



Sports and Exercise Cardiology

PHYSICAL ACTIVITY AND ITS RELATIONSHIP WITH OBESITY HYPERTENSION AND DIABETES IN URBAN AND RURAL CHINA: THE PURE CHINA STUDY

Poster Contributions

Poster Sessions, Expo North

Saturday, March 09, 2013, 3:45 p.m.-4:30 p.m.

Session Title: Sports and Exercise Cardiology: The Impact of Exercise on Cardiovascular Risk Factors

Abstract Category: 30. Sports and Exercise Cardiology: Sports Medicine

Presentation Number: 1173-258

Authors: *Hongqiu Gu, Jingtang Yang, Wei Li, Koon Teo, Lisheng Liu, Salim Yusuf, Medical Research & Biometrics, National Center for Cardiovascular Diseases & Fu Wai Hospital, Beijing, People's Republic of China*

Background: To evaluate and compare physical activity patterns of urban and rural dwellers in China, and study their relationship with obesity, hypertension and diabetes.

Methods: We studied 46285 subjects aged from 35 to 70 years from baseline survey of the PURE study in China, of whom 22807 were urban dwellers and 23478 were rural subjects. Physical activity was assessed by International Physical Activity Questionnaire (IPAQ). Weight, height, waist and hip circumference, blood pressure, and fasting blood glucose were measured in all subjects.

Results: Physical activity total score and proportion of high-level physical activity subjects were significantly higher for women urban vs rural, while lower for men urban vs rural ($P<0.01$). Waist/hip ratio (WHR) defined Obesity prevalence was significantly lower for women urban vs rural (39.51% vs 47.07%, $P<0.01$), and higher for men urban vs rural in all definitions of obesity (by BMI: 18.04 vs 11.11; by waist circumference: 58.20 vs 36.40; by WHR: 46.08 vs 36.47, $P<0.01$). Hypertension prevalence was significantly lower for women urban vs rural (33.69 vs 43.43, $P<0.01$), but not significantly in men. Diabetes prevalence was significantly higher both for women urban vs rural (8.15 vs 5.19, $P<0.01$) and men urban vs rural (11.10 vs 5.59, $P<0.01$). Low-lever compared with high lever physical activity subjects, age, gender, location and other demographic variables adjusted Odds Ratio for obesity was 1.13(95%CI: 1.04-1.23), 1.26(95%CI: 1.19-1.34) and 1.16(95%CI: 1.04-1.29), defined by BMI, waist circumference and WHR respectively; for hypertension is 1.10(95%CI: 1.03-1.17) and for diabetes is 1.16(95%CI: 1.04-1.29).

Conclusion: urban women are more physical active than rural women, and have a lower prevalence of obesity and hypertension, while urban men are less physical active than rural men and have a higher prevalence of obesity. Diabetes prevalence is higher both for urban men and women. Physical activity is inversely associated with obesity, hypertension and diabetes; improvements in physical activity should be promoted.