

Cranberry capsules or antibiotics for women with recurrent urinary infections?

Cranberries have a reputation for preventing recurrent urinary tract infections, thanks to at least two successful placebo controlled trials. Cranberries looked less successful in a recent head-to-head trial against standard prophylaxis with trimethoprim-sulfamethoxazole: women taking the 'natural' treatment for a year developed significantly more urinary tract infections, significantly faster than controls (4 v. 1.8 infections, $p=0.02$; 4 v. 8 months to first infection, $p=0.03$).



Antibiotics clearly worked better for this selection of 221 young women, who reported 6 infections on average during the year before recruitment. However, the authors and a linked comment (p. 1279) agree that women shouldn't give up on cranberries just yet. Prophylaxis with trimethoprim-sulfamethoxazole caused resistance to develop quickly in isolates of *Escherichia coli* grown from samples of both faeces and urine. After a month of antibiotics, 86.3% of faecal isolates and 90.5% of urinary isolates were resistant to this antibiotic. Resistance rates were 23.7% and 28.1% after a month of cranberry capsules. Women should still be given a choice, say the authors.

Future head-to-head trials should consider using bigger doses of cranberries or cranberry extract, says the comment. The bioavailability of the active ingredient (type A proanthocyanidins) is notoriously poor, and the doses of cranberry used in this trial were probably no match for an antibiotic with a bioavailability of 90%.

Beerepoot MAJ, et al. Arch Intern Med 2011;171:1270-1278.

Calorie labelling in fast food restaurants – does it work?

Tamara Dumanovsky and colleagues assessed the impact of fast food restaurants adding calorie labelling to menu items on the energy content of individual purchases.



They used cross-sectional surveys in spring 2007 and spring 2009 (1 year before and 9 months after full implementation of a regulation requiring chain restaurants' menus to contain details of the energy content of all menu items).

The study took place in 168 randomly selected locations of the top 11 fast food chains in New York City during lunchtime hours.

Participants were 7 309 adult customers interviewed in 2007 and 8 489 in 2009.

The main outcome measures were energy content of individual purchases, based on customers' register receipts and on calorie information provided for all items on menus.

For the full sample, mean calories purchased did not change from before to after regulation (828 v. 846 kcal, $p=0.22$), although a modest decrease was shown in a regression model adjusted for restaurant chain, poverty level for the store location, sex of customers, type of purchase, and inflation adjusted cost (847 v. 827 kcal, $p=0.01$). Three major chains, which accounted for 42% of customers surveyed, showed significant reductions in mean energy per purchase (McDonald's 829 v. 785 kcal, $p=0.02$; Au Bon Pain 555 v. 475 kcal, $p<0.001$; KFC 927 v. 868 kcal, $p<0.01$), while mean energy content increased for one chain (Subway 749 v. 882 kcal, $p<0.001$). In the 2009 survey, 15% (1 288/8 489) of customers reported using the calorie information, and these customers purchased 106 fewer kilocalories than customers who did not see or use the calorie information (757 v. 863 kcal, $p<0.001$).

Although no overall decline in calories purchased was observed for the full sample, several major chains saw significant reductions. After regulation, 1 in 6 lunchtime customers used the calorie information provided, and these customers made lower calorie choices.

Editor's note: But did it lead to weight loss? That is the unanswered question.

Dumanovsky T, et al. BMJ 2011;343:d4464.

Does mammography reduce deaths from breast cancer?

A retrospective trend analysis of breast cancer mortality was performed within three pairs of neighbouring European countries (Northern Ireland (UK) v. Republic of Ireland, the Netherlands v. Belgium and Flanders (Belgian region south of the Netherlands), and Sweden v. Norway), in relation to implementation of screening. The information was retrieved from a WHO mortality database on cause of death and data sources on mammography screening, cancer treatment, and risk factors for breast cancer mortality.

Linear regressions of log-transformed, age-adjusted death rates were used to calculate changes in breast cancer mortality. Joinpoint analysis was used to identify the year when trends in mortality for all ages began to change.

From 1989 to 2006 deaths decreased in Northern Ireland and the Republic of Ireland

by 29% and 26%; in the Netherlands, Belgium and Flanders by 25%, 20% and 25%; and in Sweden and Norway by 16% and 24%, respectively. The temporal trend and year of downward inflexion were comparable between Northern Ireland and the Republic of Ireland and between the Netherlands and Flanders. The mortality rates in Sweden have decreased steadily since 1972, showing no downward inflexion until 2006. Similar levels of health care services and prevalence of risk factors for breast cancer mortality were present in each pair of countries compared. However, implementation of mammography screening differed by a time interval of approximately 10 - 15 years.

From this analysis it was shown that the contrast between the time differences in implementation of mammography screening and the similarity in reductions in mortality between the country pairs suggested that screening did not play a direct part in the reductions in breast cancer mortality.

Autier P, et al. BMJ 2011;343:d4411.

No need to hunt for micrometastases in women with early breast cancer

Routine examination of sentinel lymph nodes can miss isolated occult metastases in women with early breast cancer. Should pathologists look harder, using more sophisticated immunological tests? A cohort study from the USA suggests it would make little difference to overall survival. Using immunochemical techniques, pathologists found occult metastases in 10.5% of 326 women whose sentinel lymph nodes looked free of cancer on routine tests. These women were no more likely to die during the next 5 years than women with no occult metastases (95.1% v. 95.7% survival; adjusted hazard ratio 0.88, 95% CI 0.45 - 1.71). Immunochemical test results did not inform treatment, and most women had both radiotherapy and adjuvant chemotherapy after their lumpectomy (2 498/3 247; 76.9%).

Pathologists also looked for occult metastases in bone marrow aspirates from 3 413 women in the same cohort. Just 104 (3.0%) aspirates were positive, and while crude analyses hinted at reduced survival for these women, the association disappeared when researchers adjusted for well-known prognostic factors such as age, tumour type, and the presence or absence of oestrogen receptors (1.83, 0.79 - 4.26).

All participants had early breast cancer – mostly stage 1 (83.3%) invasive ductal carcinomas (80.1%) that were oestrogen-receptor positive (81.2%). Hunting for micrometastases in either sentinel lymph nodes or bone marrow isn't justified for these women, say the researchers.

Giuliano AE, et al. JAMA 2011;306:385-393.

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