

Skirt size increase linked to 33% greater postmenopausal breast cancer risk

Mid-20s to mid-50s critical period; association irrespective of overall weight (BMI)

[Association of skirt size and postmenopausal breast cancer risk in older women: a cohort study within the UK Collaborative Trial of Ovarian Cancer Screening (UKCTOCS) doi 10.1136/bmjopen-2014-005400]

Going up a skirt size over a period of 10 years between your mid 20s and mid 50s is linked to a 33% greater risk of developing breast cancer after the menopause, finds a large observational study published in the online journal **BMJ Open**.

Overall weight gain during adulthood is known to be a risk factor for breast cancer, but a thickening waist seems to be particularly harmful, indicating the importance of staving off a midriff bulge, the research shows.

The researchers base their findings on almost 93,000 women taking part in the UK Collaborative Trial of Ovarian Cancer Screening (UKCTOCS) in England.

The women were all aged over 50, had gone through the menopause, and had no known breast cancer when they entered the study between 2005 and 2010.

At enrolment they provided detailed information on height and weight (BMI); reproductive health; fertility; family history of breast and ovarian cancer; and use of hormonal contraceptives and HRT, all of which influence breast cancer risk.

They were also asked about their current skirt size, and what this had been in their 20s.

After a monitoring period of three to four years they were asked about continuing use of HRT; their general health; a subsequent diagnosis of cancer; and lifestyle, including how much they smoked and drank.

Most of the women were white, educated to university degree level, and overweight at the point of study entry, with a BMI of 25-26.

During the monitoring period, 1090 women developed breast cancer, giving an absolute risk of just over 1%. As expected, infertility treatment, family history of breast/ovarian cancer, and use of HRT were all significantly associated with a heightened risk of being diagnosed with the disease, while pregnancies were protective.

But after taking account of other influential factors, increases in skirt size emerged as the strongest predictor of breast cancer risk.

At the age of 25, the women's average skirt size had been a UK 12 (US 8; Europe 40-44), and when they entered the study at the average age of 64, it was a 14 (US: 10; Europe 42-46). Skirt size increased over the course of their adult lives in three out of four of the women.

The analysis revealed that going up one skirt size every 10 years was associated with a 33% greater risk of developing breast cancer after the menopause; going up two skirt sizes in the same period was associated with a 77% greater risk.

The researchers estimate that the five year absolute risk of postmenopausal breast cancer rises from 1 in 61 to 1 in 51 with each increase in skirt size every 10 years. Adding BMI to the calculations did not significantly improve the prediction of risk.

As this is an observational study, no definitive conclusions can be drawn about cause and effect, and there is likely to have been some variation in skirt sizing over the years, say the researchers.

But an expanding waistline has been linked to other cancers, including those of the pancreas, lining of the womb, and ovaries, they point out, possibly because midriff fat is more harmful.

“Although the exact mechanism of these relationships need to be better understood, there is a suggestion that body fat around the waist is more metabolically active than adipose tissue elsewhere,” they write, adding that extra fat is known to boost levels of the female hormone oestrogen, on which many breast cancer cells rely for fuel.