

42% Indians at risk of misdiagnosis of hypertension

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Indians seem to have higher blood pressure in the evenings than in mornings



India Heart Study (I.H.S) findings highlight a high prevalence of masked hypertension and white-coat hypertension in Indians at 42% on first office visit. It was also found that Indians have a higher average resting heart rate of 80 beats per minute, higher than the desired rate of 72 beats per minute.

In Mumbai (1643 participants), the study found, that

- 4% of the respondents were oblivious of their high blood pressure levels (masked hypertension) and
- 8% of respondents were found to have white-coat hypertension and were misdiagnosed

As compared to other places where this study was conducted, with 50 percent participation in Mumbai, more women seemed to be conscious of their health.

In Karnataka, the study found that

- 12.7% of the respondents were oblivious of their high blood pressure levels (masked hypertension) and
- 25% of respondents were found to have white-coat hypertension and were misdiagnosed

Another striking finding of the study is that unlike other countries, Indians seem to have higher blood pressure in the evenings than in mornings which should guide doctors to rethink the time advised for anti-hypertensive drug dosage. Any treatment for hypertension should also consider the choice of medicine which will help reduce higher heart rate.

The study was conducted over a period of nine months, starting from June 2018 till March 2019. The blood pressure measuring device from Taiwan headquartered Microlife Corporation was used during the study.

Dr. Upendra Kaul, Cardiologist, Chairman and Dean Academics and Research of Batra Hospital & Medical Research Centre (BHMRC), who was the Principal Investigator of I.H.S, said "India Heart Study points to a need for better clinical management

of hypertension in India. This is India-specific data and should help shape the best practices for the diagnosis of high blood pressure among Indians. The study presents exhaustive data on the various aspects of hypertension.”

Throwing light on the study, **Dr. Willem Verberk**, PhD., Cardiovascular Research Institute Maastricht (CARIM), and a key investigator, said, “For the ‘correct’ detection of hypertension, home blood pressure monitoring is advised. However, different patients may have different co-morbidities, like diabetes, which makes the use of validated devices for home blood pressure monitoring important. Home blood pressure monitors for pregnant women, adolescents and people with kidney disorders needs to be validated separately.”

Dr. Viraj Suvarna, President – Medical, Eris Lifesciences said, “Masked Hypertension, if undetected, is a dangerous phenomenon. It is important to monitor one’s blood pressure, beyond the clinic, even at home, according to prescribed guidelines. Accurate diagnosis of hypertension is an important element of our fight against this disease and improving health outcomes.”

According to **Dr. Brian Pinto** of Holy Family Hospital, Mumbai, and a co-ordinator for IHS from Mumbai: “The incidence of masked hypertension, of people not knowing they had hypertension, was found at 15% among Mumbaikars. This can have serious consequences for patients and needs their attention.”

Dr. C K Ponde, Cardiologist at Hinduja Hospital, and a co-ordinator for I.H.S from Mumbai, said, “Uncontrolled high blood pressure or hypertension is the most common cause for rise in heart attacks in the country. Since the symptoms do not manifest themselves early on, it’s hard to detect the existence of hypertension. A higher heart rate further complicates matters.”

White-coat hypertensives who are misdiagnosed and put on anti-hypertensives have to take unnecessary medication. There is also a risk of hypotension (low blood pressure, less than 90/60) in such persons. On the other hand, a masked hypertensive may go undiagnosed running the risk of complications for heart, kidney, and brain, leading to premature mortality.

“High blood pressure affects multiple organs in the body including the kidneys. Uncontrolled high blood pressure can lead to Chronic Kidney Disease which complicates disease management,” added **Dr. Prashant Rajput**, a renowned Nephrologist.

What sets this study apart is that it was conducted a ‘drug-naive’ set of participants using a comprehensive process of taking blood pressure readings. The investigators examined the blood pressure of **18,918 participants** (male and female) through **1233 doctors** across **15 states** over a period of **nine months**. The participants’ blood pressure was monitored at home four times in a day for 7 consecutive days.

Eris Lifesciences commissioned this study that was conducted under the aegis of Batra Hospital & Medical Research Centre. The company is also starting with another study very soon- The Ongoing Outcome (TOO) which will be based on patient follow-ups.