



## Looking back

In this ongoing series, we look back at the key messages and practice points from selected articles in BPJ 60 (April, 2014).

We have added some suggested discussion questions for peer groups, or for personal review.

As this is a new feature of Best Practice Journal, we would be very interested in getting feedback from our readers as to whether this is useful. Please email your comments to: [editor@bpac.org.nz](mailto:editor@bpac.org.nz)

Tear off along perforation

## The ankle-brachial pressure index: An under-used tool in primary care?

The ankle-brachial pressure index is a calculation of the ratio of the patient's systolic blood pressure at their ankle to the systolic pressure in their arm.

### An ABPI measurement can be used for:

1. Patients with signs and symptoms of peripheral artery disease.
2. Targeted testing of asymptomatic patients at increased risk of peripheral artery disease. Based on international guidelines, ABPI is particularly recommended in the following patient groups:
  - All people aged between 50 and 69 years who smoke or have diabetes
  - All people from age 70 years, regardless of other risk-factors
  - All people with a Framingham risk score > 10%
3. To exclude peripheral artery disease before applying compression bandaging or compression hosiery in patients with venous disease or ulceration
4. To exclude peripheral artery disease in patients undergoing treatment that may result in vascular complications, e.g. patients undergoing leg or foot surgery

N.B. ABPI testing is not necessary in patients with a pedal pulse that is easily felt on palpitation, as this effectively excludes peripheral artery disease.

**To calculate ABPI:** divide the patient's ankle systolic pressure detected (with Doppler) at the posterior tibial artery by their brachial pressure to get a ratio.

- An ABPI between 1.0 – 1.4 is sufficient to exclude peripheral artery disease in most patients.
- An ABPI of < 0.9 indicates significant occlusion in the arteries supplying the lower extremities and is diagnostic for peripheral artery disease. The lower the patient's ABPI, the more severe the disease, with an ABPI < 0.4 indicating critical limb ischaemia.
- An ABPI > 1.4 is clinically inconclusive; consider referring the patient to a vascular laboratory.
- Compression hosiery is considered safe in patients with an ABPI > 0.8.

Criteria that indicate increased urgency of referral to a vascular surgeon include:

- An ABPI < 0.5
- Known peripheral artery disease in patients presenting with a new ulcer or area of necrotic tissue
- An ulcer that is not responding to treatment
- Intermittent claudication when walking for less than 200 m

The treatment of peripheral artery disease focuses on:

1. Improving quality of life in symptomatic patients
2. Reducing overall cardiovascular risk, which may have a small disease-modifying effect on peripheral artery disease

All patients with an ABPI < 0.9 have peripheral artery disease and are clinically assumed to have a 5-year cardiovascular risk > 20%. Management of cardiovascular risk factors should be intensive. The modifiable and non-modifiable risk factors for peripheral artery disease are the same as those for other forms of cardiovascular disease.

Lifestyle advice is the first-line treatment for peripheral artery disease, i.e. smoking cessation, regular exercise, weight loss, healthy diet. Walking, in particular, is beneficial for patients with leg pain and intermittent claudication.

There is no specific **pharmacological treatment** for peripheral artery disease, but pharmacological reduction of cardiovascular risk is recommended, as appropriate, for all patients, e.g. antiplatelet treatment, statins, anti-hypertensives, anti-diabetic medicines.

### Peer group discussion points

1. Does your practice routinely perform ABPI measurements, and if not what are the barriers to doing so?
2. In your opinion, would targeted testing of people at increased risk of peripheral artery disease be likely to result in improved management of cardiovascular risk?
3. If your practice had a Doppler device for performing ABPI measurements, would this enable you to manage patients with venous leg ulcers more effectively and therefore reduce the number of patients referred to vascular specialists?
4. Are you likely to consider using ABPI after reading the article? If yes, what do you see are the advantages? If no, what do you see are the disadvantages?