dental hygiene annually, quite outside diagnostic and restorative dental care. In addition, I have observed many innovative medical approaches to preventive practice in suburban clinics and in urban medical centers which indicate that once the American physician grasps the need, he can usually find ways to make a preventive program attractive, saleable and even economically viable. Moreover, I believe that we are slowly and surely producing a new breed of physician among the young, and a new species of converts among the older, who recognize, for example, that 80%+ of lung cancer is self-induced--along with many heart attacks and strokes. An increasing number of physicians is thus becoming willing and interested to set up routines in their office and see to it that they or their office staff develop skills to help people in a preventive approach.

Insert #30, page 56: Future controlled trials and carefully evaluated preventive programs are essential to progress in preventive medicine and in traditional therapeutic medicine. They provide the firm therapeutic rationale. But this future promise does not prevent any of us from practicing reasonable preventive medicine now, based on the best evidence available today. Evidence about hygienic living is much stronger than that for the use of many pharmaco-therapeutic and surgical procedures physicians recommend daily. The firm scientific



studies of populations, both observational and experimental, have enhanced the prestige of epidemiological research and the awareness of the potential for prevention. There is a place now for preventive medicine in the stream, if not the mainstream, of modern medical training and practice.

Insert #31, page 57: I would agree that a pharmacologic or "pill" solution to the mass cardiovascular disease problems seems improbable, first because it is a mass problem and mass pill-taking is not really a public health solution for anything, and second, because the main chronic diseases are of multiple origin and they begin with childhood habits and influences.

Insert #32, page 58: Only a handful of pediatricians have spoken up about the challenge, the opportunity and the necessity of a preventive approach in childhood toward chronic disabling adult diseases. Whereas prevention in immunology, orthopedics, orthodontics and many other fields is well built into pediatric practice, the prevention of obesity, hypertension, smoking and hyperlipidemia are hardly touched upon. Indeed, the highest pediatric academic circles caution against any mass intervention in the habitual eating pattern of children, as if the American children's experiment in eating were a successful one!

Insert #33, page 61: Suggestions that surgery (or pharmacological approaches) are appropriate to the control of mass coronary disease (one hears such from an occasional megalomaniac source) are impractical both ethically and economically. Consider also the economic burden to this country now of coronary by-pass surgery in which surgeons are indicating that a "proper" community surgical rate may be on the order of 2,000 by-pass procedures per million population, at an average cost to society of \$10,000 per operation! This indicates the bizarre distortion of reality that can occur in a technological society.

Insert #34, page 62: Certain objective reports suggest that the operative mortality of by-pass surgery is not as low as is reported, due to exclusions of various subgroups from the data. Moreover the operative morbidity and disability of two to three months is not to be neglected. Extension of operative indications to individuals with asymptomatic ischemic manifestations (outside of a research design) may be one of the greatest threats to coronary patients and to the medical economy on the current scene. Vested interests, as suggested by the author, might include our training of vast numbers of cardiologists and surgeons to do these coronary procedures (physicians after all like to do what they know how to do), added to by the insistence of accreditation agencies on a minimum number of coronary procedures per year; to this is added the profit motive and the investment in large facilities and staffs; all produce a formidable industry to which the authors term "vested interest" is entirely appropriate.

Insert #35, page 64: On the other hand, there is a real need for thoughtful estimates of the impact of any major reduction of strokes and coronary death; that is, the impact on the economy of prolonging productive life and delaying hospitalization and death, and the impact on hospital utilization in terms of competitive morbidity and mortality. In other words, what diseases, at what cost, are likely to replace those which may effectively be controlled in the next decades?

Insert #36, page 65: However, the efficacy of treating mild to moderate hypertension among high risk patients is under active and extensive investigation, in trials throughout this nation and Europe. Another five years should tell the story.

Insert #37, page 67: It is anticipated that FDA restrictions on the use of propranolol in hypertension may be removed by the time the author's statement is published. For the moment, this is not approved therapy in this country, though propranolol is the first to be administered in most hypertensives on the Continent.

Insert #38, page 74: But, in fact, the paradox has been explained earlier by the author in that it is impossible to study effectively relationships between diet, serum lipids and coronary risk where 1) the measurement tools are highly imprecise for individual characterization, where 2) within-individual variability equals or exceeds between-individual variability, thereby nullifying correlations, where 3) populations have relatively homogenous high fat diets, and where 4) the diet as measured at one time may have little relevance to a lifetime diet and atherogenic process. I would interpret the finding of poor correlations within high fat, affluent cultures as weak design and methods rather than a weak hypothesis. The diet-heart theory is confirmed by correlations made between cultures where there is a wide range of diet intake, of lipid values and of coronary disease incidence, and where the measurement tools are rendered more precise.

Insert #39, page 74: 20% of calories as saturated fats as suggested here by the author is equivalent to the higher values found among industrial and other cultures that have been measured. The reduction in saturated fat consumption should probably be nearer to 10 percent or less of daily calories, if the "ideal" is to match existing "natural experiments" in populations where lipid levels are low and coronary disease is infrequent. It is quite possible to have a highly varied, palatable habitual diet with saturated fat calories at 10% or less. Obviously the author means here, the partial substitution of polyunsaturated oils for saturated fat, because there is no reason, I believe, for us to vastly increase the habitual polyunsaturate intake. The American Heart Association prudent diet

matches natural diets in many parts of the world where there are low serum lipids. It is 10%-10%-10% saturated, monounsaturated and polyunsaturated fatty acids in terms of daily proportionate calories.

Insert #40, page 78: Maybe the author overemphasizes the "dieting" and "deprivation" idea here of weight reduction, when the major cultural determinant of excess weight in our society is physical inactivity, both of occupation and of leisure. I believe that the hope for largescale correction of obesity, or for the prevention of obesity, requires an emphasis on regular physical activity. In fact, there is some evidence that systematic physical activity in the form of walking 30 minutes or more daily, with ad lib eating, results in the longterm reduction and control of obesity.

Insert #41, page 79: The author omits giving advice on how to persuade people to stop smoking and seems to suggest that educational material be provided about the importance of smoking. A mass of evidence suggests that giving such information alone to patients achieves less than optimal results. There should probably be a smoking-oriented visit to the office with the physician or one of his aides establishing the individual's smoking pattern and smoking need, discussing the commitment to stopping smoking and setting a quit date, discussing how to prevent weight gain on stopping smoking, and presenting various hints to modify the environment and the behavior of smoking. A systematic, determined approach is needed, to which the physician lends his authority, not with fanaticism but with firm advice, understanding and strong positive support.