**A Study on the effect of body position on the Blood pressure measurements**

**Introduction**

Blood pressure (BP) measurement is perhaps the most frequently performed clinical procedure and important therapeutic decisions rely on its accuracy . However ,its accuracy strongly depends both on the number of measurements and the circumstances during the procedure. Unfortunately, it is perhaps one of the most inaccurately performed procedures done by healthcare providers (Armstrong 2002). A study revealed that up to 97% of doctors do not adhere to the recommendations of the American Heart Association when measuring BP, yet crucial decisions about treatment are made based on these inaccurate measurements (McKay et al. 1990). Efforts have continuously been made to standardize the procedure, but it remains difficult to reach a consensus among different official guidelines for BP measurement. Moreover, in daily practice and even in research, factors that can significantly influence BP measurements are sometimes erroneously neglected (Bailey & Bauer 1993, Norman et al. 1999). One of these factors is the position of the both the patient and the arm during the BP measurement. The World Health Organization/International Society of Hypertension (WHO/ISH) guidelines on BP measurement recommend that BP should be measured routinely with the patient seated with the arms supported at the heart level, but the patient may also be supine or standing provided that the arm is supported at heart level for all body postures (Campbell et al. 1994). Other guidelines suggest that sitting and supine BP readings may be considered equivalent (Sala et al. 2005). In addition, the approximation of the heart level or the reference right atrium level is often vaguely mentioned or not mentioned at all (Pickering 2002). WHO/ISH and the British Hypertension Society (BHS) are more precise in their recommendations. According to WHO/ISH, the right atrial level can be practically estimated at the level of the fourth intercostal space (Subcommittee 2003) and according to BHS at the level of the mid-sternum (Petrie et al. 1986).