The 1984 JNC report on hypertension

The 1984 report of the Joint National Committee (JNC) on Detection, Evaluation, and Treatment of High Blood Pressure was published in the May issue of *Archives of Internal Medicine.*[1] This is the third Joint National Committee report (JNC III). The first was published in 1977[2] and the second in 1980.[3]

The purpose of these Committee reports is to provide physicians and other health care providers who take care of hypertensive patients with state-of-the-art information dealing with detecting, evaluating, and treating patients with hypertension.

The Coordinating Committee of the National High Blood Pressure Education Program of the National Heart, Lung and Blood Institute selects the members of the Joint National Committee and approves their reports. JNC I was chaired by Dr. Marvin Moser of White Plains, New York; JNC II was chaired by Dr. Iqbal Krishan of the Mayo Clinic; and JNC III was chaired by Dr. Harriet Dustan, formerly of The Cleveland Clinic Foundation and now Director of the Cardiovascular Research and Training Program at the University of Alabama. There were 17 members of JNC III, including 14 physicians, two nurses, and one health educator. Dr. Michel Ibrahim of the University of North Carolina was the chairman of the Subcommittee on Definitions and Epidemiology; Dr. Edward Frohlich, formerly of The Cleveland Clinic Foundation and now Director of Research and Education at the Ochsner Clinic in New Orleans, was chairman of the Subcommittee on Nonpharmacologic Therapy. It was my privilege to serve as chairman of the Subcommittee on Pharmacologic Therapy.

Important changes, additions, and new information published in the 1984 report that were not in the 1980 report include:

1. *High normal blood pressure* was defined as diastolic blood pressure of 85 to 89 mm Hg. It was recommended that persons with this level of blood pressure have measurements taken at least once a year instead of every two years as recommended for persons whose diastolic blood pressure is less than 85 mm Hg.

2. The section on *nonpharmacologic therapy* was expanded, and in addition to dietary restriction of sodium, weight control, and behavioral modification—all of which were discussed in the 1980 report—the roles of alcohol, exercise, dietary fat, calcium, potassium, and magnesium were discussed. There was a consensus that nonpharmacologic therapy, especially restriction of dietary sodium to 2 g (or the equivalent of 5 g of sodium chloride) daily and weight control should be prescribed as adjunctive therapy for every hypertensive patient, and that for some patients with mild hypertension, these measures may eliminate the need for antihypertensive drugs.

3. *Pharmacologic therapy for mild hypertension* (diastolic blood pressure of 95 to 104 mm Hg) was a source of major controversy during deliberations of the JNC III. There was agreement that patients with diastolic blood pressure ≥100 mm Hg should receive drug treatment in addition to nonpharmacologic treatment, whether or not they have target organ involvement or other major risk factors for cardiovascular disease (family history, cigarette smoking, black race, hypercholesterolemia, diabetes). Patients who have diastolic blood pressures of 90 to 99 mm Hg with evidence of target organ disease or who have other major risk factors should also receive antihypertensive drugs in addition to hygienic (nonpharmacologic) measures. Patients who have diastolic blood pressure of 95 to 99 mm Hg without target organ disease or other major risk factors should have a three- to six-month trial of nonpharmacologic treatment initially, and if this fails

to reduce blood pressure to less than 90 mm Hg, drugs should be prescribed. Most Committee members believed that the Hypertension Detection and Follow-Up Program (HDFP) study[4] supported the efficacy of pharmacotherapy for patients with diastolic blood pressures of 90 to 94 mm Hg without evidence of target organ damage or other major risk factors after a trial of nonpharmacologic therapy failed to control blood pressure. However, others would not prescribe drugs for this comparatively low risk group. Yet all agreed that this group should be kept under equally close surveillance when antihypertensive drug therapy is not prescribed as when it is.

4. *Stepped care approach* to the management of hypertension continued to receive support from JNC III. It was recognized, however, that for some groups (young patients with evidence of hyperkinetic circulation and patients with angina pectoris or previous myocardial infarction), beta blocking agents are preferable to diuretics in step one. Other adrenergic inhibiting agents may be useful in step one for selected patients.

5. In deference to the findings of the Multiple Risk Factor Intervention Trial (MRFIT),[5] there was more discussion about *side effects of diuretics* in JNC III than in JNC II, especially with regard to hypokalemia and the effects of diuretics on plasma lipids. A more cautious approach to diuretic-induced hypokalemia was recommended.

6. The recommended *dosage range for diuretics* was substantially reduced in the 1984 report compared to previous reports.

7. *Fifteen new antihypertensive drugs* that were either marketed since the 1980 report or will be marketed soon were included in the 1984 report. These include new beta blocking agents; labetalol (a new alpha and beta blocking agent); calcium slow-channel blocking agents; the converting enzyme inhibitors, captopril and enalapril; guanabenz; and guanadrel.

8. *Special groups.* In addition to updates of the sections on hypertension in the elderly, coronary artery disease, cerebrovascular disease, renal impairment, and isolated systolic hypertension—all of which appeared in the 1980 report—there are new sections dealing with hypertensive emergencies and urgencies, primary prevention of hypertension, black patients, diabetic patients, hypertension in the young, and management of hypertension preoperatively and postoperatively and during pregnancy.

The 1984 JNC report was also published in the *Journal of the American Osteopathic Association* in May[6] and will be distributed by the National High Blood Pressure Education Program, 120/80 National Institutes of Health, Bethesda MD 20205.

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