

CONTROVERSIES IN OPTIMAL B.P AMONG THE MANY GUIDELINES

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Controversies in optimal B.P. among the many guidelines

- **Q.** What is the optimal B.P. IN DIFFERENT AGES in the general population?
- **Q.** What is the optimal B.P. in Pts. WITH DM/CKD.

Comment:

- The lower the B.P. is not always the better 2014.
- B.P. targets are revised – after trials.
- No significant effects on mortality from intensive lowering of B.P. compared to standard B.P. lowering.

Controversies in optimal B.P. among the many guidelines

- Controversial new B.P. guidelines aren't one size!!
- Loosened B.P. guidelines stir immediate controversy.
- 2012 Guidelines

B.P goal with masked HTN with more TOD:
suggested a lower goal of < BP135/5 was recommended.

Guideline Controversy

- In the old guidelines (from 2007 to 2012). JNC in HTN pts. with DM/ or CKD – the target B.P. was 130/25 mmHg, and 120/80 mmHg respectively.
- Newest guidelines = DM₂/CKD = Target is \leq 140/90 mmHg because of \uparrow mortality with lower B.P targets.

The lower B.P. in the elderly & octogenarians – makes them vulnerable to dizziness, unsteadiness – which may end in falls \pm fracture.

- Doctors – Say in the new guidelines – patients should be individualized.

Guideline Controversy

- In 2015 – British Guidelines – optimal systolic B.P target in STAGE I HTN is controversial – and advice ↑ doses of medications to reach B.P. goal.
- New guidelines CHANGE NOTHING if you are younger than 60 yrs.
- But if you are elderly or an octogenarian – your goal is to keep your B.P. at $\leq 150/90$ mmHg

* Guideline controversy STARTED when 17 national experts in Dec. 2016 – based on a 5 yrs. analysis of the best available research and targets for treating high B.P. (Journal of Amer. Med. Assoc.) and warn that elderly pt.s with rigid lower B.P. targets will be exposed to **M.I & stroke.**

* HTN + CKD:

- Guidelines in the past – were to reduce B.P. to 125/80 especially in pts. with proteinuria.
- Optimal B.P. treatment – recently advised for the these pts. A target B.P. of $\leq 140/90$. [lower B.P. ↑ mortality in ESRD]

Newest Guidelines 2016

- JNC: BHS
- ESH CHEP
- ESC

The guidelines in JN8,

= In 2016 = mentioned that the old guidelines pose & damper to elderly pts. Over 60 yr and advised doctors to raise the B.P. goal in this age to 150/90 mmHg.

* B.P. values are important to know but experts differ about optimal B.P. control. (Dec. 2016).

Controversy in HTN Guideline

• Sprint Trial

- Is a contributor to JNC: Recommendations.
- Experts advice a new approach – most agree an a go-slow treatment.

i.e. – If Pt. younger 60 yrs – target B.P.= 140/90 mmHg / B

- If Pt. is 60 yrs. Or older – Target B.P. is = 150/90 mmHg/A
- If Pt. HAS DM \pm TIA / or CKD = Target B.P. is = 140/90 mmHg. / A

• Lower B.P. in older ages:

- 1- Reduced organ perfusion – \uparrow symptoms e.g. dizziness.
- 2- \uparrow Mortality if B.P. is reduced markedly (Diastolic B.P. x coronary perfusion)

Classification + grades of HTN

	Systolic	Diastolic
- Normal	120 - 129	/ 80 – 84
- High Normal	130 - 139	/ 85 – 89
- Grade I	140 - 159	/90 – 99 mmHg
- Grade II	160 - 179	/ 100 – 109
- Grade III	180 or more	/ 110 or more
- Isolated systolic HTN = > 140 / < 90 mmHg		

* Systolic B.P. is a better predictor of CV events than diastolic after the age of 50 yrs.

Guideline Are To Be Respected But Not Followed Blindly !!

1- Anti-HTN medications are given to patients with **INDIVIDUALIZATION**

2- According to:

- i- AGE.
 - ii- Level of B.P.
 - iii- TOD \pm
 - iv- Co-morbid conditions
 - v. Cost
 - vi. Complications
 - CKD
 - H failure
- CAD
 - TIA
 - Bronchial Asthma
 - BPH
 - DM₂
 - PVD
 - Dyslipidemias
 - Smoker

3- Guidelines are not all one size!!!!

B.P. Targets Guidelines 2016

I Level of B.P. + AGE

- JNC
- ESC
- EHS
- BHS

Adolescents / young adults

18 – 40 yrs.

- Mild HTN = 140/90 – 159/99 mmHg Grade I
- No TOD.
- No D.M.
- No CKD.
- Rx: LSM + Diuretic.
- Target B.P. = 120/80 mmHg.

B.P. Targets Guidelines 2016

II Level of B.P. + AGE

- JNC
- ESC
- EHS
- BHS

Middle Aged

40– 60yrs.

- Moderate HTN = 160/100 – 179/109 Grade II
- TOD +
- D.M ±
- CKD ±
- Rx = combination Rx + LSM
 - ACEI + D.
 - ACEI + CaCB
 - ARB + D
 - ARB + CaCB
 - CaCB + D.
- Target B.P. = \leq 140/90 mmHg

B.P. Targets Guidelines 2016

III Level of B.P. + AGE

- JNC
- ESC
- EHS
- BHS

Elderly > 60 yrs.

- Severe HTN = 180/110 mmHg or more Grade III
 - TOD ++
 - D.M. ±
 - CKD ±
 - Rx. : LSM + Combination Rx.
 - Target B.P. ≤ 140/90 mmHg
- ACEI + D.
ACEI + CaCB
ARB + D
ARB + CaCB
± Beta blocker
CaCB + D.
Aldost. Antag.

B.P. Targets Guidelines 2016

IV Level of B.P. + AGE

- JNC
- ESC
- EHS
- BHS

Octogenarians 80 yrs. or more

- Moderate HTN > 160/100
 - Severe HTN > 180/110 mmHg
 - ISH > 140/ < 90
 - TOD +++
 - D.M. +
 - CKD ++
 - Rx. : LSM + Combination Rx.
 - * Hypotensive agents
Selected according
to renal function
 - * Target B.P. = < 150/90mmHg
- ACEI + D.
ACEI + CaCB
ARB + D
ARB + CaCB
CaCB + D.
• ± Beta Blocker
• ± Ald. Antog.

B.P. Targets Guidelines 2016 In Octogenarians 80 yrs. or more

- ISH is very common \uparrow S / \downarrow D. B.P. (Arterial Stiffness).
- More liable to stroke, M.I. and HF.
- Rx. Is necessary in this group.
- Effective Rx. = reduces

- Stroke	40%
- M.I	20%
- HF	50%
- Systolic B.P. reduction is more important than diastolic B.P. [linear relationship age, level of systolic B.P and stroke + M.I)
- Excessive B.P. reduction in this group \uparrow mortality from CAD. (J. shaped phenomena).
- B.P. Goal is 150/90 mmHg.
- All trials – showed a significant stroke reduction (Stop – Systo-Euro – Scope – Hyvet.)

B.P. Goals May be Tainted by:

- 1- Combination Rx.

- ACEI + D	
- ACEI + GCB	
- ARB + D	
- ARB + CaCB	
- CaCB + D.	
- 2- Regular F.U.
- 3- Check for extrinsic factors – affecting B.P. !!
 - Salt – liquorice – Nsaids – steroids.
 - C. pills – cough mixtures – glitazones.
4. Exclude Reno-vascular HTN.

CONCLUSION

B.P. Targets + Guidelines

OLD

mmHg

NEW

2010	2016
- General Popul. $\leq 140/90$	- $\leq 140/90$
- D.M. 130/85	- $\leq 140/90$
- CKD 120/80	- $\leq 140/90$
- Octogenarians 140/90	- $\leq 150/90$

- JNC:
- BHS
- EHS
- ESC

* Octogenarians :

- Are more L. able to M.I / stroke
- The lower is not the better

Thank you