



Role of a Physician in Treating Hypertension

A physician plays a crucial role in diagnosing, managing, and preventing complications of hypertension. Since hypertension is often asymptomatic, early detection and effective management are key to reducing the risk of cardiovascular diseases, stroke, and kidney failure.

1. Early Detection & Diagnosis

✓ Accurate Blood Pressure Measurement

- Ensure proper technique (correct cuff size, patient position, multiple readings).
- Use ambulatory BP monitoring (ABPM) or home BP monitoring (HBPM) if needed.

✓ Confirming Hypertension

- Diagnose hypertension only after multiple BP readings on different days.
- Rule out white coat hypertension and masked hypertension.

✓ Identifying Secondary Hypertension (If Suspected)

- Consider causes like renal artery stenosis, endocrine disorders (pheochromocytoma, hyperaldosteronism), thyroid disorders, or medication-induced hypertension.
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2. Risk Assessment & Patient Evaluation

✓ Assess Cardiovascular Risk Factors:

- Age, family history, smoking, obesity, diabetes, kidney disease, lipid profile.

✓ Baseline Investigations:

- Blood tests: Lipid profile, fasting glucose, HbA1c, kidney function (eGFR, creatinine), electrolytes.
- Urine tests: Proteinuria (signs of hypertensive nephropathy).
- ECG: To detect left ventricular hypertrophy (LVH), arrhythmias, ischemic heart disease.

✓ Target Organ Damage Assessment:

- Kidneys (serum creatinine, eGFR, albuminuria).
- Heart (ECG, echocardiogram for LVH).
- Eyes (fundoscopy for hypertensive retinopathy).



3. Creating a Treatment Plan

✓ Deciding Treatment Based on BP Category

- BP 130–139/80–89 mmHg (Stage 1 Hypertension): Lifestyle modification first; medications if high risk.
- BP \geq 140/90 mmHg (Stage 2 Hypertension): Start antihypertensive medications + lifestyle changes.
- BP \geq 180/110 mmHg: Urgent treatment to prevent hypertensive crisis.

✓ Individualized Drug Therapy

- First-line medications:
 - ACE inhibitors (e.g., Lisinopril, Ramipril) or ARBs (Losartan, Telmisartan) – preferred in diabetes, CKD.
 - Calcium channel blockers (Amlodipine, Nifedipine) – useful in elderly, black patients.
 - Diuretics (Thiazides like Chlorthalidone) – first-line for salt-sensitive hypertension.
 - Beta-blockers (Metoprolol, Carvedilol) – for heart failure, post-MI patients.

✓ Combination Therapy for Resistant Hypertension

- If BP remains high despite 2 drugs, consider adding a third drug (diuretic, CCB, or aldosterone antagonist like Spironolactone).

✓ Lifestyle Modification Counseling

- Salt restriction (<5g/day), DASH diet, regular exercise, weight loss, smoking cessation.

4. Patient Education & Long-Term Monitoring

✓ Explain the Importance of Treatment Adherence

- Educate patients on the lifelong nature of hypertension management.
- Address medication concerns (side effects, affordability).

✓ Encourage Home BP Monitoring

- Helps patients track progress & improve adherence.

✓ Regular Follow-Ups (Every 3–6 Months for Controlled BP, More Often if Uncontrolled)

- Monitor for medication side effects.
- Adjust treatment if BP remains uncontrolled.



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- ✓ Manage Hypertension in Special Populations
 - Elderly: Start with lower doses to prevent falls.
 - Pregnant women: Use Labetalol, Methyldopa (avoid ACE inhibitors, ARBs).
 - Diabetics: Prefer ACE inhibitors/ARBs for kidney protection.
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5. Managing Hypertensive Emergencies & Crises

- ✓ Hypertensive Urgency (BP $\geq 180/110$ mmHg, No Organ Damage)
 - Lower BP gradually over 24–48 hours using oral medications like Amlodipine, Clonidine, or Labetalol.
 - ✓ Hypertensive Emergency (BP $\geq 180/120$ mmHg + Organ Damage)
 - Immediate hospitalization for IV medications (Nitroprusside, Labetalol).
 - ✓ Stroke or Myocardial Infarction (MI) with Hypertension
 - Carefully lower BP to prevent worsening ischemia.
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Conclusion

A physician's role in hypertension management includes early diagnosis, risk assessment, personalized treatment, lifestyle modification counseling, and long-term monitoring. Proper patient education and medication adherence are crucial to preventing complications.