

Evidence for Treatment Target of <130/80 mmHg in Patients with Diabetes

Question A: At what SBP should pharmacotherapy be started in people with diabetes?

- The CDA recommends treatment be initiated at a BP of $\geq 130/80$ mmHg.
 - This is a Grade D (**consensus**) recommendation.
- No studies compared the effect of starting therapy in patients with SBP of 130 to 139 mmHg vs patients with SBP > 140 mmHg.
- Thus there is uncertainty about starting therapy at SBP 130 to 139 mmHg vs ≥ 140 mmHg in patients with diabetes.

Question B: What should the SBP treatment target be in people with diabetes?

- The CHEP and CDA guidelines recommend $< 130/80$ as BP target.
- ACCORD BP randomized patients with diabetes to SBP targets < 120 mmHg vs < 140 mmHg.
 - There was **no** statistically significant **difference** between the 2 target groups in the **primary** outcome of non-fatal MI, non-fatal stroke, or cardiovascular death.
 - There was benefit in the **secondary** outcome of **stroke** though the absolute benefit was small.
- It may be difficult to reach a SBP of < 130 mmHg without excessive lowering of DBP (≤ 70 mmHg) which may lead to increased cardiovascular events particularly in the elderly and people with diabetes or coronary heart disease.

Monitoring CKD in Patients with Diabetes: Relevance to BP Targets

- Do annual random urine albumin to creatinine ratio (ACR).
 - You may have to write this request on the lab requisition.
- If ACR < 2 mg/mmol in men or < 2.8 mg/mmol in women, result indicates no kidney damage, repeat in one year.
 - There is no need for prescribing an ACEI or ARB unless the patient has hypertension.
 - BP threshold and target uncertain but based on ACCORD BP may be $< 140/90$ rather than $< 130/80$.
- If ACR ≥ 2 mg/mmol in men or 2.8 mg/mmol in women, result indicates presence of kidney damage.
 - If there are indicators of **overt** nephropathy, there is no need to repeat the test. The patient has kidney damage. Indicators of overt nephropathy include
 - Positive urine dipstick for protein
 - ACR levels above 20.0 mg/mmol for males and 28.0 mg/mmol for females
 - Urine albumin level > 300 mg/day
 - If there are **no** indicators of overt nephropathy repeat ACR twice at 1 to 8 week intervals.
 - If 2 of the 3 tests are positive, the patient has kidney damage.
 - Start ACEI or ARB regardless of BP to delay progression of CKD (Grade A)
 - **BP target** is SBP < 130 mmHg (Grade C); DBP < 80 (Grade B)