

How Low Should We Go?

PERSONAL BEST HEALTH

Blood Pressure Update



There has been more attention paid lately to the target of blood pressure therapy. The emergence of new information about blood pressure from recent studies has changed our targets for blood pressure management. New information will undoubtedly continue to be discovered as well.

The new guidelines now state that any systolic BP over 120 is abnormal and is called "prehypertension." Persons with BP in this range need to make adjustments in their lifestyle as mentioned on the back of this handout.

The focus of the newest recommendations —

known as JNC 7 — is to increase public awareness and to emphasize the goals of BP for physicians and patients.

Patients can achieve goal blood pressure. Most patients who are controlled need to take at least two medications to achieve adequate BP, however.

The data for lower blood pressure is compiled from observational studies, which demonstrate that for every increase in systolic BP, the risk of cardiovascular disease, stroke, target-organ damage and death increases. Recent studies have confirmed that treating BP decreases these

risks and associated bad outcomes. *Lower blood pressure is associated with longer survival and less complications.*

The recommendations reinforce the importance of controlling systolic blood pressure (the top number). Diastolic BP control generally follows systolic control.



New BP targets recommended to decrease complications of hypertension.

What Conditions Might Change My Treatment?

Patients in general do best on thiazide diuretics, which have been shown to decrease heart disease, stroke and end-organ damage in persons with elevated BP. There are conditions that might favor the use of other BP medications,

but diuretics are almost always part of the treatment plan.

Kidney disease has been shown to receive extra benefit from the ACE inhibitors and ARB medications. After a heart attack there is added

benefit to using beta-blockers, ACE inhibitors and ARB medications.

Certain other health conditions may not tolerate classes of BP medications as well. Your physician must take your total health into account.

Blood Pressure Facts

- 50,000,000 Americans have high blood pressure.
- Over 30% of persons with BP do not know it.
- BP contributes to or directly causes over 160,000 deaths yearly.
- In most cases (> 90%) the cause of BP is not known.

Special points of interest:

- *Controlling blood pressure is a major health concern and can decrease risk of stroke and heart disease.*
- *Patients with other health issues — especially diabetes and kidney disease — need to have lower BP than others.*
- *Medication regimens must often be individualized.*

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Goals of BP Therapy

- < 140/90 will decrease the occurrence of heart disease and stroke.
- < 130/80 should be the goal for patients with diabetes or kidney disease.

Lifestyle Modifications

| | |
|--------------------|---|
| Weight Reduction | Maintain normal body weight (BMI < 25) |
| DASH Eating Plan | Diet rich in fruit, vegetables and low in fat <i>More Info:</i> www.nhlbi.nih.gov/health/public/heart/hbp/dash/index.htm |
| Sodium Restriction | Reduce sodium intake to less than 2.4 gm/day |
| Physical Activity | Regular aerobic exercise 30 minutes/time most days of the week |
| Moderate Alcohol | No more than 2 drinks/day for men and 1 drink/day for women |

Cardiovascular Risk Factors [From JNC 7]

- Hypertension
- Cigarette smoking
- Obesity (BMI > 30)
- Physical inactivity
- Elevated cholesterol
- Diabetes (elevated sugar)
- Kidney damage
- Age (> 55, > 65)
- Early family history

Target-Organ Damage from BP

Heart

- Enlarged heart (left ventricle)
- Angina or prior heart attack
- Prior bypass surgery, angioplasty, stent
- Heart failure

Brain — stroke or mini-stroke
Chronic kidney disease
Peripheral artery disease
Retinopathy — damage to vision

Good Drugs, Bad Drugs

The safety of several classes of blood pressure medications has been questioned over the past decade. We now know that just lowering your blood pressure is not enough. We also know that there may be gender and racial differences in the efficacy and side effects of different medications.

It is also possible that a drug class may be "less desirable" as a first-choice therapy but is required as a third or fourth medication to control blood pressure in an individual. Each patient and their management is likely to be different. What works great for your mother or neighbor may not be appropriate for an individual patient being seen in the office.

Some general conclusions can be made about the different classes of medications:

Diuretics: these are among the oldest of medications and have repeatedly

been shown to improve survival in patients with hypertension.

Alpha-blockers: these medications were recently shown to have some potential to cause complications. They have a benefit of treating prostate enlargement in men.

Central alpha-blockers: are effective but can have more side effects.

Beta-blockers: another class with a longstanding history of increasing survival in patient who take them. They can cause fatigue and interfere



with breathing in a few patients.

Calcium blockers: shown in the mid

There are many medications to treat BP.

1990s to be related to decreased survival in patients who take them. They are potent medications and are still used when the risk of elevated blood pressure is too great and nothing else has helped. They can also be used to control heart rate.

ACE inhibitors: these medications have benefits in improving heart function in patients with heart failure. They are not very potent in controlling BP, however.

ARB (angiotensin receptor blockers): "cousins" of the ACE inhibitors that are better at lowering BP. They have recently been shown to improve survival in patients. They are very expensive and have no generic equivalents.

Direct vasodilators: potent medications with potent side effects. They are generally used only in severe BP cases.