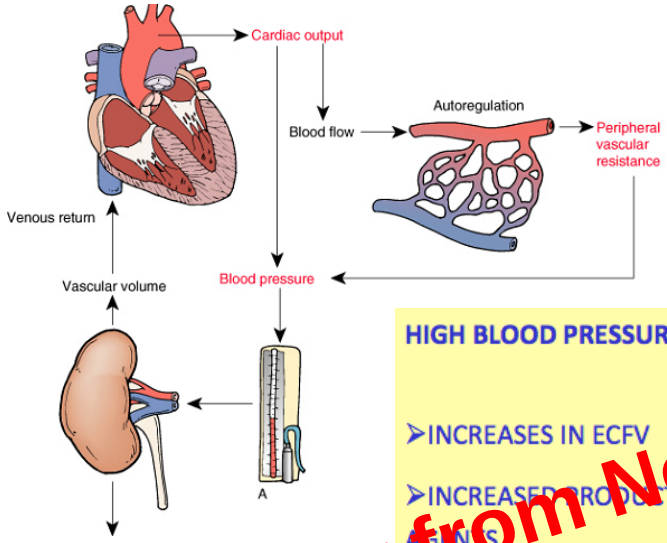
Hypertensive nephropathy

- Granular cortical atrophy due to nephrosclerosis
  - Leads to cell death and Necrosis - decreased vascular perfusion - affects renal arteries
- Loss of a glomerulus causes atrophy of the nephron

Regulation of Blood Pressure

BP=CO x TPR



HIGH BLOOD PRESSURE CAN ARISE FROM

- INCREASES IN ECFV
- INCREASED PRODUCTION OF VASOCONSTRICTOR AGENTS
- REDUCTION IN PRODUCTION OF VASODILATOR AGENTS

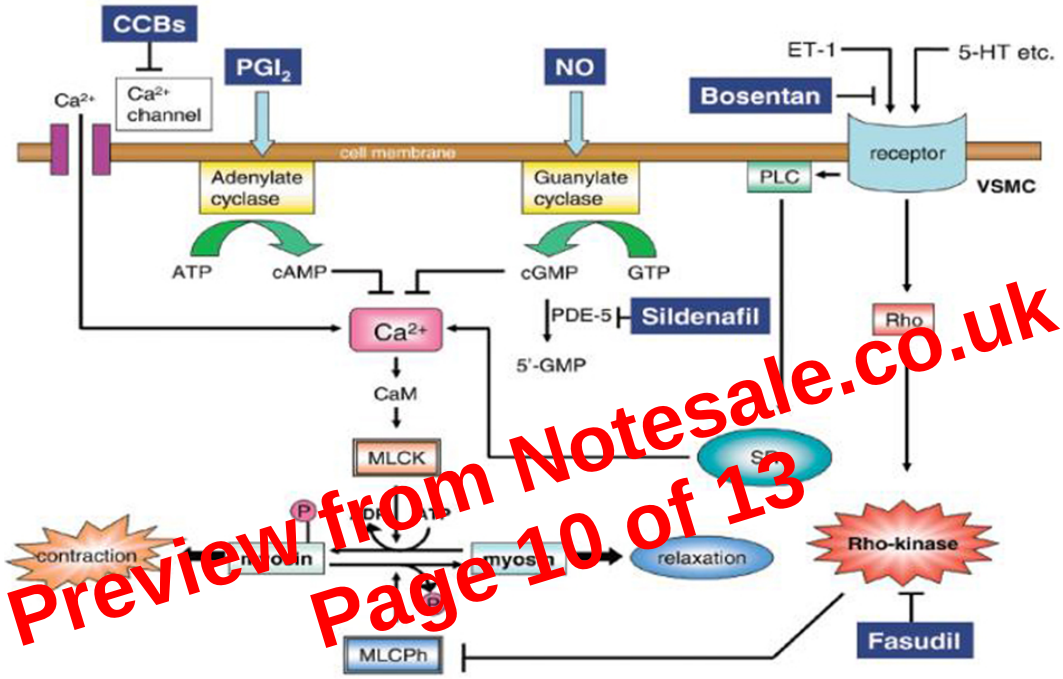
Classification of Hypertension (BHS)

Category	Systolic blood pressure (mmHg)	Diastolic blood pressure (mmHg)
Optimal blood pressure	<120	<80
Normal blood pressure	<130	<85
High-normal blood pressure	130-139	85-89
Grade 1 Hypertension (mild)	140-159	90-99
Grade 2 Hypertension (moderate)	160-179	100-109
Grade 3 Hypertension (severe)	≥180	≥110
Isolated Systolic Hypertension (Grade 1)	140-159	<90
Isolated Systolic Hypertension (Grade 2)	≥160	<90

Differences in ET receptors

- ET-A
  - Located on Smooth Muscle cells
  - Mediate vasoconstriction
- ET-B
  - Located on endothelial and smooth muscle cells
  - SMCs mediate vasoconstriction
  - ECs mediate vasodilation

Endothelin and Drug targets



Extra information:

K+ Channel openers/agonists

- Drugs:
  - Minoxidil
  - Diazoxide
- Mechanism of action:
  - VSM hyperpolarisation
  - Reduction in VDCC activity
  - Reduction in [Ca2+]i
  - Increased relaxation