

Researchers find possible association between obesity and male breast cancer

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Researchers at the University of Leeds have found a possible association between the rise in obesity and the increase in cases of male breast cancer.

The findings, published in the journal *BMC Medicine* and funded by the charity Yorkshire Cancer Research, suggest a link between female hormones produced in the [fat cells](#) of [obese men](#) and the growth of cancerous tumours.

Professor Speirs, from the University of Leeds' School of Medicine,

said: "We have known for a long time that fat cells contain enzymes that convert [male hormones](#) (testosterone) into female hormones (oestrogen). It follows logically that the more fat you carry the more opportunity you have for oestrogen production, so men with a [body mass index](#) over 25 have more female hormones in their blood.

"We also know that more than 90% of male breast cancers seen in the clinic have receptors on the cell surface that recognise these female hormones and use them to grow."

Dr Matthew Humphries, who was involved in the study and who is also from the School of Medicine and the University, observes in the paper that cholesterol can be converted into a compound that mimics the activity of oestrogen. Obese men tend to have much higher cholesterol levels, so they have more of the oestrogen-mimicking compound in their bodies which also encourages cancer growth."

It was recently reported at the American Society of Clinical Oncology's annual conference in Chicago that obesity is set to overtake tobacco as the leading cause of cancer.

Dr Humphries added: "One of the most worrying global public health issues is the rise in the number of overweight and obese people, especially in the developed world. As well as raising awareness of [male breast cancer](#) we also wish to stress that obesity is a preventable condition and men can take measures to reduce their risk of developing the disease, including eating a healthier diet. This is especially important for men at higher risk, for example, those with BRCA mutations in the family."

More information: "Obesity and male breast cancer: provocative parallels?" *BMC Medicine* 2015, 13:134 [DOI: 10.1186/s12916-015-0380-x](#)

Provided by University of Leeds

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