

Dietary Management for Hypertension

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Abstract

The number of people living with hypertension (high blood pressure) is predicted to be 1.56 billion worldwide by the year 2025. Hypertension is the most important preventable risk factor for premature death worldwide. It increases the risk of ischemic heart disease, strokes, peripheral vascular disease, and other cardiovascular diseases, including heart failure, aortic aneurysms, diffuse atherosclerosis, chronic kidney disease, and pulmonary embolism. Growing burden of hypertension is mainly due to modern life style factors such as sedentary lifestyle, poor dietary choices, alcohol consumption, stress etc. Intake of modified therapeutic healthy diet and increased physical activity helps to prevent hypertension.

Keywords: Hypertension; Risk Factor; Modern Life Style; Healthy Diet.

Introduction

High blood pressure, also called hypertension, means the pressure in arteries is higher than it should be. Blood pressure is the force of blood pushing against the walls of the arteries as the heart pumps blood.

If this pressure remains consistently high, it can cause many complications in the body. Left untreated, high blood pressure can lead to health problems such as heart disease, stroke, kidney failure, and more.

Prevalence

Hypertension is a very common condition, in both developing countries and industrialized nations. In fact, according to the American Heart Association, more than 76 million Americans over age 20 – or 1 in 3 adults – have high blood pressure.

Risk Factors

The following can increase the chances for developing high blood pressure:

Older Age

The risk of high blood pressure increases as we age. High blood pressure is more common in men who are 45 years of age and older, while women are more likely to develop the condition after age 65.

Race

High blood pressure is more common in African-American adults than in Caucasian or Hispanic-American adults. African-Americans tend to develop hypertension earlier in life and often experience more severe cases that lead to serious complications, such as stroke, heart attack, and kidney failure.

Family History

Having a family history of high blood pressure can also increase our risk, as the condition tends to run in families.

Being Overweight

The more we weigh, the more blood we need to supply oxygen and nutrients to our tissues.

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As the volume of blood circulated through our blood vessels increases, so does the pressure on artery walls. Obesity, especially abdominal obesity, also increases stiffness in arteries, which increases blood pressure.

Sedentary Lifestyle

Being inactive is often linked to factors that can increase heart rate, such as obesity and type 2 diabetes.

Tobacco Use

When we smoke or chew tobacco, our blood pressure rises temporarily.

Moreover, chemicals in tobacco can damage the lining of artery walls, which can cause arteries to narrow, increasing blood pressure.

Being exposed to secondhand smoke also can increase blood pressure.

Dietary Choices

What we choose to eat (and not to eat) can increase our risk for hypertension, including the following:

- Too much salt (sodium) can cause our body to retain fluid, which increases blood pressure.
- Since potassium helps balance the amount of sodium in our cells, not getting enough potassium can lead to too much sodium in our blood.
- Vitamin D may affect an enzyme produced by our kidneys that affects our blood pressure, so having too little could be harmful.

Alcohol Consumption

Drinking more than two drinks a day for men and more than one drink a day for women may affect our blood pressure.

Stress

Being under intense stress can lead to a temporary increase in blood pressure.

Chronic Conditions

Having kidney disease, sleep apnea, or diabetes can affect blood pressure.

Pregnancy

Being pregnant can cause an increase in blood pressure.

Birth Control

Women who take birth control pills are at greater risk of developing high blood pressure [1].

Dash Diet

DASH (Dietary Approaches to Stop Hypertension) eating plan is recommended for hypertensive individuals. It focuses on heart-healthy foods that are low in fat, cholesterol, and sodium, and rich in nutrients, protein, and fiber.

Foods may include the following:

- Fruits
- Vegetables
- Whole grains
- Low-fat dairy products
- Fish
- Poultry
- Nuts

DASH limits the following:

- Red meats (including lean red meats)
- Sweets
- Added sugars
- Sugar-containing drinks

Following is an example of the recommended servings from each food group for someone on the diet who is consuming 2,000 calories a day.

- 6 to 8 servings a day of grains
- 4 to 5 servings a day of vegetables
- 4 to 5 servings a day of fruits
- 2 to 3 servings a day of dairy
- 6 or fewer servings a day of lean meat, poultry, and fish
- 4 to 5 servings a week of nuts, seeds, and legumes
- 2 to 3 servings a day of fats and oils
- 5 or fewer sweets a week

Indian Diet Plan for High Blood Pressure

Here is a sample chart of Indian diet plan for high blood pressure.

This Indian diet plan for high blood pressure provides you around 1500 calories and can be followed if you are looking for managing your weight as well as hypertension.

Menu	Amount	Calories (Kcal)	Protein (Gms)
Early Morning			
Roasted <u>Flax seeds</u> / Sunflower seeds	1 tsp	--	--
Tea (without sugar)	1cup	35	4
Marie biscuits	2	56	-
		Total calories-91	Protein - 4
Breakfast			
Stuffed <u>Carrot</u> / spinach paratha (whole wheat flour)	2 small	270	7
Curd (Avoid adding salt, you can add jeera powder)	1 cup / 50 gms	30	1.5
		Total calories-300	Protein-8.5
OR			
2 Egg White omlette with capsicum	(2 egg white)	150	7
Brown Bread Slice / 1 Roti	2 no. / 1 no.	100	3
		Total calories-250	Protein-10
Mid Morning			
Apple / Banana / Guava / Grape fruit / Orange	1 med (50- 60 gms)	40	-
Green Tea (No Sugar)	--	--	--
Lunch			
Vegetable brown rice pulav / Vegetable Oats Upama	1 soup bowl (50 gms uncooked)	250	3
Cucumber , carrot , beetroot and onion raita	1 bowl	75	3.5
Mix veg salad	1 bowl	30	2
		Total calories-355	Proteins-8.5
OR			
Chappati / Phulka (little or no fat)	3 medium size	255	9
Capsicum / lady finger / parval / torai / Bottle gourd veg	1 med bowl	70	1.5
Dal / drumstick sambar	1 med bowl	130	6
Salad	1 med bowl	30	2
		Total calories - 485	Proteins - 18.5
10 minutes,walk post lunch + 1 cup warm water with lemon / Green tea (no sugar)			
Evening			
Green tea / Tea / Coffee (without sugar) / <u>beet root juice</u>	1 cup	35	4
Puffed Rice (unsalted) / 2 wheat rusks / water melon	1 bowl	100	3
		Total calories-280	Protein-7
Dinner			
whole wheat flour chapati / phulka	3 medium sized	255	9
Mix veg / drumstick / palak vegetable	1 med bowl	70	1.5
Curd / kadhi / dal	1 small bowl	30	1.5
		Total calories-435	Proteins-14.5
10 minutes,walk post lunch + 1 cup warm water with lemon / Green tea (no sugar)			
Bed Time			
Cow's Milk (no sugar)	1 cup	75	2
<u>Soaked almonds</u>	4 no.	20	3
	TOTAL	Total calories=1546	Total protein=50

The above mentioned Indian Diet plan for high blood pressure is a sample plan of what kind of food one must eat in order to control high blood pressure.

Dietary Changes to Maintain Normal Blood Pressure

In order to maintain normal blood pressure levels, various dietary modifications will have to be made.

However, one can easily avoid medication of high blood pressure by taking some precautions while eating:

- *Eat a Low Sodium Diet:* Eating a low sodium diet doesn't mean simply adding less salt to your meals; it also indicates consuming less of processed foods. This is because processed foods, canned foods and fast foods contain a high amount of sodium which affects the blood pressure adversely.

- *Include Lots of Fruits and Vegetables:* Eat lots of fruits and vegetables since they are rich in potassium and this mineral helps to lower the blood pressure. Fresh fruits are also rich in sodium, magnesium, calcium and anti-oxidants and together these help to control the blood pressure levels. Some useful fruits are apricots, bananas, avocados, melons, oranges, lemons, prunes, grapefruit, dates and raisins.
- *Limit Alcohol Intake:* Most people know that moderate amounts of alcohol can help to lower blood pressure levels but people interpret this act the way they like. They drink alcohol in excess and this affects the blood pressure adversely. Limit alcohol intake to a maximum of 2 per day to keep blood pressure under control.
- *Reduce Caffeine Intake:* Although caffeine raises our blood pressure levels very slowly, it does have a negative effect when consumed regularly. Also, the amount of caffeine we drink also makes a huge difference. One should not drink more than 200 mgs per day.
- *Stop Smoking:* The nicotine that is emitted from cigarette smoke is really dangerous, not only for lungs but also for heart. If a person smokes they are not only endangering oneself but also all those around themselves.
- *Eat Only Whole Grains:* Eating whole grains is as effective as anti-hypertensive medicines, since they contain lots of potassium and thus help to control blood pressure. They also contain many other nutritious elements such as fiber, selenium, magnesium, folate and iron. One should eat at least 85 gms of whole grains such as oats, wheat, brown rice, popcorn, quinoa and breakfast cereals.
- *Avoid Fats:* Excess of cholesterol and bad fats clogs the arteries. Limit intake of fat and consume only good fats. Choose foods that contain omega-3 fatty acids. Try steaming, baking, grilling and boiling over frying foods. Food can easily be cooked with a very small amount of fat. It might not taste as good initially but this is what is good for your heart. Replace full fat yoghurt with low fat yoghurt.
- *Eat Lean Meats:* Avoid red meats. Consume chicken and fish that contains omega-3 fatty acids. Bake, roast and grill the poultry but avoid frying. Salmon, tuna and herring are heart-healthy varieties of fish.
- *Limit Intake of Sugar:* Consume only natural sources of sugar such as fruits, raisins, dates and maple syrup. Avoid aerated beverages and packed juices since these contain a lot of sugar. Avoid unnecessary snacking and don't eat huge portions.

Try not to consume foods that contain high fructose corn syrup. This includes ketchups, crackers and soft drinks.

Lifestyle Changes to Maintain Blood Pressure

Apart from the above dietary changes from your Indian diet plan for high blood pressure, you also need to inculcate certain lifestyle modifications to keep your blood pressure within the normal range.

- *Exercise Daily:* Regular physical exercise can go a long way in bringing your blood pressure levels down. It improves the blood circulation and also lifts your mood.
- *Watch your Weight:* Keep a close eye on your weight and make it a point to maintain it within limits. Lose all that extra weight around your waist and prevent yourself from becoming overweight.
- *Monitor your Blood Pressure:* You may buy a blood pressure monitor and check your blood pressure regularly to keep track of any irregularities.
- *Keep Stress at Bay:* Try to keep stress at bay so that tension and anxiety do not affect your health in any way [2].

Ten Delicious, Nourishing, Healthy Foods that can Lower Our Blood Pressure and Reduce the Risk of Heart Disease.

Banana

These easy-peel fruits aren't just sweet and low in sodium; they're also rich in potassium which helps lower blood pressure. To incorporate more bananas into your diet- add it to your cereal, cake, bread, smoothies and milkshakes.

Spinach

This green leafy delight is low in calories, high in fiber, and packed with nutrients like potassium, folate, magnesium - key ingredients for lowering and maintaining blood pressure levels. Did you know that half a cup of cooked spinach provides around 12% of an adult's recommended daily calcium intake? Add fresh spinach leaves to salads or sandwiches.

Celery

Medicine practitioners have used celery for reducing high blood pressure for ages! Research has shown that eating as few as four celery stalks a day can reduce high blood pressure. It contains phytochemicals known as phthalides that relax the muscle tissue in the artery walls, enabling increased blood flow and, in turn, lowering blood pressure.

Oatmeal

Eating a diet high in fiber & whole grains helps your body maintain a healthy blood pressure and oatmeal does just that! It helps reduce both your systolic and diastolic pressure. This low-sodium food can be prepared as a hot cereal and topped with fruit.

Avocados

The oleic acid found in avocados can reduce high blood pressure and cholesterol levels. Avocados also contain potassium and folate, which both essential for heart health. It is rich in vitamins A, K, B & E and are loaded with fiber.

Watermelon

It contains an amino acid called L-citrulline, which has proven to lower blood pressure. Watermelon is a heart health promoting food loaded with fiber, lycopenes, vitamin A and potassium. All these nutrients have blood pressure-lowering effects. Add this delectable fruit to your diet and wait for the magic to happen!

Beetroot

This crimson root veggie is rich in nitrates, which is thought to relax blood vessels and improve blood flow. Drinking a glass of beet juice can yield a five-point drop in blood pressure, according to a 2012 Australian study. The effect might be even greater over the long term if they are drinking it day upon day. Yes, beetroot juice lowers systolic blood pressure in just a few hours.

Sunflower Seeds

Sunflower seeds are rich in vitamin E, folic acid, protein and fiber. Just a handful of sunflower seeds help to lower your blood pressure and promote your

heart-health. They are also a great source of magnesium and they make a nutritious snack - but be sure to buy them unsalted in order to minimize your sodium intake.

Oranges

This super rich vitamin fruit - is another food we must indulge in to lower your blood pressure. Opt in for a glassful of orange juice or eat the whole fruit to load with fiber and vitamin.

Carrots

Carrots are high in potassium and beta-carotene which have been shown to be effective in reducing high blood pressure. Carrot juice also helps maintain normal blood pressure by regulating heart and kidney functions [3].

Conclusion

Indian diet plan for high blood pressure will help in maintaining blood pressure near normal. One u can slowly get rid of medicines as well. In extreme cases, patients might still have to consult a medical practitioner. Some medications along with dietary modifications will help to keep blood pressure under control.

References

1. [Http://www.everydayhealth.com/high-blood-pressure/guide/](http://www.everydayhealth.com/high-blood-pressure/guide/).
2. [Https://www.dietburrrp.com/indian-diet-plan-for-high-blood-pressure/](https://www.dietburrrp.com/indian-diet-plan-for-high-blood-pressure/).
3. Food.ndtv.com/lists/eat-right-cure-high-blood-pressure-724344.