SUMMARY

The research work compiled in this thesis was conducted based on the fact that India has been witnessing a significant rise in the prevalence of cardiovascular risk factors like obesity and hypertension amongst children and adolescents and that cardiovascular diseases affect the Indians at a younger age as compared to other ethnic populations. A cross-sectional study was conducted on the Gujarati adolescents to determine the effect of lifestyle and body composition on the cardiovascular determinants of blood pressure in Gujarati adolescents so that effective preventive strategies may be developed for the local population. Meal Frequency, Sleep Duration at Night, Physical Activity and body composition in terms of total body weight, total fat mass, visceral fat mass and fat free mass were studied and related to the cardiovascular determinants of blood pressure viz, cardiovascular sympathetic activity at rest, vascular distensibility, cardiovascular reactivity to stress and left ventricle mass. The study found a significant and positive impact of adequate sleep duration on the cardiovascular reactivity and a significant and negative impact of increase adiposity on the vascular distensibility, sympathetic vascular tone and cardiovascular reactivity. However, the impact of adiposity on the cardiovascular system is gender dependent, indicating a protective role of female sex hormones and a negative role of male sex hormones in the pathogenesis of high blood pressure. The study shows that lifestyle to some extent and increase in adiposity significantly affects the cardiovascular determinants of blood pressure in Gujarati population at an age as early as 16-19 years. However, experimental and longitudinal studies are still required with more definitive investigations so as to develop preventive and therapeutic strategies for hypertension.