

# 40. Hypertension Therapy

## Lifestyle Modifications for Prevention and Management

- Lose weight if overweight
- Limit alcohol intake to no more than 1 oz (30 ml) of ethanol / day, (2 drinks/day).
- Increase physical activity (30-45 min almost every day of the week)
- Dietary potassium (approximately 90 mmol/day), Calcium, Magnesium
- The jury is still out on the relationship between salt intake, just avoid excessive Sodium
- Maintain adequate intake of dietary Calcium and Magnesium
- Stop smoking
- NSAIDs are associated with elevation of BP and should be tapered when possible

## Guidelines to Improve Adherence

- *Pills are commonly missed once a week*
- Encourage measuring blood pressure at home
- Keep care inexpensive and simple, once daily formulations are best
- Encourage daily walks
- Anticipate adverse effects, unsuccessful therapy and adjust therapy"

## First Line Therapy

- JNC-7 recommends first line low dose diuretics
- Thiazides increase risk of diabetes, but ACEI & ARB decrease that risk
- Treating hypertension must be concerned with the effects not just next week but for the following decades
- Combination therapy is now the rule rather than the exception
- ACEI or ARB + Thiazide diuretic best first line therapy
- Second Line
  - a. Calcium channel blockers - particularly in resistant HTN
  - b. ARB Angiotensin Receptor Blockers: Valsartan
  - c. Beta blockers with heart failure, coronary disease, diabetes
- Future Recommendations
  - a. SARA-Eplerenone (Future?)

## Selected Comorbid Conditions

- ACE inhibitors (ACE-I) should ALWAYS be used with CHF, diabetes, or atherosclerosis
- ACE-I (or angiotensin II blockers) appear preferable in early renal failure
- ACE-I recommended for reduction in progression of chronic renal failure
  
- Carvedilol, a non-selective adrenergic blocker anti-oxidant, indicated for CHF and HTN  
Carvedilol is the only beta blocker that does not engender diabetes with long term use
  
- $\beta$ -Adrenergic blockers peri-operative in all hypertensives
  
- Alpha-adrenergic blockers now for prostatism and not HTN

## Unfavorable Comorbid Conditions

- Pregnancy: Avoid ACE-I, AT II
- Gout: Avoid Diuretics
- Liver Disease: Labetalol and Methyldopa

## Monitoring:

- With diuretics and ACEI: Potassium and Magnesium level monitoring