

# World Hypertension Day

## Measure Your Blood Pressure, Control It, Live Longer



■ DR. SUSHIL KUMAR SHARMA

World Hypertension day is celebrated annually on the 17th May. The main aim of the day is to educate the public and increase awareness of hypertension, which is also commonly known as high blood pressure. The expanded theme for World Hypertension Day is to Measure Your Blood Pressure accurately, Control It, Live Longer, with a goal of increasing high blood pressure (BP) awareness in all populations around the world. Main crux of this theme is focusing on combatting low awareness rates worldwide, especially in low to middle income areas, and accurate blood pressure measurement methods. Amid the resurgence of second wave of Covid particularly in our setup this task of creating awareness has become even more challenging but still we have to manage it with all the resources available whether in online or offline mode.

**Prevalence:** Hypertension is a major cause of a range of health problems such as strokes, heart attacks and kidney disease, and can also contribute to dementia. Globally, an estimated 26% of the world's population (972 million people) has hypertension, and the prevalence is expected to increase to 29% by 2025, driven largely by increases in economically developing nations.

The high prevalence of hypertension exacts a tremendous public health burden. As a primary contributor to heart disease and stroke, the first and third leading causes of death worldwide, respectively, high blood pressure was the top modifiable risk factor for disability adjusted life-years lost worldwide. In some recent studies both covid-19 case fatality rates and hypertension prevalence increases with age, reaching 8.0% and over 50% respectively for the 70 to 79 year age group.

**Symptoms of hypertension :**

Hypertension is generally a silent condition. Many people won't experience any symptoms.

It may take years or even decades for the condition to reach levels severe enough that symptoms become obvious. Even then, these symptoms may be attributed to other issues.

**Symptoms of severe hypertension can include:**

- Headaches
- Shortness of breath
- Epistaxis
- Flushing
- Dizziness
- Chest pain
- Loss in Vision

These Symptoms require immediate medical attention .They don't occur in everyone with hypertension, but waiting for a symptom of this condition to appear could be fatal.

The best way to know if you have hypertension is to get regular blood pressure readings.

**Risk factors for developing high blood pressure :**

- Family History
- Advanced Age
- Gender Related risk pattern
- Lack of Physical Activity
- Poor Diet, especially one that includes too much salt
- Overweight and obesity
- Alcohol Consumption
- Stress and Ethnic back ground
- Possible contributing factors : Stress , Second hand Smoke , Sleep Apnea.

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

**Causes of Hypertension:**

There are two types of hypertension.

**Primary hypertension** - Primary hypertension is also called essential hypertension. This kind of hypertension develops over time with no identifiable cause. Most people have this type of high blood pressure. Researchers are still unclear what mechanisms cause blood pressure to slowly increase. A combination of factors may play a role. These factors include:

**Genes:** Some people are genetically predisposed to hypertension. This may be from gene mutations or genetic abnormalities inherited from your parents.

**Physical changes:** If something in your body changes, you may begin experiencing issues throughout your body. High blood pressure may be one of those issues. For example, it's thought that changes in your kidney function due to aging may upset the body's natural balance of salts and fluid. This change may cause your body's blood pressure to increase.

**Environment:** Over time, unhealthy lifestyle choices like lack of physical activity and poor diet can take their toll on your body. Lifestyle choices can lead to weight problems. Being overweight or obese can increase your risk for hypertension.

**Secondary Hypertension** - Secondary hypertension often occurs quickly and can become more severe than primary hypertension. Several conditions that may cause secondary hypertension include:

- kidney disease
- obstructive sleep apnea
- congenital heart defects
- problems with your thyroid
- adverse effects of certain group of medications
- alcohol abuse or chronic use
- adrenal gland problems
- certain endocrine tumors
- Basic and Optional Laboratory Tests for Primary Hypertension
- Fasting blood glucose
- Complete blood count
- Lipid profile
- Serum creatinine with eGFR
- Serum sodium, potassium, calcium\*
- Thyroid-stimulating hormone
- Urinalysis
- Electrocardiogram
- Optional testing Echocardiogram
- Uric acid
- Urinary albumin to creatinine ratio

**High blood pressure Emergencies :** High blood pressure is usually a chronic condition that gradually causes damage over the years. But sometimes blood pressure rises so quickly and severely that it becomes a medical emergency requiring immediate treatment, often with hospitalization.

In these situations, high blood pressure can cause:

Memory loss, personality changes, trouble concentrating, irritability or progressive loss of consciousness

Stroke

Severe damage to your body's main artery (aortic dissection)

Chest pain

Heart attack

Sudden impaired pumping of the heart, leading to fluid backup in the lungs resulting in shortness of breath (pulmonary edema)

Sudden loss of kidney function

Complications in pregnancy (preeclampsia or eclampsia)

Blindness

**Complications of Uncontrolled Hypertension**

The excessive pressure on your artery walls caused by high blood pressure can damage your blood vessels, as well as organs in your body. The higher your blood pressure and the longer it goes uncontrolled, the greater the damage.

**Uncontrolled high blood pressure can lead to complications including:**

**Heart attack or stroke.** High blood pressure can cause hardening and thickening of the arteries (atherosclerosis), which can lead to a heart attack, stroke or other complications.

**Aneurysm.** Increased blood pressure can cause your blood vessels to weaken and bulge, forming an aneurysm. If an aneurysm ruptures, it can be life-threatening.

**Heart failure.** To pump blood against the higher pressure in your vessels, the heart has to work harder. This causes the walls of the heart's pumping chamber to thicken (left ventricular hypertrophy). Eventually, the thickened muscle may have a hard time pumping enough blood to meet your body's needs, which can lead to heart failure.

Weakened and narrowed blood vessels in your kidneys. This can prevent these organs from functioning normally.

Thickened, narrowed or torn blood vessels in the eyes. This can result in vision loss.

Metabolic syndrome. This syndrome is a cluster of disorders of your body's metabolism, including increased waist circumference; high triglycerides; low high-density lipoprotein (HDL) cholesterol, the "good" cholesterol; high blood pressure and high insulin levels.

These conditions make you more likely to develop diabetes, heart disease and stroke.

Trouble with memory or understanding. Uncontrolled high blood pressure may also affect your ability to think, remember and learn. Trouble with memory or understanding concepts is more common in people with high blood pressure.

Dementia. Narrowed or blocked arteries can limit blood flow to the brain, leading to a certain type of dementia (vascular dementia). A stroke that interrupts blood flow to the brain also can cause vascular dementia.

**Prevention of high blood pressure**

Healthy lifestyle changes can help you control the factors

that cause hypertension. Here are some of the most common home remedies

**Developing a healthy diet :**

A heart-healthy diet is vital for helping to reduce high blood pressure. It's also important for managing hypertension that is under control and reducing the risk of complications. These complications include heart disease, stroke, and heart attack.

A heart-healthy diet emphasizes foods that include:

- fruits
- vegetables
- whole grains
- lean proteins like fish
- Increasing physical activity

Reaching a healthy weight should include being more physically active. In addition to helping you shed pounds, exercise can help reduce stress, lower blood pressure naturally, and strengthen your cardiovascular system.

Aim to get 150 minutes of moderate physical activity each week. That's about 30 minutes five times per week.

**Reaching a healthy weight**

If you are overweight or obese, losing weight through a heart-healthy diet and increased physical activity can help lower your blood pressure.

**Managing stress**

Exercise is a great way to manage stress. Other activities can also be helpful. These include:

- meditation
- deep breathing
- massage
- muscle relaxation
- yoga or tai chi

These are all proven stress-reducing techniques. Getting adequate sleep can also help reduce stress levels.

**Adopting a cleaner lifestyle**

If you're a smoker, try to quit. The chemicals in tobacco smoke damage the body's tissues and harden blood vessel walls.

If you regularly consume too much alcohol or have an alcohol dependency, seek help to reduce the amount you drink or stop altogether. Alcohol can raise blood pressure.

**Key Message:**

Proper management can control hypertension and prevent its complications.

Effective lifestyle and drug treatments are available that could control hypertension in most individuals. Newer drugs provide better control while avoiding the side effects that have limited therapy in the past.

A close collaboration between the physician and patient is needed to optimize better health outcomes.

The latest evidence shows that people with uncontrolled or untreated high blood pressure may be at risk of getting severely ill with COVID-19. It's also important to note that people with untreated high blood pressure seem to be more at risk of complications from COVID-19 than those whose high blood pressure is managed with medication.

There is as yet no evidence that hypertension is related to outcomes of COVID-19, or that ACE inhibitor or ARB use is harmful, or for that matter beneficial, during the COVID-19 pandemic. Use of these agents should be maintained for the control of blood pressure, and they should not be discontinued, at least on the basis of current evidence at this time. With the vaccination drive for covid going on at a faster pace every hypertensive patient particularly those with other co morbidities should get the jab so as to decrease the morbidity and mortality .

When it comes to getting vaccinated, benefits far outweigh the risks for people with cardiovascular issues. Of note, every hypertensive is advised to take blood pressure medications, such as ACE-Inhibitors, beta-blockers, or blood thinners, before attending your vaccination appointment, especially if you have cardiovascular complications like cardiac chest pain or angina. The unintended consequences of discontinuing effective treatments for hypertension, without a suitable replacement titrated against blood pressure measurements under direct medical supervision, could put patients at needlessly increased cardiovascular and possibly corona virus risk. In addition, managing such titration currently, when primary care is prioritizing acute illness over routine contacts (including blood pressure checks), makes the proposed strategy impractical and risks further diluting access to care.

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## General Knowledge Questions

1. Which of the following is a large blood vessel that carries blood away from the heart?

- A. Vein
- B. Artery
- C. Capillary
- D. Nerve

2. Which of the following is not a member of the vitamin B complex?

- A. Thiamine
- B. Riboflavin
- C. Folic acid
- D. Ascorbic acid

3. Fungi are plants that lack:

- A. Oxygen
- B. Carbon dioxide
- C. Chlorophyll
- D. None of these

4. What makes a reptile a reptile?

- A. Cold blooded
- B. Warm Blooded
- C. Non-Hearing
- D. Egg-laying

5. Which blood vessels have the smallest diameter?

- A. Capillaries
- B. Arterioles
- C. Venules

D. Lymphatic

6. Which of the following is an air-borne disease?

- A. Measles
- B. Typhoid
- C. Pink eye
- D. None of the above

7. A yellow dust appears on the fingers, whenever we touch the middle of a flower. These tiny yellow grains are one of the most precious substances in nature because they contain the secret of plant life. What is this dust called?

- A. Pollen
- B. Sperm
- C. Spore
- D. Sporocyst

8. Which organ of the body produces the fluid known as bile?

- A. Liver
- B. Pancreas
- C. Gall bladder
- D. Kidney

9. Which of the following hormones is a steroid?

- A. Estrogen
- B. Glucagon
- C. Insulin
- D. Oxytocin

10. Which one of the following is not a function of

the liver?

- A. Regulation of blood sugar
- B. Enzyme activation
- C. Detoxification
- D. Reproduction

11. Greatest number of Sweat glands are present in which part of the human body?

- A. Forehead
- B. Forearm
- C. Palm of the hand
- D. Back

12. Vaccination was started by.....

- A. Jonas E. Salk
- B. Paul Muller
- C. Edward Jenner
- D. Robert Frost

13. Proteins are made up of .....

- A. Sugars
- B. Amino acids
- C. Fatty acids
- D. Nucleic acids

14. Mention the source of Liver, milk, egg yolk, fish liver oil?

- A. Vitamin A
- B. Vitamin B2
- C. Vitamin D
- D. Vitamin C

## ASTRO SPEAK

ARIES



MAR 21 - APR 20

You may have a tendency to talk really quickly to say what's on your mind before you forget it, but you'll get a better response if you speak slowly and stick to the point as much as possible. You have a lot running through your mind, but try to be conscious of your delivery. The most important thing to do is keep your audience in mind and tailor your style to their needs.

TAURUS



APR 21 - MAY 20

You have a tendency to rush ahead right now, but in this moment, you want to make absolutely sure that everything is in order before you sign on the dotted line. Now is not the time to sign any legally binding contracts or put your name on anything that even looks remotely official. If someone asks for your expert opinion, be positive you know what they're requesting. The less people ask of you today the better.

GEMINI



MAY 21 - JUN 20

The more personal and professional names you add to your contact list, the happier you are. After all, meeting new people is one of your favorite pastimes. Introduce yourself to a neighbor you've never talked to before, chat with someone on the train, or go out of your way to welcome a new co-worker. Of course, you probably aren't going to connect with every person you meet, make an effort.

CANCER



JUN 22 - JUL 23

You aren't really all that interested in hearing anyone else's opinion about what you feel is your business. You have your own individual style of doing things. Friends and family members might want to put in their two cents or offer you constructive criticism, but you're in no mood to hear any of it. Politely but firmly decline offers of help.

LEO



JUL 24 - AUG 23

You could be in a social mood today. You may have a lot of things on your to-do list, but do they really all have to get done right this minute? Instead, think of the day in terms of what you want to do. Put off what you can and start planning an impromptu getaway even if it's only a quick pedicure. Call your closest friends to join you. You're certainly not the only one in the mood to blow off some steam!

VIRGO



AUG 24 - SEP 23

You can't really afford to waste any time playing guessing games. The success of the tasks you've been assigned depends on cold, hard facts. If you don't know the answers to the questions that need to be answered, ask an expert. You'll probably have to cite your sources, so be sure to take down names, numbers, addresses, titles, and anything.

LIBRA



SEP 24 - OCT 22

The more confidence you have in yourself, the less other people will doubt you. You've been looking for that big break, and today you're finally in the position to get it. You can't do it all on your own, but you should be able to get the major part out of the way without any help from others. This is one time when your brainpower needs to be turned up to its maximum level. Even so, you have very little to worry about.

SCORPIO



OCT 23 - NOV 22

If they see any errors, don't be defensive. Just fix what needs to be fixed and be grateful you caught it in time. It won't take very much of your time to double-check your to-do list, and it might even pay to have someone else look it over for you just in case. Run your info by someone you trust, preferably a friend or close family member.

SAGITTARIUS



NOV 23 - DEC 22

Philosophy is very appealing to you right now, but for whatever reason, you aren't quite able to grasp the most pressing concepts. You're able to get just below the surface, but you can't quite reach the deep levels you know are there. Don't worry. No one thinks any less of you. Instead of giving up, take this opportunity to learn what you can and don't worry about your temporary mental block. You probably just need to relax.

CAPRICORN



DEC 23 - JUL 20

You're uncharacteristically scatterbrained at the moment, and you can't seem to remember even the most trivial things. Stop for a minute and give yourself time to adjust to this new sense of confusion. You have the feeling you might just lose your head if it weren't attached to you right now. It won't last forever, but it might last long enough to frustrate you thoroughly.

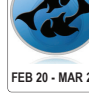
AQUARIUS



JAN 21 - FEB 23

Expect surprises in the romance department. Some will be much more welcome than others. Electricity is in the air, and you're likely to be the recipient of more than one admiring glance. Even if you aren't used to this kind of attention, you sure could get used to it pretty quickly! If you're single, this is a great time to begin a new romance.

PISCES



FEB 20 - MAR 20

You are much better off spending time with people you know in familiar surroundings right now. If you absolutely have to go out of town or even out of your neighborhood, take along a comforting reminder of home. It will give you much-needed peace of mind. Take your time getting there if you have anything big scheduled for today, or see if you can postpone it.