Mean Arterial Pressure

REFRESHER

RECOGNIZE IT

- MAP is the average pressure in the arteries during one cardiac cycle
- It reflects perfusion pressure to vital organs and how well blood reaches essential tissues
- MAP = (Systolic BP + 2 x Diastolic BP) / 3

ASSESS

- Normal range 70-100 mmHg
- Below 60 can indicate inadequate perfusion, leading to potential organ damage
- Above 100 suggests excessive vascular resistance, increasing the heart's workload
- MAP gives a clearer picture of organ perfusion than systolic BP alone
- BP can be skewed by anxiety, muscle movement, or improper cuff placement

ACT — FIRST MOVES

1. Use MAP to guide treatment rather than chasing specific systolic/diastolic numbers
2. In shock, maintaining MAP is crucial to ensure adequate flow to organs
3. Low MAP may signal the need for fluids, vasopressors, or inotropes
4. Aim: keep MAP above 60-65 in critical patients

PEARLS

- Shock often drops MAP — intervene quickly to prevent organ failure
- Hypertension raises MAP and can strain the heart toward stroke or heart failure
- In trauma, MAP helps assess blood loss and the need for resuscitation
- MAP is a key metric for when to start fluid therapy or medications

Take Home Message:

MAP is the perfusion number: normal 70-100, below 60 organs are at risk — keep critical patients above 60-65.