

**A REVIEW ON ROLE OF COUNSELING IN HYPERTENSION**

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**ABSTRACT**

The prevalence of hypertension is high and increasing worldwide. Drug therapy is effective, but for both "pre hypertensive" and treated hypertensive patients, lifestyle changes are also important. Dietary modification is a key part of these changes, although skepticism about the role of diet in determining blood pressure has slowed implementation of the available guidelines. However, there is now a large body of evidence supporting a role for dietary salt, potassium, alcohol, and body mass in determining blood pressure. Various studies have shown that salt restriction, alcohol moderation, weight loss, exercise, and a DASH (Dietary Approaches to Stop Hypertension) diet

can achieve decreases in systolic blood pressure of approximately 10 to 15 mm Hg when applied together of the dietary changes, salt intake remains the most amenable to change. But we must further reduce salt in processed food if it is to be part of a wider strategy to lower blood pressure in the general population. Nevertheless, the message to patients must be that dietary changes made within a concerted alteration in lifestyle can have a very significant impact on their blood pressure.

**KEYWORDS:** The prevalence of diet in determining impact on their blood pressure.

**1. INTRODUCTION**

Hypertension results due to disturbances in hemodynamic mechanism which is reflected through increased peripheral vascular resistance and high diastolic blood pressure. High blood pressure (BP) is a major public health problem in India and its prevalence is rapidly increasing among both urban and rural populations.<sup>[1,2]</sup> In fact, hypertension is the most prevalent chronic disease in India. The prevalence of hypertension ranges from 20-40% in urban adults and 12-17% among rural adults. The number of people with hypertension is

projected to increase from 118 million in 2000 to 214 million in 2025, with nearly equal numbers of men and women.<sup>[3]</sup>

A survey of 26,000 adults in South India showed a hypertension prevalence of men 23% and women 17%. But 67% of those with hypertension were unaware of their diagnosis. Majority of hypertensive subjects still remain undetected and the control of hypertension is also inadequate. This calls for urgent prevention and control measures for hypertension.<sup>[1]</sup>

### 1.1 Types of Hypertension<sup>[2]</sup>

There are two major types of hypertension.

They are

- **Primary, Essential or Benign Hypertension**
- **Secondary Hypertension**

### 1.2 What is Benign Hypertension?

The Primary, essential or benign hypertension is the commonest form of high blood pressure. It accounts for about 80 - 90 percent of all the diagnosed cases of high blood pressure around the world. The cause of the primary, benign or essential hypertension (HTN) is mostly unknown. It is common amongst those, whose parent(s) also has the disease.

### 1.3 Risk factors

- Race
- Obesity
- Sedentary lifestyle
- Excessive use of salt
- Smoking
- Excessive use of alcohol
- High cholesterol

### 1.4 What is Secondary Hypertension?

Secondary hypertension is the type of high blood pressure in which the actual CAUSE is known. Secondary HTN, accounts for about 5 - 10 percent, of all diagnosed cases of this disease. As the name implies, it is "**Secondary**" to a pre-existing medical condition like:

- Kidney disease
- Thyroid or other endocrine disorders

- Some medications like ibuprofen, and amphetamines
- Some contraceptives
- Cushing syndrome
- Tumors
- Reno vascular Disease
- Contraction of the aorta
- Some sleep disorders.

#### Other Different Types of Hypertension

- Acute
- Chronic

### 1.5 Causes of Hypertension<sup>[3]</sup>

What causes high blood pressure?

Blood pressure is the measure of the force of blood pushing against blood vessel walls. The heart pumps blood into blood vessels, which carry the blood throughout the body. High blood pressure, also called hypertension, is dangerous because it makes the heart work harder to pump blood out to the body and contributes to hardening of the arteries, or atherosclerosis, to stroke, kidney disease, and to heart failure.



Figure 1: Causes of hypertension.

## 2. Treatment and diagnosis of Hypertension

### 2.1 Diagnosis<sup>[4]</sup>

To measure your blood pressure, your doctor or a specialist will usually place an inflatable arm cuff around your arm and measure your blood pressure using a pressure-measuring

gauge. A blood pressure reading, given in millimeters of mercury (mm Hg), has two numbers. The first, or upper, number measures the pressure in your arteries when your heart beats (systolic pressure). The second, or lower, number measures the pressure in your arteries between beats (diastolic pressure). If you have any type of high blood pressure, your doctor will review your medical history and conduct a physical examination. Your doctor may also recommend routine tests, such as a urine test (urinalysis), blood tests, a cholesterol test and an electrocardiogram a test that measures your heart's electrical activity. Your doctor may also recommend additional tests, such as an echocardiogram, to check for more signs of heart disease.

## 2.2 What Is "Normal" Blood Pressure<sup>[5]</sup>?

A blood pressure reading is written like 120/80. It's read as "120 over 80." The top number is called the systolic, and bottom number is called the diastolic. The ranges are:

**Table 1: Normal values of blood pressure.**

Top number (systolic) in mm Hg	Bottom number (diastolic) in mm Hg	Your category*	What to do
Below 120	And below 80	Normal blood pressure	Maintain or adopt a healthy lifestyle.
Between 120-139	Or between 80-89	Pre hypertension	Maintain or adopt a healthy lifestyle.
Between 140-159	Or Between 90-99	Stage1 hypertension	Maintain or adopt a healthy lifestyle. If your blood pressure goal isn't reached in about a month, talk to your doctor about taking one or more medications.
160 or higher	Or 100 or higher	Stage2 hypertension	Maintain or adopt a healthy lifestyle. Talk to your doctor about taking more than one medication.

## 3. Management of hypertension

### 3.1 Treatment<sup>[6]</sup>

Changing your lifestyle can go a long way toward controlling high blood pressure. Your doctor may recommend you eat a healthy diet with less salt, exercise regularly, quit smoking and maintain a healthy weight. But sometimes lifestyle changes aren't enough. In addition to diet and exercise, your doctor may recommend medication to lower your blood pressure. Your blood pressure treatment goal depends on how healthy you are. If you're age 60 or older, and use of medications produces lower systolic blood pressure (such as less than 140

mm Hg), your medications won't need to be changed unless they cause negative effects to your health or quality of life. Also people older than 60 commonly have isolated systolic hypertension when diastolic pressure is normal but systolic pressure is high. The category of medication your doctor prescribes depends on your blood pressure measurements and your other medical problems.

Medications to treat high blood pressure

- **Thiazide diuretics**
- **Beta blockers**
- **Angiotensin-converting enzyme (ACE) inhibitors.**
- **Angiotensin II receptor blockers (ARBs).**
- **Calcium channel blockers, Renin inhibitors 2.**

Hypertension is managed using lifestyle modification and antihypertensive medications.

#### **4. Lifestyle modifications<sup>[7]</sup>**

The first line of treatment for hypertension is identical to the recommended preventive lifestyle changes and includes dietary changes, physical exercise, and weight loss. These have all been shown to significantly reduce blood pressure in people with hypertension. Their potential effectiveness is similar to and at times exceeds a single medication. If hypertension is high enough to justify immediate use of medications, lifestyle changes are still recommended in conjunction with medication.

Dietary change, such as a low sodium diet and a vegetarian diet are beneficial. A diet rich in nuts, whole grains, fish, poultry, fruit and vegetables lowers blood pressure. A major feature of the plan is limiting intake of sodium, although the diet is also rich in potassium, magnesium, calcium, as well as protein.

Several exercise regimes including isometric resistance exercise, aerobic exercise, resistance exercise, and device-guided breathing may be useful in reducing blood pressure.

#### **4.1 Classification and Standards of Care**

Risk increases with age: those who are normotensive at age 55 have a 90% lifetime risk of developing hypertension.

Hypertension responds to both lifestyle changes and pharmacotherapy. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High

Blood Pressure (JNC 7) recommends exercise, weight reduction, sodium restriction, moderation of alcohol intake, and a diet rich in fruits and vegetables and low in fat for all stages.

## **5. Role of Counseling<sup>[8]</sup>**

Counseling hypertensive patients requires insight, creativity, and ingenuity, because fixed messages will fall flat. Nevertheless, effective counseling covers 3 essential themes: 1 improving health status with adherence, 2 providing information on adverse effects and contraindications, and 3 promoting healthy behaviors. Always begin by asking patients what prescribers told them previously, in order to save time and to identify information deficits quickly.

### **5.1 Emphasizing Medication Adherence**

Because patient adherence is lower for symptomless conditions it is crucial to emphasize controlling blood pressure and to list the risks of medication non adherence. Inform patients about what to do if they miss a dose. Repeat the name of the medication frequently so that patients become familiar with it.

Make suggestions that incorporate multiple daily doses into the patient's routine. Be cautious, however, about pairing medications with meals: some patients eat only 2 meals a day; others may have 4. Instead, specify the number of times per day to take the medication. Ask specific questions about the patient's ability to follow directions, such as "This medication must be taken twice; when in your day do you think you would take it?".

### **5.2 Adverse Effects and Contraindications**

Make adequate counseling ideal by offering tips for coping with common adverse effects. Note rare but serious side effects, and describe the circumstances under which patients should contact their provider. Warn patients about drug, food, or OTC product interactions and other contraindications. Counsel patients about the dangers of stopping the medication before talking to their physician. Sudden termination of many antihypertensive may lead to rapid, dangerous blood pressure escalation. Tell patients to keep enough medicine to last through weekends, holidays, or vacations. Suggest carrying an extra prescription in a billfold or purse in case of an emergency.

Provide written information to reinforce counseling, especially when someone else picks up the patient's medication. Always encourage patients to call the pharmacy with questions.<sup>[9]</sup>

### 5.3 Promoting Healthy Behaviors

Counsel patients about exercise- reducing weight by 10 kg (22 lb) reduces blood pressure by 5 to 20 mm Hg; exercising 30 minutes daily is associated with a reduction of 4 to 9 mm Hg; and reducing sodium intake can affect pressure by 2 to 4 mm Hg. Sometimes adding new behaviors (eg, exercising) is easier than eliminating old habits (eating salty chips).

### 5.4 Patient Self-Monitoring

Many patients monitor their own blood pressure. Physician should counsel the patients. They should be told to keep a log and to record their pressure at the same time each day. Additionally, they should take their cuff with them when they visit their doctor to ensure that they are taking readings correctly and that the machine is calibrated accurately.<sup>[10]</sup>

## CONCLUSION

Hypertension is an important public health challenge in both economically developing and developed countries. Significant numbers of individuals with hypertension are unaware of their condition and, among those with diagnosed hypertension, treatment is frequently inadequate. Measures are required at a population level to prevent the development of hypertension and to improve awareness, treatment and control of hypertension by life style change in the community.

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