

# Visualizing and Predicting Heart Diseases with an Interactive Dash Board

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## **BP Variation With Respect To Age**

Blood pressure variability has been considered a physiological marker of autonomic nervous system control, with short- and long-term fluctuations from intricate interactions among behavioral, environmental, neural central or reflex influences, along with other potential contributing factors.

Current indexes of blood pressure variability raise methodological issues related to their poor reproducibility, their interdependence, and their association with the level of blood pressure. Besides methodological problems, the prognostic significance of blood pressure variability remains controversial. Some studies reported association of end-organ damage (Parati et al., 1987a; Tatasciore et al., 2007; Matsui et al., 2011), cardiovascular events (Kikuya et al., 2000; Rothwell et al., 2010a,b; Rothwell, 2010; Webb et al., 2010; Johansson et al., 2012; Shimbo et al., 2012), or mortality (Muntner et al., 2011) with blood pressure variability, whereas others failed to find any association or found variability to be inferior to the level of blood pressure (Pierdomenico et al., 2006; Hansen et al., 2010; Schutte et al., 2012). This review addressed to what extent blood pressure.

Increased BP variability causes target organ damage, e.g., endothelial dysfunction, vascular and cardiac hypertrophy, disease and cerebral . and different BP variabilities, both occurring in ASCOT, are obviously difficult to dissociate, even with complex statistical adjustments, a lower BP variability may be an additional property of CCBs contributing to their established effectiveness in preventing CV outcomes. Analyses of individual data from trials comparing CCBs with placebo and other agents are desirable.

Central command continuously modulates the baroreflex- and chemoreflex-mediated cardiovascular and autonomic functions.<sup>33,34</sup> This modulation is important for BP variability during sleep and daytime activities. Several cortical and subcortical brain sites have direct neural projections to the autonomic centers located in the brainstem and modulate their functions.

