Excess weight linked to increased risk of dying from cancer in populations of Asia-Pacific

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Overweight and obese individuals from the Asia-Pacific region are significantly more likely to die from cancer compared with individuals in the normal weight range. New strategies are urgently needed to tackle the obesity epidemic in Asia to prevent further increases in the cancer burden in this region, concludes an Article published Online First in the *Lancet Oncology*.

Being overweight or obese is increasingly recognised as a key risk factor for several types of cancer. However, this research has mainly been done in western populations, and whether these findings are applicable to other populations is unclear. A rapid increase in obesity in many Asian countries has been fuelled by major changes in lifestyles from more traditional to more western, and by people being less active and eating fattier diets. Little is known about the implication for cancer risk of these obesity changes in Asia.

In this study, Christine Parr, from the University of Oslo, Norway, and international colleagues examine the relation between BMI and cancer mortality in 424 519 adults from Asia (China, Hong Kong, Taiwan, Japan, South Korea, Singapore, and Thailand), and from Australia and New Zealand (ANZ). The researchers analysed data from 39 cohorts within the Asia Pacific Studies Collaboration (APSC). They also compared cancer mortality between populations in Asia and outside Asia (ANZ). Study members were followed up for a median period of 4

years.

Risks for all cancers, and for 20 specific types of cancer, were related to body mass index (BMI, kg/m2). Individuals with a BMI of less than 18.5 kg/m^{2}were defined as underweight, with a BMI of 18.5□□.9 kg/m^2 defined as normal, a BMI of 25-29.9 kg/m^2 defined as overweight, and with a BMI of 30 or more defined as obese, in accordance with the World Health Organization's classification.

Overall, findings showed that, compared with normal-weight individuals, overweight and obese individuals were 6% and 21% more likely to die from cancer (after excluding lung and upper aerodigestive tract). This was after age, smoking status, and drinking status were taken into account.

Additionally, compared with normal-weight individuals, obese people were significantly more likely to die from colon cancer, rectal cancer, breast cancer (women 60 years or older), ovarian cancer, cervical cancer, prostate cancer, and leukaemia.

Interestingly, despite differing dietary and other lifestyle risk factors for cancer: "the study does not show a higher relative risk for cancer mortality in Asian populations compared with Western populations for the same level of BMI, as has been suggested for diabetes and cardiovascular disease", write the authors.

The authors conclude by calling for "effective strategies to prevent the increasing proportions of overweight and obese people in Asian populations… to reduce the burden of cancer that can be expected if the obesity epidemic continues."

In a Comment, Dr Andrew Renehan from the University of Manchester, UK, says that these findings have clear implications for health policy.

However, he points out that the methods used to calculate risk do not explain specifically where in the BMI range the effects of excess weight begin to rise. He states that we need to test the hypothesis that many Asian populations might have an increased risk of cancer at BMIs lower than the WHO cutoff for overweight (≥25kg/m2), as has been found for type 2 diabetes and cardiovascular disease.

He concludes by calling for further research including standardising data collection to incorporate "effect-modifying factors; wider categorisation of BMI data; other anthropometric measures that might better approximate body composition; and determination of key allelic polymorphisms identifying genetic differences in the complex interaction between an individual, body adiposity, and cancer occurrence."

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