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Practical Aspects of BP Assessment

Lawrence Satin, MD, FACC

Chief Medical Officer

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What We Already Know

- ABPM is better than Manual BP Cuff
- Small increases in BP can increase population CV risk
  - BUT a shift in the mean population risk …
  - Not the same risk for each individual
- Circadian BP rhythm change and worse CV outcomes
  - Excessive morning surge
  - Lack normal nocturnal fall in BP (non-dippers)
- Drugs can induce different effects in different phases of the BP circadian rhythm
  - ACE inhibitors super-dipping effect when dosed at night
  - Calcium channel blockers transform non-dippers to dippers
- Central Aortic Pressure vs Peripheral Brachial Pressure
  - Beta blocker less effective ↓ CV events vs calcium channel blocker

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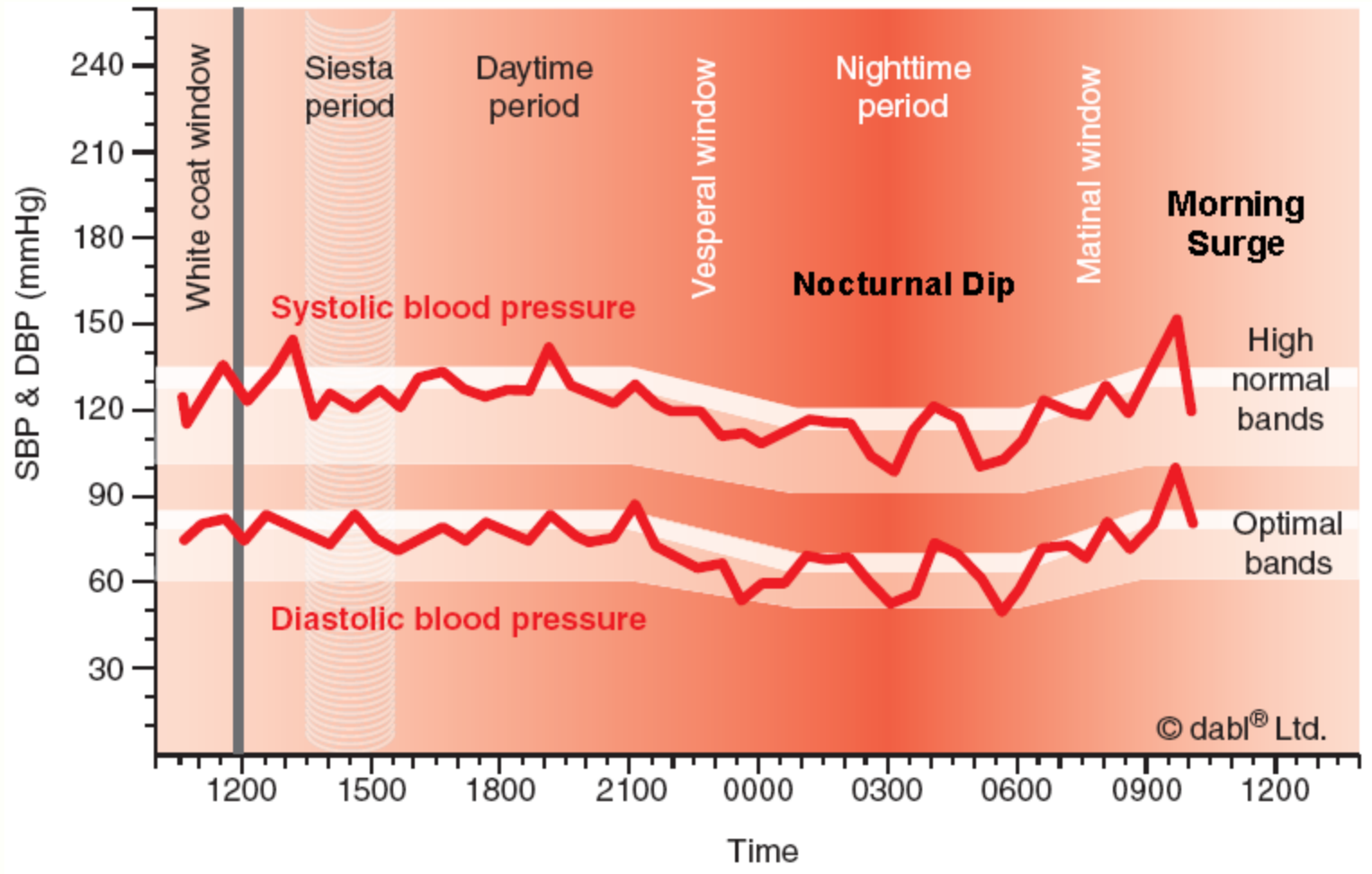
The Value-Add of ABPM



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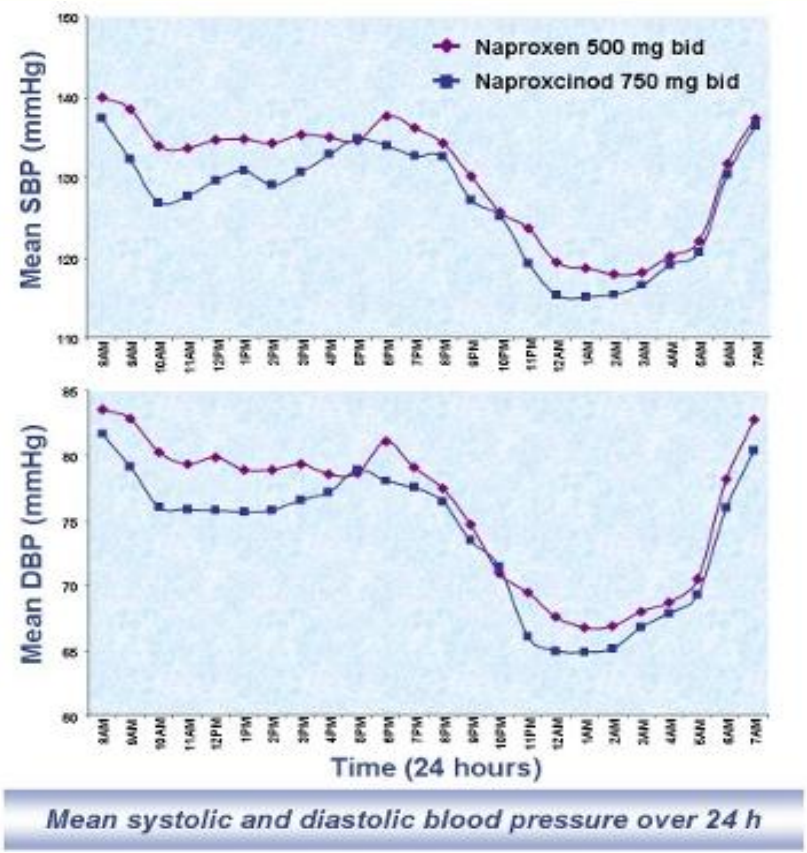
Can ABPM Ever Make a Difference vs Manual BP?

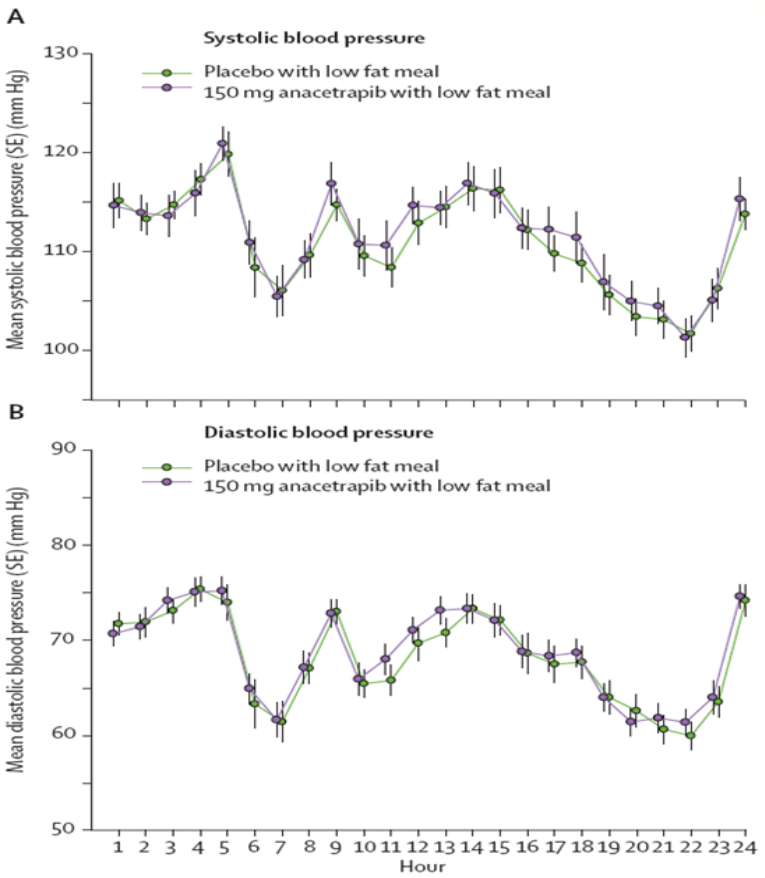
Naproxen vs Naproxcinod
(NSAID vs Cyclo-oxygenase Nitric Oxide Donor)



Mean systolic and diastolic blood pressure over 24 h

Naproxcinod approved by EMA 2010, FDA awaiting further studies.

Torcetrapib vs Anacetrapib
(Cholesteryl Ester Transfer Protein Inhibition)



Torcetrapib trials stopped 2006 with 60% increase in deaths, only 1 of 6 trials showed increase in BP. Anacetrapib 2009 DEFINE no increase in BP or MACE. Above, Krishna, et al. Lancet, Dec 2007, v370, p 1907-14. Merck 2 yr follow-up due Dec 2012.

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What We DO NOT Know

- Do all drugs that increase BP do so in a concentration dependent manner?
- What is the magnitude and duration from onset of dosing for increased BP to constitute a CV risk?
- Can SHORT TERM studies evaluate BP risk in NHVs?
- How helpful is pre-clinical evaluation of BP risk?
- Should we also be looking at physiologic changes?
  - Cardiac output
  - Peripheral vascular resistance
  - Central vs brachial peripheral blood pressure curves

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