

# New European guidelines for the management of arterial hypertension: an American perspective

**Norman M. Kaplan**

University of Texas Southwestern Medical Center, Hypertension Division, Dallas, Texas, USA

A number of differences exist between the US guidelines (JNC-7) published in 2003 [1] and the new European guidelines [2]. Most of the differences reflect the inclusion of many advances in both the pathophysiology and management of hypertension that have occurred between 2003 and 2007. By nature, the European guidelines are more up-to-date.

I will focus on what is likely the major difference: the concept of prehypertension introduced in the 2003 JNC-7 covering blood pressures from 120–139/80–89, whereas the 2007 European guidelines continue to use “Normal = 120–129/80–84; High Normal = 130–139/85–89.”

These reasons why the European guidelines do not use “prehypertension” are provided. First, the evidence from the Framingham study showed that the likelihood of developing hypertension or having a cardiovascular event “was definitely higher in subjects with high normal (130–139/85–89) than in subjects with normal BP (120–129/80–84) and therefore there is little reason to join the two groups together.” Second, the term “prehypertension” may cause anxiety to patients and lead to unnecessary medical expenses. Third, the entire 120–129/80–89 population includes some in no need of intervention and some with a very high risk profile that requires therapy.

## My personal view

The European guideline separation of “prehypertension” into two groups seems appropriate but the terms used to classify them seem inappropriate. “Normal” is not 120–129/80–84 and “High-Normal” is not 130–139/85–89. If the European guidelines used “High Normal” for 120–129/80–84 and “Prehypertension” for 130–139/85–89, then the major objectives to the JNC-7 grouping would be met and those with the higher blood pressures would, hopefully, be more motivated to follow lifestyle modifications and to monitor their pressures more closely over time.

### Correspondence to:

Norman M. Kaplan, MD, University of Texas Southwestern Medical Center, Hypertension Division, Astron Bldg., 5303 Harry Hines Blvd. 8th Floor, Suite 400, Dallas, Texas, USA, phone: 214-645-2800, fax: 214-645-9611, e-mail: norman.kaplan@utsouthwestern.edu

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Remember that the motive behind the term “prehypertension” was to motivate both patients and practitioners to pay more attention to levels of pressure that were not optimal but still below the level mandating drug therapy.

In the US and I am sure in Poland, as well, it is very difficult to get patients to change unhealthy lifestyles. If labeling them with a more threatening name would motivate them to quit smoking, lose weight, exercise more, and consume less sodium, the label would be worthwhile, even if it raised their level of anxiety. Maybe a little anxiety over their current health status is necessary to get otherwise asymptomatic people to change lifestyle.

## Should prehypertensives be given drug therapy

My answer is “no.” Non-drug therapies may prevent progression of BP to overt hypertension and the occurrence of cardiovascular events. But to give another large group of asymptomatic people with a low risk-profile antihypertensive drugs is not now appropriate in view of the limited evidence that doing so will stop the progression of their blood pressure.

Two trials of active drug therapy in prehypertensive people have now been published. The first was the Trial of Preventing Hypertension [3]. In this four year trial, 806 patients with systolic blood pressures of 130 to 139 mmHg and/or diastolic pressures of 85 to 89 mmHg were randomly assigned to two years of therapy with either placebo or candesartan (16 mg/day). After two years, patients continued therapy with placebo for another two years.

At two years, the systolic and diastolic pressures were, not surprisingly significantly lower with candesartan therapy compared to placebo. However, within nine months of cessation of candesartan therapy, the pressures rose to values similar to those in the placebo group. The same findings had been noted in the much larger Medical Research Council trial of stage 1 hypertension, which demonstrated that after five to six years of active therapy with a thiazide diuretic or beta blocker, cessation of therapy resulted in a rise in blood pressure that, within six months, was not distinguishable from the placebo group that had not been treated from trial onset [4]. In contrast, patients continued on active therapy maintained the fall in blood pressure.

In the second published prevention trial, similar findings were noted in a double-blind study of normotensive patients at

increased risk of familial hypertension who were treated with an angiotensin receptor blocker for one year and observed off ARB for two more years [5]. At the end of the drug-free period, no persistent effect on blood pressure was seen.

Until there is evidence that active drug therapy will prevent progression of prehypertension into overt hypertension, we should more intensively use non-drug therapy and carefully observe these subjects. Only when their blood pressure persistently remains above 140/90, measured preferably by home self-readings, should active drug therapy be considered.

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