

Extract from:

Guidelines for management of hypertension: report of the fourth working party of the British Hypertension Society, 2004—BHS IV

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Hypertension in the young

There is little evidence to guide management of patients in ‘younger patients with hypertension’, that is, younger than the lowest age used in the Framingham-based risk calculator, namely 32 years. In those with stage 1 hypertension, that is, 140–159/90–99mmHg, even up to the age of 49 years (the minimum age assigned by the risk tables in Figure 2), it is almost impossible for a non-smoker to achieve an absolute CVD risk $\geq 20\%/10$ years, unless diabetic or markedly hyperlipidaemic (total cholesterol: HDL ratio ≥ 4.7). Precisely, because of this low absolute level of CVD risk, these patients will never be included within, or contribute many events to an outcome trial. Importantly, although these patients have a low absolute risk, they have a high risk of strokes and CHD relative to their peers.⁸² Moreover, Framingham data show a steep rise in SBP and DBP over 10 years in 30-year old people within the top quartile of BP, and it can therefore be surmised that a young patient who is already hypertensive will, if left untreated, become more treatment resistant later in life. Although the hypertension in younger people may appear too mild to treat, it is not benign and it is worth reflecting on the fact that the underlying diathesis is sufficiently severe to have declared itself so young.

The profile of hypertension is also different in younger people. Diastolic hypertension is more common than it is in older people, and appears to be just as strong as a predictor of future cardiovascular events as SBP in this younger age group. With regard to SBP, when it is elevated in younger people, it heralds the onset of ISH with ageing, suggesting that large artery stiffening may be a consequence of untreated systolic hypertension in the young.²⁰⁸ It is emphasised that, although treatment of stage 1 hypertension in younger people is often delayed because of their low absolute CVD risk over 10 years, it cannot be assumed that subtle and progressive vascular damage occurring in the untreated younger hypertensive patient is necessarily reversible.

One solution might be to calculate the lifetime, rather than 10-year, risks for younger patients. However, such actuarial tables, incorporating other risk factors, are not readily available. We therefore draw attention to the need to be circumspect about applying the thresholds in Figure 1 to treatment decisions in younger patients—particularly those in their early 30s or younger, who will be exposed to more than a decade of increasing BP before their BP or absolute CVD risk reaches the recommended treatment thresholds for people with stage 1 hypertension. Given the lack of evidence from outcome trials at this younger age, and the unlikelihood that it will ever emerge, it is reasonable to reach a decision jointly with the patient, balancing the inconvenience and cost of treatment with their attitude to the potential benefits of treatment. Unlike their older counterparts, the younger patient can legitimately balance long-term risks against inconvenience of early treatment initiation. Whatever decision is reached, it is important that these patients are not lost to follow-up.

It is also important to note that secondary causes of hypertension are more common in younger people presenting with hypertension. For these reasons, referral for more specialised evaluation should be considered (see Table 3). Secondary hypertension should, in particular, be suspected if patients do not respond to the initial treatment recommendations for younger patients according to the AB/CD rule (Figure 3).

NB. *The AB/CD rule has been superseded by the BHS/NICE guideline of 2006 based on new evidence:*
http://www.bhsoc.org/NICE_BHS_Guidelines.stm

Please refer to the full guideline for figures and tables:
http://www.bhsoc.org/Latest_BHS_management_Guidelines.stm

References

- 82 Lewington S et al. Prospective Studies Collaboration. Age-specific relevance of usual blood pressure to vascular mortality: a meta-analysis of individual data for one million adults in 61 prospective studies. *Lancet* 2002; 360: 1903–1913.
- 208 Franklin SS et al. Hemodynamic patterns of age-related changes in blood pressure: The Framingham Heart Study. *Circulation* 1997; 96: 308–315.