Objective To estimate the prevalence and distribution of hypertension and to determine the status of hypertension awareness, treatment, and control in Xinjiang.

Methods The Cardiovascular Risk Survey in Xinjiang, A total of 14,618 adults, age ≥35 years in Xinjiang.

Results The standardisation prevalence is 42.25%. Prevalence rate of hypertension is 42.44% in Han, 35.2% in Uygur, 53.04% in Kazak respectively. Among hypertensive patients, only 45.5% were aware of their high blood pressure, 19.7% were taking antihypertensive treatment, and control in Xinjiang.

Conclusion The smoking rate of Shougang district was lower than that of Beijing and the whole country. The smoking rate in male was significantly higher than that in female. It is very important to develop the health education and the smoking control in some special people.

Results There were statistical difference about the levels of the blood lipids between the Li and the Han nationality. The reason could be that the Li nationality living in the poor area who are under low living standard. The different Polymorphisms of blood lipid genes may be one of the causes.

Objective To study the impact of 24-h sleep deprivation on arrhythmia and heart rate variability (HRV).

Methods Soldiers were used as research objects, they were divided into normal group and the sleep deprivation group. 1. Heart rate, atrial premature beat, ventricular premature beat and heart rate variability were observed by 24-h ambulatory ECG during sleep deprivation. 2. The changes of serum cortisol levels were detected during sleep deprivation.

Results 1. After 24 h sleep deprivation, HF, SDNN and RMSSD significantly reduced, LF significantly increased, LF /HF showed a significant increase. 2. Part of volunteers presented atrial premature beats and ventricular premature beats. 3. The level of serum cortisol significantly increased.

Conclusion The underlying mechanism of alteration of arrhythmia and HRV after 24-h sleep deprivation would be ascribed to lower vagal activity and elevated sympathetic activity.