

# Hypertension

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## **Hypertension--where do we go from here?**

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## Hypertension — Where Do We Go from Here?

**M**AY is National Hypertension Month and therefore a most appropriate time to ask a few critical questions concerning the status of research and treatment directed at this most pervasive disease of acculturated humans. Two interesting documents that have become available this month provide considerable material for reflection. "Health, United States, 1984," a publication of the U.S. Department of Health and Human Services,<sup>1</sup> presents remarkable data on changes in cardiovascular morbidity and mortality since 1970. Life expectancy of Americans has increased by 3.8 years since 1970, reaching a new high of nearly 75 years. More importantly, since 1970 there has been a greater improvement in longevity than in the 20 years prior to 1970, during which time life span increased by 2.7 years. Life expectancy increased dramatically during the first half of this century, but this was almost entirely accounted for by a reduction in infant and childhood mortality. The physician treating the adult patient could take no credit for this improvement, with most of the accolades appropriately distributed among sanitarians, public health workers, and pediatricians. Food and water could finally be delivered free of infectious agents, and mandatory immunization programs controlled the deadly plagues of childhood.

Now, for the first time, most of the increase in life expectancy between 1970 and 1983 can be shown to be caused by a decrease in mortality among the middle-aged and elderly. Age-adjusted death rates have declined by 26% for heart disease and 48% for stroke, a change of unprecedented magnitude! The Framingham study<sup>2</sup> has taught us that the primary risk factors for cardiovascular disease are smoking, hyperlipidemia, and hypertension. It is probable that favorable changes in each of these risk factors are at least in part responsible for the latest increase in life expectancy.

In 1965, more than half of all men over 20 years old were smokers. By 1983, this number had decreased to 35%.<sup>1</sup> Decreases in smoking among women are less dramatic but still notable, although there is a worrying increase in cigarette consumption among young women. A marked reduction in Americans' intake of cholesterol and saturated and unsaturated fatty acids is also evident.<sup>3</sup> What about hypertension control? In this issue, we have reproduced the Final Report of the Subcommittee on Definition and Prevalence of the 1984 Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure.<sup>4</sup> Sifting through these very carefully gathered data, we find that:

- 58 million Americans are estimated to be at increased risk of morbidity and premature mortality associated with high blood pressure. Almost one person in three (29.8%) has hypertension.
- The percent of hypertensive persons aware of their condition (at a threshold of 140/90 mm Hg) is 54%.
- The percent of hypertensive persons taking antihypertensive medication is 33%.
- The percent of hypertensive persons under control is only 11%, though this rather low figure pertains only if the threshold is set at 140/90 mm Hg. If individuals with blood pressures greater than 160/90 mm Hg are considered, control rates rise to 34.2%.
- The percent of hypertensive persons whose blood pressure is under control increases with age until 54 years and then seems to level off. Control rates range from as low as 2.2% for persons aged 18 to 24 years to 14.0% for those aged 55 to 64 years. The control rate for women is much greater than that for men (16.7% vs 6.1%).

While some of these data are encouraging because sceptics may have doubted that an impact of this significance could be made on both hypertension awareness and treatment in a free-living population, it is sobering to realize that only a small fraction of those who might benefit from treatment has been reached. The observation that women are more likely than men to be treated successfully indicates that gender-sensitive techniques in public education must be devised. Particularly serious is the very small fraction of hypertensive children who are treated. Early treatment of the young may well provide the greatest opportunity for affecting the natural history of

hypertension. This may best be accomplished by a concerted effort to educate physicians involved in the treatment of children.

How does hypertension control relate in importance to the control of the other risk factors? The information presently available does not allow us to rate the importance of modifying each risk factor. An informed guess would certainly point to the contributions of modifying all three.

The further development of control strategy will be very different for each risk factor. Effecting further reduction of smoking is a matter for public education and legislation. For all but the frankly hyperlipidemic individuals, a very small proportion of the population at risk, public education in dietary choice is the only reasonable method available for control of cholesterol levels. Hypertension, on the other hand, requires the physician's direct intervention and a program of lifelong pharmacotherapy in most instances. It is hard to imagine that 58 million Americans will compliantly take daily medication for the rest of their lives once the diagnosis of hypertension has been made. Even the most benign of agents will ultimately be ignored or discarded by many, despite continued reinforcement. The most significant challenge to the investigator lies not in finding a better antihypertensive agent, nor in devising better methods for ensuring compliance, but in establishing the causes and then the definitive cure of essential hypertension.

Essential hypertension is peculiar in that, contrary to most other diseases, the treatment of its principal symptom, high blood pressure, is generally sufficient to avert the debilitating or fatal consequences of the disease. Because this treatment presently requires lifelong pharmacotherapy, its universal application is impractical. The responsibility to pursue and define the etiology of the disease lies with the investigators who contribute to the pages of this journal. It is they who will ultimately effect the eradication of essential hypertension.

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