Medical Xpress

Excess body weight causes over 124,000 new cancers a year in Europe

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At least 124,000 new cancers in 2008 in Europe may have been caused by excess body weight, according to estimates from a new modelling study. The proportion of cases of new cancers attributable to a body mass index of 25kg/m2 or more were highest among women and in central European countries such as the Czech Republic, Latvia, Slovenia and Bulgaria.

The lead author of the study, Dr Andrew Renehan, told Europe's largest cancer congress, ECCO 15 - ESMO 34, in Berlin today (Thursday 24 September): "As more people stop smoking and fewer women take hormone replacement therapy, it is possible that obesity may become the biggest attributable cause of cancer in women within the next decade."

Dr Renehan, who is a senior lecturer in cancer studies and surgery at the University of Manchester (UK), and his colleagues in the UK, The Netherlands and Switzerland, created a sophisticated model to estimate the proportion of cancers that could be attributed to excess body weight in 30 European countries. Using data from a number of sources including the World Health Organisation and the International Agency for Research on Cancer, they estimated that in 2002 (the most recent year for which there are reliable statistics on cancer incidence in Europe) there had been over 70,000 new cases of cancer attributable to excess BMI out of a total of nearly 2.2 million new diagnoses across the 30 European countries.

The percentage of obesity-related cancers varied widely between

countries, from 2.1% in women and 2.4% in men in Denmark, to 8.2% in women and 3.5% in men in the Czech Republic. In Germany it was 4.8% in women and 3.3% in men, and in the UK it was 4% in women and 3.4% in men.

Then, the researchers projected the figures forward to 2008, taking into account what was known about shifts in the distribution of BMI, the dramatic decline in women's use of hormone replacement therapy (HRT) from 2002 onwards following research that showed it increased the risk of breast cancer, and the wider use of PSA screening for prostate cancer in men.

They found that the number of cancers that could be attributed to excess body weight increased to 124,050 in 2008. In men, 3.2% of new cancers could be attributed to being overweight or obese and in women it was 8.6%. The largest number of obesity-related new cancers was for endometrial cancer (33,421), post-menopausal breast cancer (27,770) and colorectal cancer (23,730). These three accounted for 65% of all cancers attributable to excess BMI.

"I must emphasise that we are trying not to be sensationalist about this," said Dr Renehan. "These are very conservative estimates, and it's quite likely that the numbers are, in fact, higher."

The number of new cases of obesity-related oesophageal cancer was particularly high in the UK relative to the rest of Europe. "This country accounts for 54% of new cases across all 30 countries," said Dr Renehan. "This may be due to synergistic interactions between smoking, alcohol, excess body weight and acid reflux - and is currently an area where research is required."

Until 2002 when HRT use dropped dramatically following the results of the Women's Health Initiative Trial (USA) that showed an increased risk

of breast cancer in women taking HRT, Dr Renehan said that HRT masked and diluted the effects of obesity on the incidence of breast cancer. "In women who used HRT it wasn't clear what proportions of breast cancers were caused by HRT or by obesity. In women who don't take HRT, the effect of obesity was much clearer. Now that far fewer women are using HRT, it is much easier to see the effect of obesity on the incidence of breast cancer, and also on endometrial cancer. Consequently, the proportions of these cancers attributable to obesity have increased."

Dr Renehan said that although European countries were taking steps to tackle the obesity epidemic, this study underlined the urgency of the task and the scale of the problems caused by increasingly overweight populations.

"The overall size of the burden of increasing cancer incidence should inform health policy. For example, it is clear that, in both relative and absolute terms, obesity-related cancer is a greater problem for women than for men. At a country level, it is a greater problem for central European countries like the Czech Republic, whereas it is less of a problem in France and Denmark. Similarly, obesity-related oesophageal cancer seems to be a substantial and unique problem in the UK.

"The study also identifies priorities for research into certain cancers, namely endometrial, breast and colorectal cancers. In the face of an unabating obesity epidemic, and apparent failure of public health policies to control weight gain, there is a need to look at alternative strategies, including pharmacological approaches."

Dr Renehan's own research is trying to relate these epidemiological findings back to the biological mechanisms that are at work. His research uses the observed interactions between excess BMI and cancer risk to guide questions in the laboratory.

Source: ECCO-the European CanCer Organisation