

## Age and gender differences in the associations of behavioral factors with arthritis: analysis of the 2005 California Health Interview Survey data

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**Background:** It is estimated that 50 million U.S. adults (about 1 in 5) report doctor-diagnosed arthritis and the number of adults with arthritis is expected to increase sharply to 67 million by 2030 (Data Source: 2007–2009 NHIS). Smoking and alcohol consumption have been studied as possible risk factors for adult arthritis and physical activity protects against the development of this chronic disease and disability. However, few studies focused on the age and gender differences in the association of these behavioral factors with arthritis.

**Methods:** 10,664 adults (aged 18 years or older) with arthritis and 30,579 controls are selected from the adult respondents to the 2005 California Health Interview Survey (CHIS). Statistical analyses accounted for the survey design and appropriate procedures in SAS 9.2 such as SURVEYFREQ and SURVEYLOGISTIC were applied to the weighted data.

**Results:** After adjusting for other factors, gender-stratified weighted logistic regression analyses showed that both current and past smoking were associated with arthritis in both genders; whereas alcohol consumption and physical activity were associated with arthritis just in women but not in men. Furthermore, physical activity was associated with arthritis just in the elder group (65+ years) while alcohol consumption was associated with arthritis just in the middle-aged group (45-64 years). In addition, both the current and past smoking were highly significantly associated with arthritis in young adult group (28-44 years) and middle-age group while past smoking was associated with arthritis just in elder-aged group.

**Conclusion:** There are age and gender differences in the associations of behavioral factors with arthritis. Age and gender effects should be considered in the prevention and treatment of this chronic disease.

### Biography

Kesheng Wang completed his Ph.D. from Georg-August-University Goettingen, Germany and postdoctoral studies from The Hospital for Sick Children/University of Toronto, Toronto, Canada. He has published more than 30 papers in reputed journals and serving as an editorial board member of Journal of Biometrics & Biostatistics and Frontiers in Statistical Genetics and Methodology.

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