Sexual health

Intrauterine device use associated with reduced risk of cervical cancer

Women who had used an intrauterine contraceptive device (IUD) were found to have a lower risk of cancer of the cervix in a systematic review and meta-analysis.

The investigators, based in the United States, searched PubMed, Web of Science and ClinicalTrials.gov for suitable studies, written in English, from inception to July 2016.

The search strategy identified 225 unique reports but only 17 met the inclusion criteria and were deemed of high enough quality for review of which 16 could be harmonised for meta-analysis.

Data from these 16 studies which covered 4,945 incident cases of cervical cancer and 7,537 individuals who did not develop the cancer were included in the meta-analysis. The summary odds ratio (OR) of any, compared with no, use of an IUD and incident cervical cancer was 0.64 (95% CI: 0.53-0.77).

The one high-quality study that was not included in the meta-analysis reported respective ORs of 0.6 (95% CI: 0.3-1.2) for 2 to 9 years of IUD use, and 0.9 (95% CI: 0.1-1.3) for > 10 years' use.

The meta-analysis suggested there was a reduction in cervical cancer risk of around a third associated with any IUD use.

The observed association was unlikely to be explained by study design or confounding by recognised cervical cancer risk factors. A funnel plot suggested that there was no publication bias in the studies included in the review.

An immune response at the transformation zone of the cervix during IUD fitting has been suggested as a possible mechanism for the protective effect of IUDs against cervical cancer. Mechanisms involving a more chronic response to the presence of an IUD have also been mooted.

The study authors conclude: 'The meta-analysis revealed a robust inverse association between any use of an IUD and incident cervical cancer with overall incidence approximately 30% lower in women who reported ever using a device.'

'Because contributing studies were completed before an HPV vaccine was available, the magnitude of the association may be most relevant to populations in which women 30 years of age or older remain largely unvaccinated,' they add.

DR RICHARD MA

Cortessis VK, Barrett M, Brown W et al. Intrauterine device use and cervical cancer risk: A systematic review and meta-analysis. *Obstet Gynecol* 2017:130:1226-36

Respiratory disease

Breastfeeding may protect against recurrent cough in early adult life

Longer duration of breastfeeding appears to reduce the risk of recurrent cough in young adults, a study from the United States has found.

The researchers used data from the Tucson Children's Respiratory Study, a large non-selected birth cohort in which infant feeding practices and adult health outcomes were ascertained prospectively.

This population, born in the 1980s, has been followed for more than 30 years. Detailed parental demography, education and health status were recorded at the outset.

Using questionnaires and data derived from regular physician checks, infant feeding practices were determined at regular intervals. Infants were categorised into those where formula was introduced: from birth or at less than one month of age; between one and four months; and at four or more months.

Questionnaires were completed when the children reached 22, 26 and 32 years of age. Recurrent cough was defined as two or more episodes of cough without a cold that lasted for a week during the past year.

Participants were also asked about physician-diagnosed asthma, active smoking, heartburn, sinus trouble and allergic rhinitis. Adult body mass index (BMI) was calculated from self-reported height and weight at each age. Confounders were considered, in particular the known effect of breastfeeding on improving lung volume, so FVC was determined using lung function tests at each age. Potential early confounders such as RSV infection, bronchial hyperresponsiveness, atopy and early wheezing were also taken into account.

Of the original cohort, a total of 503 completed all three questionnaires, 163 completed two questionnaires and 120 completed one questionnaire.

Of the 786 participants, 19% breastfed for < 1 month, 50% for ≥ 1 to < 4 months and 31% for ≥ 4 months. The prevalence of recurrent cough at 22, 26 and 32 years was similar: 17%, 15% and 16% respectively. There was a significant protective relation between breastfeeding duration and recurrent cough between ages 22 and 32. Each ordinal increase in breastfeeding duration was associated with a decreased risk of recurrent cough in adult life: adjusted OR 0.71 (95% CI: 0.56-0.89; P = 0.004).

Additional adjustment for concurrent adult asthma, wheeze, smoking and lung volume did not affect the results.

Essentially the study demonstrates improved respiratory health in young adulthood for breastfed individuals and identifies the need for further research to find if this has implications later in life.

The study authors conclude: 'This analysis demonstrates a protective relation between breastfeeding in early life and recurrent cough at ages 22-32. Longer duration of

breastfeeding is associated with a dose-related reduced prevalence of adult recurrent cough, suggesting potential long-term protective effects on respiratory health.'

'Future research should consider relations of breastfeeding with adult symptoms and conditions, to ascertain whether this behaviour in early life is associated with alterations in adult health beyond the protection it provides in infancy,' they add.

DR PETER SAUL

Gerhart KD, Stern DA, Guerra S et al. Protective effect of breastfeeding on recurrent cough in adulthood. *Thorax* 2018;73:833-39

Diabetes

High gluten intake in pregnancy associated with type 1 diabetes in offspring

The findings of a cohort study from Denmark suggest that high dietary gluten intake by pregnant women may increase the risk of their children developing type 1 diabetes.

The Danish National Birth Cohort enrolled 91,745 pregnant women between January 1996 and October 2002. The women were recruited at their first GP antenatal visit at 6-10 weeks' gestation. Data about the development of type 1 diabetes in the offspring were obtained by linkage to the Danish Registry of Childhood and Adolescent Diabetes.

The pregnant women's gluten intake was assessed at around 25 weeks' gestation by a validated dietary questionnaire detailing their food intake in the previous four weeks. Food and nutrient intakes were then »

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