

## 1 in 3 overweight and 1 in 7 obese in north east China (Jilin Province)

*Eating meat, drinking alcohol, marriage and under 7 hours sleep nightly all linked to greater risk*

One in three people is overweight and one in seven is obese in Jilin Province, north east China, finds a large study, published in the online journal **BMJ Open**.

Regular intake of meat and alcohol, having ever been married, and getting less than 7 hours sleep a night were all associated with a heightened risk, the research showed.

The researchers base their findings on a population survey of nearly 21, 000 randomly selected people aged 18 to 79, in Jilin Province, north east China in 2012.

China is the largest developing country, with the largest population, in the world. Its rapid economic growth has spawned changes in dietary habits and lifestyle that are associated with growing levels of overweight/obesity in developed nations.

The researchers therefore wanted to find out the prevalence of obesity/overweight in a densely populated area of China—Jilin Province has a population of 27 million—and uncover influential factors associated with overweight and obesity that might inform future health policy.

All participants completed a detailed questionnaire on lifestyle factors and marital status and underwent a physical examination.

To take account of the Chinese physique, obesity was classified as a BMI of 28 while overweight was classified as a BMI within the range of 24 to 27.9.

One in three of the participants (32.3%) was overweight (men 34.3%; women 30.2%) while one in seven (14.6%) was obese (men 16.3%; women 12.8%).

Among men, the prevalence of overweight peaked at ages 45 to 54, while the prevalence of overweight and obesity peaked at the ages of 55-64 and 65-79, respectively among women.

Risk factors included marriage: people who had been married at any stage in their lives were 44% more likely to be overweight/obese than those who had never married.

People who drank alcohol regularly were 11% more likely to be overweight/obese than those who never or rarely drank, while those who ate meat regularly were 47% more likely to be overweight/obese than those who ate a predominantly vegetarian diet.

Overweight and obesity were also more common among those who slept less than 7 hours a night than among those who slept more than this.

This is an observational study so no firm conclusions can be drawn about causal factors, added to which it is based on recall, which may affect the overall accuracy of the findings, say the researchers. But the sample size is large and physical measurements were taken.

“Overweight and obesity have become a major public health problem in China, although the prevalence of obesity is lower than in developed countries,” write the researchers. “And there is

no doubt that the rapidly increasing occurrence of overweight and obesity in China will continue to increase the prevalence of chronic diseases," they warn.