with other methods of control, such as regular skin testing and compliance with chemoprophylaxis.  

Certainly one cannot advocate a mass BCG vaccination program in the United States, but one can argue that, until a better vaccine is developed, for certain high-risk groups BCG vaccination not only should be considered, but effectively implemented.

Returning to the recommendations of BCG vaccination in children, there seems to be at this time no indication for a universal BCG vaccination program in the United States. There are, however, probably an increasing number of social, economic, and ethnic subgroups in which the children fulfill the conditions of these recommendations, namely, those who are continuously exposed to untreated or ineffectively treated persons or to contacts with isoniazid- and rifampin-resistant organisms, as well as groups of children in whom the rate of new infections exceeds 1 percent per year. Careful and aggressive identification of these children and BCG vaccination of the still uninjected would contribute to an effective tuberculosis control program. Tuberculosis in children in the United States has increased 39 percent between 1987 and 1990, while in the past 8 years a number of investigations in other countries have shown BCG vaccination to be effective to varying degrees, but in all cases to have success rates greater than 60 percent. In Sweden, where BCG vaccination has been credited with the success of the tuberculosis control program, the infection rate had fallen sufficiently by 1975 to allow universal routine BCG vaccination to be replaced by selective vaccination of groups at risk. Such a selective vaccination policy may also be considered for the United States.

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Progress in the Control of Hypertension

The National High Blood Pressure Education Program (NHBPEP) is celebrating its 20th anniversary. Since its inception, there has been a remarkable reduction in the death rate from stroke and from coronary artery disease, but some discrepancies related to race and gender continue, which are of national concern. In addition, there has been a failure to impact the incidence of end-stage renal disease due to diabetes and hypertension.

As part of the National Health and Nutrition Examination Survey carried out during the 1990 census, 50 million persons (26 percent of the population) were...
found to have hypertension (blood pressure greater than 140 mm Hg systolic and/or greater than 90 mm Hg diastolic), and an additional 30 million were found to have high normal blood pressure. Control rates doubled in 10 years: 21 percent of hypertensive patients had their blood pressure reduced to less than 140/90 mm Hg, 55 percent, to less than 160/95 mm Hg. Among those patients receiving pharmacologic therapy, 43 percent had their blood pressure reduced to less than 140/90 mm Hg; 75 percent to less than 160/95 mm Hg. The goal of the NHBPEP is to further reduce the death rate from stroke and cardiovascular diseases and to turn around the incidence of end-stage renal disease with higher control rates of hypertension.

The Fifth Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure, published in January 1993, has major recommendations aimed at reducing morbidity and mortality from hypertension and associated disorders. A new classification schema now includes systolic as well as diastolic levels, and the classification describes stages of hypertension rather than using terms such as "mild hypertension," which sound too complacent. High normal blood pressure is now diagnosed at 130 to 139 mm Hg systolic and/or 85 to 89 mm Hg diastolic. Higher levels of blood pressure are classified from stage 1 through stage 4. The highest level of systolic or diastolic pressure is used for staging. In addition, it is strongly recommended that the manifestations of target organ damage be determined and recorded. Other risk factors should also be recorded. Examples of classifications might be "170/85, stage 2, isolated systolic hypertension" and "142/94, stage 1 with target organ damage (left ventricular hypertrophy) and diabetes."

Life-style changes are strongly emphasized for those with high normal blood pressure as well as with uncomplicated stage 1 disease; such changes include weight reduction, increased physical activity, and moderation of dietary sodium and alcohol intake. These modifications also assist in blood pressure control when pharmacologic therapy is necessary. Smoking cessation is important for general cardiovascular risk reduction.

The blood pressure goals should be to aim for less than 140 mm Hg systolic and less than 90 mm Hg diastolic and even to press down toward 130/85 mm Hg with due regard for cardiovascular and renal function, particularly in older persons. The modifiable cardiovascular risk factors should be controlled. A systolic pressure of 140 to 160 mm Hg is a reasonable goal in patients with isolated systolic hypertension.

"Step-care" has been replaced by a treatment algorithm. If there is an inadequate response to lifestyle modifications, it is recommended that pharmacologic therapy be added. Initial selection should be made between the diuretic and beta-blocker classes of antihypertensive drugs because a reduction in morbidity and mortality has been demonstrated for these classes. Other choices for monotherapy (angiotensin-converting enzyme [ACE] inhibitors, calcium antagonists, α1-receptor blockers, and alpha-beta blockers) have not been tested, nor have they been shown to reduce morbidity and mortality. If there is an inadequate response, then the choices to consider are increasing the drug dose, substituting another drug, and adding a second agent. The second or third agent should be a diuretic, if one has not already been prescribed.

There are special considerations in choosing these drugs, which include demographic features (eg, blacks generally do better with diuretics); concurrent disease (eg, coronary disease is best treated with beta-blockers and calcium-channel blockers; left ventricular failure, with ACE inhibitors); side effects and quality-of-life issues; dyslipidemia and diabetes (which can be aggravated by diuretics and beta-blockers); and benign prostatic hypertrophy (which can be helped by 6 blockers). Costs in the broadest sense need to be considered; this includes the cost of the medication, the need for serial biochemical testing, and time lost from work for titration visits. Direct vasodilators and adrenergic neuron depleters are not suitable for monotherapy, but could be used as additional agents.

The document provides detailed guidelines on drug selection, actions, side effects, interactions, indications and contraindications, emergency treatment, and resistant hypertension, and discusses adherence and community programs. Also provided are details of dealing with complications of hypertensive cardiovascular disorders, such as renal failure, coronary artery disease, left ventricular failure, stroke, and diabetes. New to this report are women's issues such as hypertension and pregnancy, birth control pills, and estrogen replacement therapy; hypertension secondary to cyclosporine, erythropoietin, and street drugs; and lithotripsy.

A companion position paper, a working group report on primary prevention of hypertension from the NHBPEP accompanies this report. This document discusses primary prevention from a population-based approach as well as from a targeted-population approach. The data with regard to the life-style changes recommended above are evaluated in detail. Data on stress management and supplementation with potassium, fish oil, calcium, magnesium, macronutrient alterations, and fiber are discussed. The difficulty of making these life-style changes in a population is recognized, and physicians are encouraged to use health-care providers such as nutritionists, health educators, and nurses to foster these changes in individuals and the community at large.
Members of the College will be receiving copies of these two documents and are encouraged to use them in their practice to continue the effort to control hypertension in the nation.

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The Lung Health Study
Baseline Characteristics of Randomized Participants

This issue of Chest contains an article (see page 1963) reporting the characteristics of the Lung Health Study (LHS) participants at the start of the study. A clinical trial generates many publications in addition to the primary article describing the outcome of the study. Most of these articles focus on specific aspects of the study and its results for in-depth analysis. These are published in literature appropriate to the topic, be it clinical, epidemiologic, physiologic, or behavioral. Descriptive reports, such as those relating to the study design, recruitment methods, and characteristics of the study participants, are often hard to place in a mainstream journal because it is often argued that they contain no "new" information and, therefore, do not extend our understanding in a specific area.

We would argue that these descriptive articles are very important and deserve a place in high-quality journals, which are read by the segment of the scientific community for which a particular clinical trial has the greatest relevance. Our reason for this is accessibility: individual articles usually describe a study and its participants very briefly, giving emphasis to the specific aspects of the study addressed. Ready access to a fuller description of a study and its participants is often helpful for the reader who wants or needs more detail.

We would argue, therefore, that an article that describes the characteristics of a study population at baseline has an important place in the sequence of publications. Although we would wish it otherwise, participants in clinical trials are often not representative of the base population from which they are recruited. The biases that are an inevitable consequence of recruitment strategies, the often stringent inclusion and exclusion criteria, and the sometimes arduous expectations of a study may limit the ability to generalize the results. Some of these biases may be obvious at the time of the study; some might not be apparent until long after the study is finished.

A description of the characteristics of the LHS participants at baseline does not help clarify any of the mysteries surrounding the natural history or treatment of COPD. It does, however, provide a snapshot of the study participants at entry and describes what may (or may not) be important differences among the centers in these baseline characteristics. It is the function of subsequent articles to delve into some of the tantalizing questions that the profile of the LHS participants raises, such as why the prevalence of bronchial hyperresponsiveness is so high in this volunteer population.

We appreciate the willingness of Chest to endorse this philosophy by publishing our article. As with any worthwhile clinical trial, the LHS is likely to raise many more questions than it can possibly answer. In trying to answer each question, we believe that we will often have occasion to return to the important question of exactly who were the nearly 6,000 participants who volunteered for and were randomized into the study.

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Don't Drown the "Down Lung"

Several lines of evidence suggest that the remaining lung after contralateral pneumonectomy is prone to develop pulmonary edema.1,2 This edema following pneumonectomy has been termed postpneumonectomy pulmonary edema (PPE) and is characterized by normal cardiac filling pressures, high pulmonary arterial pressures, and a high cardiac output.3

There are a number of physiologic perturbations that occur during and following pneumonectomy that make the remaining lung vulnerable to lung injury. Surgical trauma2 and lateral decubitus position4 during the intraoperative period initiate the lung injury. In the lateral decubitus position, the distance between the heart and the most dependent area of the lung would be greater than in the supine position, leading to increase in intracapillary hydrostatic pressure in the gravity-dependent areas. Thus, diffusion into the interstitium of the most dependent lung is inevitable.4

Following pneumonectomy, there is augmented...