MacLeod Diabetes & Endocrine Centre
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Blood pressure in diabetes

This is a brief summary of the local formulary and NICE CG87, plus local input. In August 2011, NICE published CG127 which contains some radical recommendations, and at time of writing, is under review.

Blood pressure target

- Usual target is <140/80 mmHg. But <130/80 mmHg if eye, kidney or cerebrovascular disease.
- Do not lower below 110/60 – particularly if heart disease (diastolic perfusion may fall).
- In elderly patients, due to increased risk of falls and syncope, usual target is <150/90 mmHg.

Measuring blood pressure

- We suggest using the average of at least three clinic measurements.
- Provide a relaxed environment with the patient seated, and the arm supported.
- Use the appropriate cuff size.
- Use a manual device if the pulse is irregular.
- Measure BP in both arms, and use the higher reading if the difference is >20 mmHg.
- If symptoms of postural hypotension, measure erect BP after at least 1 minute standing.
- Ambulatory or home BP monitoring is helpful if BP is labile or a "white coat" effect is suspected.

Home measurements

- Measure twice, 1 min apart, both in the morning and evening (4 measurements per day).
- Perform on at least 4 days (ideally 7).
- Discard first day, and use the average of the remaining measurements.
- Recommended monitors: http://www.bhsoc.org/bp_monitors/automatic.stm

Non-pharmacological intervention

- Weight reduction, physical activity at least 30 minutes most days, alcohol moderation
- Diet rich in fruit, vegetables, and low-fat dairy produce.
- Dietary sodium restriction <6g salt per day (2.4 g sodium or 100 mmol).

Pharmacological intervention

Starting/stopping ACEI & ARB

- Do not start if K>5.0 mmol/L
- Stop if K>6.0 mmol/L
- Re-measure renal bloods 2/52 after starting or dose increase
- Stop if creatinine rise >30% or eGFR fall >25%
- You can try again if there was another cause for decline

Other considerations

- Titrate every 6/52 until target achieved
- Patients may require 4 or more drugs to achieve targets
- Consider causes of secondary hypertension if 3 drugs and BP>160/90

Step 1	Most **A**	Afro-Carib **C**	**Comments**
Step 2	**A + C**		
Step 3	**D**		Furosemide if eGFR<30
Step 4	Further diuretic: - higher dose thiazide - or spironolactone if eGFR>45 and K<4.5		Or ACEI+ARB combo if: - urine prot:creat >100 - 24-hour urine prot >1g.
	And/or α-blocker		
	And/or β-blocker		Prefer bisoprolol or nebivolol
Key	**A –** ACE inhibitor or low cost ARB; **C –** calcium channel blocker; **D –** diuretic, usually thiazide		
Drug order may depend on medical history – e.g. β-blockers earlier if heart disease, diuretics if heart failure or oedema.			