with ≤5 YSM and then decreased. Other risk factors of hypertension were body mass index (BMI), abdominal obesity, a family history of cardiovascular disease among first-degree relatives, a personal history of diabetes, and high TG.

### GW26-e2344

**The optimal cutoff point of waist-to-hip ratio for Uyghur population aged over 35 years in Xinjiang**

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**OBJECTIVES** We aimed to explore the appropriate WHR cutoffs to identify people at high risk of cardiovascular disease of Uygur adults in Xinjiang.

**METHODS** The cardiovascular risk survey(CRS) in Xinjiang was conducted from October 2007 to March 2010, using 4-stagestratified random sampling method to select 14618 representative participants, and the questionnaire survey, anthropometric data, blood pressure, serum concentration of serum total cholesterol, triglyceride, low density lipoprotein (LDL), high density lipoprotein (HDL) and fasting glucose were documented. A total of 4767 Uyghur people were selected and completed the study. The present statistical analysis was restricted to the 4657 adults between 35 and 101 years old who had complete anthropometric data. The sensitivity, specificity and distance on the receiver operating characteristic (ROC) curve of different WHR levels predicting risk factors of cardiovascular disease were calculated. The analysis method of ROC curve was used to determine the optimum cut-off point of WHR predicting risk factors of cardiovascular disease.

**RESULTS** (1) The prevalence of hypertension, hypercholesterolemia and hypertriglyceridemia were higher with higher WHR for both men and women. While the prevalence of diabetes, high LDL, low HDL did not show obvious trend both in men and women.

(2) The shortest distance in the ROC curves for hypertension, dyslipidemia, diabetes and ≥2 of these risk factors suggested a WHR cutoff of 0.92 for men and 0.90 for women.

**CONCLUSIONS** Higher WHR cutoffs are needed in the identification of people at high risk of cardiovascular disease among Uygur adults in Xinjiang.

### GW26-e2358

**Current status regarding the cardiovascular disease-related risk levels among the hypertensive population of different ethnicities in Xinjiang, China**

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**OBJECTIVES** To learn the status of the cardiovascular disease associated risk levels among Xinjiang Han, Uygur and Kazakh hypertensive population.

**METHODS** Using the four stages stratified random sampling method, all the data was collected from local residents age large than 18, subjects information include lifestyle, physical examination and laboratory examination results from 2007 to 2010.

**RESULTS** There is 15061 subjects accomplish this survey, in which 2654 Han, 1612 Uygur and 2034 Kazakh people diagnosed with hypertension, Most of them were “grade one hypertension”. Cardiovascular disease related risk factors respectively in Han, Uygur and Kazakh, include older age (39.3%, 38.0%, 30.9%), smoking (33.2%, 20.1%, 32.4%), abnormal fasting glucose (10.4%, 6.5%, 8.0%), abnormal TC (19.4%, 13.6%, 24.7%), obesity (26.0%, 39.8%, 46.3%). Majority hypertensive people accompany with 1 risk factor. The risk proportions of low, medium, high and very high in hypertension population of different ethnicities respectively is Han (19.4%, 34.6%, 18.8%, 27.3%), Uygur (17.7%, 37.6%, 17.3%, 27.4%) and Kazakh (12.5%, 38.0%, 31.1%, 18.3%). Most proportion of hypertension people in high risk and very high risk situation, the medium risk hypertension population proportion in female were also very large. In the aware group, the medium risk population is mostly. In the group without therapy, medium risk, high risk and very high risk proportion were similar high, The cardiovascular disease risk stratification in age, gender, aware or unaware of disease, medicine therapy or not have significant difference in different ethnicities of hypertension population.

**CONCLUSIONS** The cardiovascular disease risk-related levels in Xinjiang hypertension population have difference between Han, Uygur and Kazakh ethnicities, most of hypertension population under high risk and very high risk of situation, especially in those age ≥60, males population. In female, medium risk population proportion were also very high.

### GW26-e4731

**Prevalence of atrial fibrillation and its risk factors in rural China: a cross-sectional study**

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**OBJECTIVES** To evaluate the prevalence of atrial fibrillation (AF) in physical laborers in rural China and identify contributing risk factors.

**METHODS** A cross-sectional study of 11,956 permanent residents of Liaoning Province in rural China ≥ 35 y of age (primarily physical laborers) was conducted between January and August 2013 (response rate 85.3%). All participants completed a questionnaire and underwent a physical exam, echocardiography and electrocardiography. Blood samples were drawn for laboratory analyses, and AF was diagnosed on the basis of history and electrocardiograph findings. Risk factors for AF were evaluated with a stepwise logistic regression analysis.

**RESULTS** The prevalence of AF was 1.2% overall, but rose steeply with age (0.1% in those 35-44 y of age, and 4.6% in those ≥ 75 y); there was no significant gender difference at any age. Independent risk factors for AF were age (odds ratio [OR] 1.89; $P < 0.001$), diabetes (OR 2.07; $P = 0.001$), history of myocardial infarction (OR 5.91; $P < 0.001$), low left ventricular ejection fraction (OR 1.85; $P = 0.005$), and low physical activity (OR 1.72; $P = 0.003$), whereas obesity, hypertension, cholesterol and triglyceride levels, current smoking and drinking, left ventricular hypertrophy, and family history of AF were not significant contributors.

**CONCLUSIONS** Although the prevalence of AF in physical labors in rural China is low, age, diabetes, history of myocardial infarction, low left ventricular ejection fraction, and low physical activity are independent risk factors.

### GW26-e4777

**Differentiation the acute effects of Black Carbon and PM2.5 on blood pressure during pregnancy**

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**OBJECTIVES** Levels of ambient fine particulate matter ($PM_{2.5}$) in China are among the highest in the world. Black carbon (BC) is an important component of $PM_{2.5}$, which has been associated more strongly than has $PM_{2.5}$ with the adverse health effects. To our knowledge, few studies have been conducted to differentiate the associations of $PM_{2.5}$ and black carbon on blood pressure (BP) and hypertensive disorders of pregnancy (HDP). We aim to explore acute effects of Black Carbon and $PM_{2.5}$ on blood pressure in the third trimester of pregnancy so as to provide clues for further studies on HDP and air quality indicators in China.

**METHODS** The health data came from a cohort study on prevalence of HDP and gestational diabetes in Shanghai City in 2010. The environmental data obtained from Shanghai Key Laboratory of Meteorology and Health. A total 7408 pregnant women were included in the study. We applied generalized additive mixed model to examine the associations of air pollutants and blood pressure. The exposure variables were $PM_{2.5}$, BC on the same day (1-day average) and 3- to 5-day averages, and the outcome variables were systolic blood pressure (SBP), diastolic blood pressure (DBP) measured in the third trimester. The nonlinear covariates of daily temperature and humidity were adjusted by natural cubic regression splines. All statistical analyses were performed using R Statistical Software, version R 2.15.1.

**RESULTS** In one-pollutant model, after adjustment for maternal age, nulliparity, multiple birth, BMI at first perinatal visit, family history of hypertension, and other chronic disease, history of abnormal pregnancy, and daily temperature and humidity, we found IQR increases 3-day and 5-day average $PM_{2.5}$ may induce 0.38 mmHg (95% CI, 0.12 to 0.64), 0.30 mmHg (95%CI, 0.03, 0.57) increases in SBP. IQR increases in 1-day, 3-day and 5-day average BC predicted 0.49 mmHg (95%CI, 0.21 to 0.78), 0.48 mmHg(95% CI,0.19 to 0.76), and 0.50 mmHg (95% CI,0.21, 0.79) increases in SBP. We also observed the similar findings in DBP, 3-day and 5-day average $PM_{2.5}$ increased 0.52 mmHg (95%CI, 0.07 to 0.98), 0.48 mmHg (95%CI, 0.02, 0.93); and BC increased