Understanding the Impact of Obesity on the Risk of Developing 22 Types of Cancer

Using data, a team of researchers from London found that a high BMI is strongly related to risk of developing 17 of the 22 cancers.

The Challenge

The developed world is facing an obesity crisis. Recent statistics estimate that 62% of adults in England are overweight or obese (The Health and Social Care Information Centre, 2013), with levels continuing to rise. Obesity is known to increase the risk of many serious illnesses including type 2 diabetes, high blood pressure, heart disease and stroke, and places an enormous strain on the NHS.

Research carried out in the past has suggested that body mass index (BMI), a measure commonly used to indicate weight, is also important in predicting risk of cancer, but high-quality studies were needed to learn more about the risks for developing the different types of common cancers affecting different parts of the body.

The Research

To detect patterns of disease more reliably, very large populations needed to be studied. A group of researchers at the London School of Hygiene & Tropical Medicine and the Farr Institute London worked together to analyse anonymous data on more than 5 million patients taken from their GP records – the largest single dataset put together so far to see how BMI was associated with 22 different types of cancer diagnoses.

The Results

Patient data covering a 25-year period up to 2012 were analysed. 3.2% of the patients studied were diagnosed with one of the cancers being investigated. High BMI (which indicates higher weight) was strongly related to risk of developing 17 of the 22 cancers, including cancer of the uterus, gallbladder, kidney, cervix, thyroid and leukaemia. The risk was clearer for some cancers than others – cancer of the liver, colon, ovaries and post-menopausal breast cancers were all associated with BMI but the risk varied depending on other factors such as patient age, whether the patient smoked, and for female patients whether they had had the menopause. Researchers estimated that a 1 unit increase in average BMI among the population would result in 3,790 more UK patients developing one of the ten cancers positively associated with BMI each year.

The Impact

Only by using data on such a large number of people could researchers study the effect of BMI on all these cancers. It also meant that researchers were able to have confidence in their findings and that the association they found really exists – a principle known in research as “power”. This important message can be used to educate the public about making health choices.

For more information about obesity visit: www.nhs.uk/Conditions/Obesity/

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