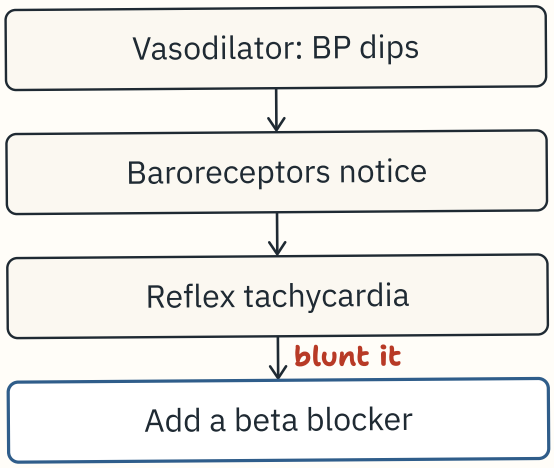
# Anti-ischaemic drugs

Which dial does each drug turn?




## Step by step

1. Demand rises with rate, contractility and wall tension
2. Wall tension rises with preload and afterload
3. Nitrates: veins dilate, preload falls
4. Dihydropyridines: arterioles dilate, afterload falls
5. Beta blockers and non-DHPs: slow rate, weaken force

| Class | Dial | Heart rate |
|---|---|---|
| Nitrates | Preload | May rise |
| Dihydropyridines | Afterload | May rise |
| Beta blockers | Rate, contractility | Falls |
| Verapamil, diltiazem | Rate, contractility | Falls |

Drug class and the dial it turns

### Rule of thumb

**Reflex tachycardia follows the pressure drop of drugs that do not slow the heart**

**Add a beta blocker to blunt it**

## Exam traps

- Nitrates and PDE-5 inhibitors: never combine.
- Verapamil and diltiazem: avoid in bradycardia and heart block.
- Beta blockers: care in vasospastic angina, asthma, severe depression.

Antianginal drugs: nitrates, beta blockers, calcium channel blockers

Video, written lesson, practice question and sources: medservatory.com/usmle-step-1/cardiovascular/anti-ischemic-drugs-nitrates-beta-blockers-ccb

For exam study only, not medical advice. Follow local guidelines and your lab's ranges.
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