



# Achieving optimal control of blood pressure

## Why is this important?

High blood pressure, or hypertension, is a major risk factor for stroke, coronary heart disease, heart failure and kidney failure. The higher the blood pressure, the higher the risk of disease [1,2].

It is estimated that around 3.7 million Australians aged over 25 have hypertension [3], and in most cases there is no identifiable cause. For this reason, all adults should have their blood pressure assessed regularly by their general practitioner.

## Best available evidence

Blood pressure is the pressure that blood exerts on the walls of the arteries as it is pumped by the heart around the body. It is written as systolic over diastolic pressure (for example, 120/80 mmHg). Blood pressure is inherently variable. Therefore, the diagnosis of

Risk group	Recommended target
Adults aged 65 years or over (unless there is diabetes and/or renal insufficiency and/or proteinuria greater than or equal to 0.25 g/day)	Less than 140/90
Adults younger than 65 years and/or Adults with diabetes and/or Adults with renal insufficiency and/or Adults with proteinuria between 0.25 and 1.0 g/day	Less than 130/85
Adults with proteinuria greater than 1 g/day (in people with and without diabetes)	Less than 125/75

Source: Heart Foundation, Hypertension Management Guide for Doctors, 2004

hypertension is not made until resting blood pressure is shown to be consistently elevated on several separate occasions [4].

According to the National Heart Foundation of Australia, hypertension is present if the systolic

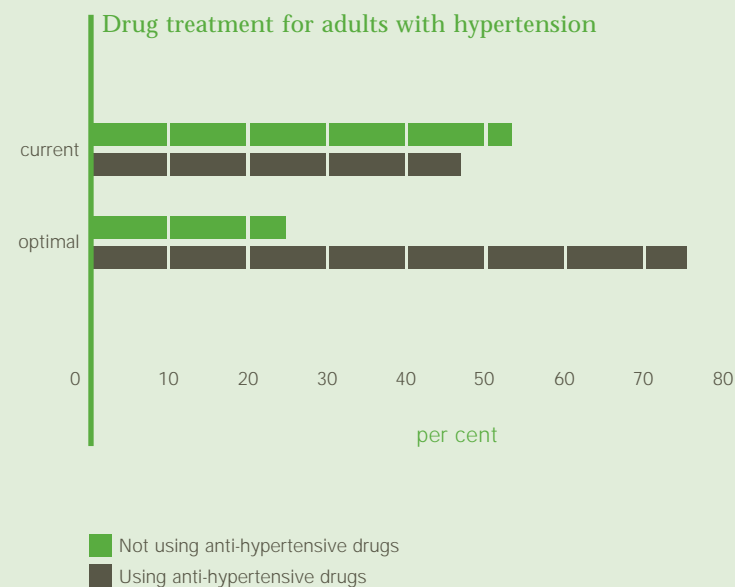
pressure is greater than, or equal to, 140 mmHg and/or the diastolic pressure is greater than, or equal to, 90 mmHg [4]. Treatment targets, however, depend on the patient's age, presence of diabetes, renal insufficiency and level of proteinuria (see table above).

More than six out of ten people who are taking anti-hypertensives have blood pressure readings above the normal range. And more than half of those who are not currently taking anti-hypertensives could reduce their absolute risk of cardiovascular disease by doing so.

There is good evidence that reducing blood pressure decreases the risk of cardiovascular disease [5], but the decision on whether to prescribe anti-hypertensives should be influenced by an assessment of the patient's likelihood of developing cardiovascular disease in, say, the next ten years. This 'absolute' risk is determined by the presence and magnitude of other risk factors such as age, gender, smoking, dyslipidaemia, kidney impairment, diabetes and physical inactivity [4].

### Current practice

A national survey conducted in 1999–2000 found that the prevalence of hypertension in the adult Australian population was around 29 per cent [5]. Just under half of those with hypertension were taking anti-hypertensives. Of those who were not taking anti-hypertensives, more than half (54 per cent) had a high absolute risk of cardiovascular disease [5]. Based on current guidelines, this group would benefit from anti-hypertensive medication.



Source: Briganti et al (2003)

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Not all patients receiving anti-hypertensive medication achieve optimal blood pressure targets. Indeed, in the national survey cited above [5], over 60 per cent of those taking anti-hypertensives had readings above the normal range: 36 per cent in the mild range (140–159/90–99mmHg), 18 per cent in the moderate range (160–179/100–109mmHg) and 7 per cent in the severe range (greater than, or equal to, 180/110mmHg).

### Implications

- It is estimated that in Australia there are over three and a half million people with hypertension [3]. Among them, those with diabetes, renal insufficiency and proteinuria are at particular risk from the damage that high blood pressure can cause various organs, particularly the heart and kidneys [4].
- Most people diagnosed with hypertension who are not on medication have had their blood pressure measured by a general practitioner some time in the preceding twelve months [5]. The decision to prescribe anti-hypertensive medication is a serious one. Once initiated, it is likely that the medication will be required for the rest of the patient's life. It appears that in exercising such caution, many patients are either not being prescribed, or are not taking, medication that is necessary to get their blood pressure under proper control.
- Greater emphasis needs to be placed on absolute cardiovascular risk. This absolute risk should be driving treatment decisions and priorities for patients being assessed for cholesterol and blood-pressure-lowering treatment and for treatment of other cardiovascular risk factors [6].
- Hypertension is the most common individual problem managed in general practice [7]. However, at least a third of patients on anti-hypertensive medication have blood pressures above the target range [5]. Each patient's medication regimen needs to be reviewed periodically to ensure that the desired outcome is achieved.



- There is considerable scope for lifestyle modification, given that two-thirds of those patients with untreated hypertension have at least one modifiable lifestyle factor present, such as smoking, excessive alcohol intake or physical inactivity [5].

## References

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- 4 Heart Foundation (2003) Hypertension management guide for doctors 2004. National Heart Foundation of Australia. Available at: [http://www.heartfoundation.com.au/downloads/hypertension\\_management\\_guide\\_2004.pdf](http://www.heartfoundation.com.au/downloads/hypertension_management_guide_2004.pdf). Accessed 21 March, 2005
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