

Hypertension

What is blood pressure?

- Blood pressure (BP) is a pressure exerted by flowing blood on the walls of our arteries.
- It is important because it is the driving force for blood to travel around the body to deliver oxygen and nutrients to the organs of the body.
- Systolic Blood Pressure (upper BP reading) is a result of Cardiac Activity (Active Cardiac Pumping).
- Diastolic pressure (lower BP reading) indicates pressure maintained in arteries even as heart relaxes between beats.
- The generally accepted level for normal blood pressure is < 130 mm Hg for systolic, and < 85 mm Hg diastolic.

Does blood pressure of an individual remain constant, does it vary?

- Blood pressure never remains constant, it varies from beat to beat.
- Blood pressure variation can be normal or abnormal.
- Such variation can be physiological such as during sleep, food (post-meals), physical activity and exercise, stress, etc. or pathological states due to disease conditions (of kidney, heart, endocrine system).
- Blood pressure may also be affected by changes in posture, advancing age (due to sub-optimal autonomic responses), or by volume of blood in circulation (such as in dehydration).

What is hypertension (high blood pressure)?

- Blood pressures of more than the normal is considered as being indicative of hypertension. If there are persistent readings more than normal, consult a physician (practitioner) of modern medicine for management.

Who all can develop/manifest hypertension?

- Anyone can develop/manifest hypertension. Individuals more than 30 of years of age should have themselves screened for it, once every 3-6 months. Also, with other risk factors (to be discussed such as lifestyle changes (stress and physical inactivity) even younger people can be affected by hypertension.

What causes hypertension?

There is no single cause of hypertension. All the following can contribute to hypertension –

- Advancing Age (> 30 years)
- Obesity
- Lifestyle factors
 - Physical inactivity and sedentary lifestyle
 - Stress
 - Excessive consumption of salt and fatty food (all processed ultra-processed food, baking soda containing bakery products and fried salted snacks have more than that the required amount of salt, good for health)
- Substance abuse
 - Tobacco products (Bidis, Cigarettes, E – cigarettes and non-inhalational forms of tobacco products, including tobacco chewing gum)
 - Alcohol
 - Potentially habit-forming drugs (Cocaine, amphetamine etc.)
- Family history of hypertension, hypertension has a polygenic inheritance. Despite a strong family history, all siblings within a family may not manifest hypertension. Similarly, hypertension can manifest even as family history may be present only in first degree relatives and not one's own parents or siblings.
- Disease such as atherosclerosis, kidney, cardiovascular and endocrine (hormonal) disease/disorders.

How does hypertension affect my body?

- High blood pressure, causes incremental damage to the blood vessels in your heart, brain, kidneys and eyes, with a potential of life threatening events involving heart (heart attacks/myocardial infarction, angina and heart failure), brain (stroke and paralysis), kidneys (chronic renal failure) and/or loss of vision.

Is hypertension preventable and treatable?

Yes, by taking precautions to positively modify the non-genetic factors.

How treat hypertension?

- Individuals with high risk (with contributing factors) must visit a nearby health facility for early as well as periodic screening of hypertension.
- Early diagnosis and treatment of hypertension by registered medical practitioner.
- Periodic measurements and monitoring of blood pressure. It is not required on daily basis. It may be monitored once in 2-3 weeks, or at every visit to the physician.
- Following a healthy lifestyle with adequate sleep, exercise, meditation, and work-life balance, accompanied by modification of diet with no trans-fat, less of other fat and salt will help you manage your blood pressure within normal range.
- Life-Style changes reduce the blood pressure maximally by 5-10%
- If blood pressure is sufficiently high it may not respond only to changes in lifestyle
- Treatment should always be initiated/modified only by a registered medical practitioner

Can high blood pressure be cured without medication?

- It is rare for hypertension to disappear by itself. It can be managed through adoption of healthy lifestyle and dietary modifications alone.

- Taking medications as prescribed by your doctor will help you manage your blood pressure more easily while delaying/preventing complications.
- However, if treatment is discontinued without medical advice, high blood pressure usually returns quickly.

Can I receive treatment from other systems of medicine?

- If there is evidence of organ damage or a past life threatening event, it is preferable to receive treatment from practitioners of modern medicine. However, help from other systems of medicine may be obtained in addition.
- Moderate to severe hypertension should be managed through modern medicine with additional help from other systems.
- Mild hypertension may be managed by traditional systems of medicine but with close monitoring of blood pressure.

I do not take excess salt; how can I reduce it further?

- What we generally look at is only visible salt in diet.
- Additionally, the following may be avoided completely or as far as possible.
 - a) Added table salt in chapati dough, rice, salad and curd
 - b) Salted snacks
 - c) Bakery items that use baking soda
 - d) Pickles and chutneys
 - e) Processed and Ultra-processed food (that invariably contain salt as a preservative and/or taste enhancer)

I am taking some medicine for another illness. Should I stop them if I am prescribed additional medicines for hypertension?

- There are complex interactions between prescribed medicines, these should be discussed in detail with the treating physician. Do not stop/modify taking any medicine on your own.

Can I stop medications for hypertension once my blood pressure is under control?

- Never make this mistake, blood pressure is perceived to be controlled because of regular use of medication and lifestyle modification. You need to consult your treating physician before stopping any medication on your own.

Can hypertension be prevented?

- Genetic factors as a cause of hypertension cannot be modified, however, all acquired factors are modifiable and if managed will prevent hypertension and/or organ damage because of hypertension to a great extent. These include:
 1. Adequate sound sleep
 2. Regular aerobic exercise
 3. Meditation for mental peace
 4. Maintenance of Work-life balance
 5. To be as close to nature as possible in everything including diet
 6. Completely avoidance of trans-fat
 7. Reduction of fat, sugar and salt (sodium) in diet`
 8. Reduction of simple and/or refined carbohydrate in diet
 9. Avoiding use of tobacco (in any form), alcohol, drugs with a potential for addiction
 10. Avoid use of any medicine/drug without proper prescription/recommendation
 11. Avoid use of processed/ultra-processed food without reading and analyzing the contents

What are symptoms of hypertension?

- Hypertension does not have any specific symptoms, that is why it is often called a silent killer. People with the following non-specific symptoms may get their BP checked:
 - a) Unexplained tiredness
 - b) Unexplained heaviness in the chest
 - c) Unexplained breathlessness
 - d) Recurrent headaches
 - e) Recurrent epistaxis
 - f) History of unexplained sub-conjunctival bleeding (bleeding in the eyes or red eyes)

How the diagnosis of hypertension is made?

- Diagnosis of blood pressure is always clinical. When ever blood pressure is more than normal on two or more occasions, hypertension is diagnosed.
- Occasionally, hypertension is diagnosed only during an admission because of a serious end organ damage (brain hemorrhage, heart failure, chronic kidney failure). That is why it is also labelled as a silent killer.

How frequently should I visit a physician if I am diagnosed as hypertensive? And if I am at risk but not yet diagnosed?

- A visit to one's clinician once in 3 months is sufficient in either of the circumstances. However, one must visit the clinician immediately if there are any of the following symptoms:
 - a) Breathlessness
 - b) Chest heaviness or tightness
 - c) Giddiness
 - d) Severe headache
 - e) Visual problems

f) Epistaxis

Can hypertension occur in children?

- Unfortunately, hypertension is affecting children increasingly because of obesity, sedentary life style and poor dietary habits (eating of processed and fast food)

What are causes of hypertension in early age—in children and adolescents?

- As mentioned in the previous question, essential hypertension (hypertension without obvious cause) is being increasingly diagnosed in children.
- Among secondary hypertension, the commonest cause would be hormonal problems

Can I take low sodium salt (LoNa Salt) if I am hypertensive?

- Best would be to decrease the intake of any salt as LoNa salt has potassium chloride, which has its own problems and is best avoided, because a number of drugs used for hypertension can affect potassium.

How weight is related to development of hypertension?

- An increase in weight requires heart to work extra to pump blood into an overweight body, hence blood pressure has to increase significantly to maintain this supply.

What is hypertensive crisis?

- Hypertensive crisis is a serious increase in blood pressure, associated with damage to vital organs and requires immediate

attention in hospital. Following symptoms should serve as a red-flag (warning) sign for a hypertensive.

- a) Severe persistent headache
- b) Weakness in any part of the body including face
- c) Chest pain/tightness or heaviness
- d) Breathlessness on rest or on minimal walking
- e) Swelling of feet
- f) Epistaxis
- g) Bleeding in eyes
- h) Blurring of vision

I have to visit my physician for review, should I miss my previous night and/or morning dose of anti-hypertensive drug??

- Keep taking all your drugs during any follow up visit.

How intake of alcohol affects the BP?

- Regular intake of alcohol can worsen your hypertension.
- Intake of alcohol by a hypertensive can cause a drop in blood pressure acutely leading to giddiness and fainting.

Do medicines increase BP?

- Yes, some common medicines are known to increase BP. These include pain killers, drugs in cough syrups, some proprietary cough and cold medicines and steroids

What to do if I miss the dose of my HTN medicine?

- Nothing to worry if you have missed one dose of your HTN medicine, but try to be as regular as you can be.

Does HTN or its medicines cause sexual dysfunction?

- Some of the medicines used to treat hypertension can cause erectile and sexual dysfunction among males, please consult your physician, if you face such a problem.

How to check BP at home?

- It is best not to check blood pressure at home. Blood pressure should be checked at most once a month. It is best checked by your physician. Frequent checking of BP at home makes one always think about his blood pressure, something that can actually worsen the blood pressure.
- If one wants to have one, buy good quality electronic apparatus. Have it checked when ever you visit your doctor, but do not check your BP too frequently

Is there any variation in BP according to time in day? (diurnal variation). If yes what is ideal time to check BP?

- Yes, BP varies at different times of the day.
- Generally, peak, high, recordings of BP occur early in the morning, which may be the best time to check when checking yourself.
- For some individuals such peaks may be at different times.

My BP is high only occasionally? Do I need treatment?

- For high BP recordings occasionally, consult your physician and follow his/her advise.

What is primary (essential) and secondary HTN?

- When ever there is no single curable cause found for hypertension, it is called primary. 95 per cent of all hypertensives have primary or essential hypertension.

What is the effect of tea, coffee on BP?

Tea and specially coffee can increase the blood pressure of some individuals. It is best for hypertensives to minimize the intake of tea and avoid coffee altogether.

What is relationship between sleep and HTN?

Restful sleep is important for hypertensives. To get restful sleep, it is best to avoid stimulants (tea, coffee and cola drinks after 2-3 PM in the afternoon). Alcohol can also affect the quality of sleep.