HYPERTENSIVE EMERGENCY

Severe BP + acute organ damage · controlled reduction

LOWER *carefully*

EMERGENCY vs URGENCY: EMERGENCY = severe BP (usually > 180/120) WITH acute target-organ damage → IV therapy. URGENCY = high BP, NO acute damage → oral, gradual. The damage, not the number, decides.

TARGET-ORGAN DAMAGE *look for it*

- **Brain -** hypertensive encephalopathy, ischaemic / haemorrhagic stroke
- **Heart -** ACS, acute pulmonary oedema (SCAPE)
- **Aorta -** acute aortic dissection
- **Kidney / eye -** acute kidney injury, retinal haemorrhage / papilloedema
- **Pregnancy -** pre-eclampsia / eclampsia

HOW FAST TO LOWER *controlled, not crash*

- **General -** reduce MAP by ~ 20-25% in the first hour, then gradually
- **Aortic dissection -** SBP 100-120 + HR < 60 FAST - beta-blocker (esmolol / labetalol) FIRST
- **Ischaemic stroke -** usually permissive; < 185/110 only if thrombolysing
- **ICH -** target SBP ~ 140 (individualise); SCAPE - high-dose GTN

IV AGENTS *titratable, short-acting*

Drug	Use	Note
Labetalol	Most emergencies; dissection	Avoid in asthma / bradycardia / acute HF
GTN (nitroglycerin)	Pulmonary oedema, ACS, SCAPE	High doses for flash oedema
Nicardipine / clevidipine	Most emergencies incl. stroke	Smooth titratable control
Esmolol	Aortic dissection (with vasodilator)	Rate control first, then reduce BP
Sodium nitroprusside	Refractory (specialist)	Cyanide risk; avoid in renal failure / raised ICP

SPECIAL SCENARIOS

PREGNANCY

Pre-eclampsia / eclampsia: labetalol, nifedipine or hydralazine + magnesium sulphate; deliver.

PHAEOCHROMOCYTOMA

Alpha-block FIRST (phentolamine); NEVER beta-block alone (unopposed alpha crisis).

COCAINE / STIMULANT

Benzodiazepines first-line; use a vasodilator; avoid pure beta-blockers.

HYPERTENSIVE URGENCY (no acute organ damage): do NOT lower acutely with IV drugs. Restart / uptitrate oral agents, reduce gradually over days, look for a cause, and arrange prompt outpatient follow-up.

PEARLS & PITFALLS

- Organ damage, not the number, defines an emergency - a very high BP with no acute damage is urgency.
- Aortic dissection is the exception - lower BP and heart rate fast with a beta-blocker first.
- Do not crash the BP: over-rapid reduction causes cerebral, coronary and renal hypoperfusion.
- In acute ischaemic stroke, leave BP high unless thrombolysing (then < 185/110).

References: ACC/AHA Hypertension 2017 · ESC/ESH Hypertension 2023 · standard critical-care references.

Educational aid; verify doses against local protocol and patient factors.