

Hypertension Management in Diabetes

Cardiovascular disease is the major cause of morbidity and mortality in people with diabetes.

Hypertension is associated with an increased risk of many complications of diabetes, including cardiovascular disease, and the findings from the UKPDS trial indicate that any reduction in a person's average blood pressure reduces the risk of complications (from type 2 diabetes).

Recommended Blood Pressure Targets	less than (mmHg)
No microvascular complications	140 / 80
Microvascular complications (Proteinuria, Retinopathy, Microalbuminuria)	130 / 80

General Comments on Hypertension Management in Type 2 Diabetes

- The UKPDS trial showed clear benefit of lowering blood pressure to 142/84 mmHg in middle-aged patients with type 2 diabetes and hypertension
- To achieve this approximately one third of patients required one anti-hypertensive agent, one third needed two and one third needed three or more agents
- A target of 140/80 or less may be difficult, impossible or unnecessary to achieve in certain patients (eg the elderly). **Individual targets should be established for each patient**
- Systolic hypertension is common in diabetes and the recommended targets may be difficult to attain. Aim to lower the systolic pressure by 20mmHg in the first instance and then review.
- Aim to minimise ALL vascular risk factors, especially in patients with established end-organ damage.
- Offer lifestyle management advice re smoking, weight loss, physical activity etc

How to measure blood pressure

British Hypertension Society recommendations;

- Patient should be seated and relaxed for 5 minutes with the arm supported.
- Ensure no tight clothing constricts the arm
- The rubber bladder should encircle between three quarters and the whole arm.
- The cuff must be level with the heart.
- The alternative adult cuff (12.5 – 13.0 x 35) is recommended for use in all adults
- For arm circumference over 42cm large bladders may be required.

Cuff sizes	Width (cm)	Length (cm)	arm arc (cm)
Normal	12.0 – 13.0	23	up to 33
Alternative adult	12.5 – 13.0	35	up to 42

Blood pressure measurements should be taken on a minimum of three separate occasions and averaged

Electronic monitors should only be used if there is published evidence of accuracy. If used upper arm automated machines are preferable and all machines should be appropriately calibrated. More information available at the [British Hypertension Society](#) website.