Hospital attending Cardiology outpatient department for master health checkup, aged between 30 to 65 years, who volunteered to take part in the study. The procedure was explained and written consent was obtained from the subjects. All the subjects underwent a detailed clinical examination regarding anthropological measurement & physiological measurement before being included in the study as per the study protocol. The subject selection was based on the predetermined exclusion-inclusion criteria.

**Inclusion criteria:**

**Study group:**
- Controlled Hypertension for more than 2 years
- Males and females aged 30-65 years
- Normal Cardiovascular and Respiratory system on clinical examination
- No history of Diabetes mellitus
- No history of any acute infectious diseases
- No history of any chronic diseases

**Control group:**
- Normotensive population
- Males and females aged 25-65 years
- Normal body mass index (BMI: 19-25 Kg/m²)
- Normal Cardiovascular and Respiratory system on clinical examination
- No history of Diabetes mellitus
- No history of any acute infectious diseases
- No history of any chronic diseases

**Exclusion Criteria:**
- < 25 years and > 75 years of age
- History of Diabetes mellitus
- History of Connective tissue disorders
- History of Congenital heart diseases
- History of Coronary artery disease
- History of peripheral artery disease
- History of valvular heart disease
- History of cardiac arrhythmias
- Patients where it was technically difficult to perform echocardiography
- Abnormal Cardiovascular and Respiratory system on clinical examination

Cardiovascular Autonomic function tests were carried out in the morning in the department between 10 AM to 12 Pm after 2 hours of light breakfast, after intimate testing procedures with the subjects.

The Autonomic function tests which were performed to assess the cardiovascular parasympathetic functional status:

1) **Deep breathing test** - This test is used to assess the parasympathetic activity. Subject was instructed to maintain deep breathing at a rate of six breaths per minute and was made to lie down comfortably in supine position with head elevated to 30°. ECG electrodes were connected for recording Lead II ECG. While subject was breathing deeply at a rate of 6 breaths per minute (allowing 5 seconds each for inspiration and expiration) maximum and minimum heart rates were recorded with each respiratory cycle. Expiration to inspiration ratio was determined by using the formula.

2) **Valsalva Manoeuver** - The Valsalva ratio is a measure of parasympathetic and sympathetic functions. Subject was made to exhale forcefully into the mercury manometer and asked to maintain the expiratory pressure at 40 mm of Hg for 10 – 15 seconds. ECG changes were recorded throughout the procedure, 30 seconds before and after the procedure. Valsalva ratio were calculated by using the formula.

3) **Heart rate response to standing:** On changing the posture from supine to standing heart rate increases immediately by 10-20 beats per minute. This response is detected by recording ECG in supine and standing postures. Subject was made to lie down in supine posture. ECG electrodes were connected from the subject to the cardiovwin system. Subject was asked to relax completely for a minimum period of 10 minutes. Basal heart rate was recorded by using cardiovwin system. Subject was asked to stand up immediately and change in heart rate is noted from the monitoring screen of cardiovwin. Heart rate response to standing was determined by using the formula heart rate in standing position – heart rate in supine position.

Heart rate variability test: HRV was done between 9 am to 12 pm to minimize the effect of diurnal variation. Subjects were informed to fast at least before 12 hours to avoid effect of food on HRV. Subject was asked to lie down comfortably on supine position for 5 minutes before recording of HRV to avoid wrong results. Subjects were instructed to breathe quietly and avoid movement and not to talk while procedure