

## **Managing High Blood Pressure in People with Type 2 Diabetes**

### **A Simple Guide for Patients**

- Introduction

Diabetic patients should be aware of their blood pressure levels since 75% of diabetic patients can develop hypertension (an increase in blood pressure levels). Both diabetes and hypertension can lead to heart diseases and can affect the kidneys, so management of both either by lifestyle modifications or drugs is important for a better quality of life.

Type 2 diabetes – where the body can not use insulin efficiently - can cause the following: (1) heart dysfunction, (2) increase in insulin levels, (3) kidney problems, and (4) increased blood pressure levels, so controlling diabetes and the increased blood pressure can prevent bad events occurrence.

- Treatment options

Scientists found different treatment options based on the stage of disease as the following:

- (1) In the case of a diabetic patient whose blood pressure is less than 140/90 mmHg, scientists found that lifestyle modifications only are recommended; exercise for 30 minutes at least for 5 days/ week, quit smoking and alcohol, limit food salt to < 5 g/day, eat more vegetables and fruits, focus on food rich with potassium like nuts, seeds and legumes, and avocado, and reduce high caloric food and this will lead to decreased blood pressure levels to the intended target ( < 130/80 mmHg).
- (2) In diabetic patients with higher blood pressure levels ( more than 140/90 mmHg) or in case of patients in which life modification was not effective, scientists found that lifestyle modifications only are not enough, patients should start taking drug treatment while maintaining the lifestyle modification targeting blood pressure levels 120-130 /70-79.
- (3) In case the drugs are not effective, doctors will adjust the dose or use different combinations of types of medicines for healthy blood pressure levels.

- Types of Medicines

Regarding the medications used, there are different categories of drugs that could be used:

1. Angiotensin-converting enzyme inhibitors (ACE inhibitors), like Atacand, are a family of medications targeting a specific substance in the body that can narrow the blood vessel and block its action leading to increased blood pressure levels -since when the blood vessels are narrow, blood pressure go up.
2. Angiotensin 2 receptor blockers (ARBs), like Tareg drug, are a type of medication that can stop a chemical in the body from narrowing the blood vessels leading to relaxed veins and arteries decreasing blood pressure levels.
3. Calcium channel blockers (CCBs), like bisocard, can prevent calcium from entering the heart cells, since increased calcium in it will make the heart squeeze stronger increasing the blood pressure levels.
4. Diuretics, like Lasix, are called “ water pills” since it is a category of medications that increase the water removal from the body through urine, since water increases the fluid amount in the body leading to vessel tightness and increased blood pressure levels.

Doctors can use just one category of those medications, or can use a combination of different categories, this is based on the condition of the disease and the patient's general health.

- Conclusion

Being committed to the medications schedule, regular follow-up with the doctor, lifestyle modifications and regular check-ups for the blood pressure level can save you from unachieved

blood pressure goals and additional treatment schedules and most importantly save you from the heart and kidney problems associated with diabetes and hypertension.

Reference research paper:

<https://doi.org/10.37349/eemd.2025.101422>