

like determining if the efficacy observed in randomised controlled trials translates into effectiveness in broader populations and more realistic settings, and to provide information on adverse events and risks. In the first of three articles on critical appraisal of cohort studies, Gurwitz and colleagues (p 895) explain the role of cohort studies in the hierarchy of evidence, the characteristics of their design, and how selection bias can compromise their validity.

## POEM\*

### Popular diets are equally effective for losing weight

**Question** Which of four popular diets (Atkins, Zone, Weight Watchers, and Ornish) is most effective for losing weight and reducing cardiac risk factors?

**Synopsis** Every week it seems as if somebody publishes another diet book that claims to be the best method for losing weight and keeping it off. In fact, there are very little data addressing the health effects of popular diets and even less data that directly compare different diets. The investigators enrolled 160 overweight or obese adults (mean body mass index 35; range 27-42), aged 22 to 72, with known hypertension, dyslipidaemia, or fasting hyperglycaemia. Subjects were randomised (concealed allocation assignment) to either Atkins (carbohydrate restriction), Zone (macronutrient balance), Weight Watchers (calorie restriction), or Ornish (fat restriction) diet groups. Individuals assessing outcomes were blinded to treatment group assignment. The study attrition rate as a result of patient dropouts was high: 34 (21%), 61 (38%), and 67 (42%) participants did not complete the study at 2, 6, and 12 months, respectively. The most common reason for withdrawing was that the assigned diet was too hard to follow or was not resulting in enough weight loss. Although the results were not statistically significant ( $P = 0.08$ ), more subjects discontinued the Atkins (48%) and Ornish diets (50%) than the less extreme Zone (35%) and Weight Watchers (35%) diets. With intention to treat analysis, all four diets resulted in similar weight loss at one year, with no statistically significant difference between the diets. In each of the diet groups, approximately 25% of participants sustained a weight loss of more than 5% and 10% a loss of 10% of initial body weight at one year. Improvement in cardiac risk factors was directly proportional to the amount of weight loss and was similar among the diet groups. Self reported dietary adherence was directly correlated with the amount of weight loss and reduction in cardiac risk factors. The study was powered to have an 80% chance of detecting a weight change of 2% from baseline or a 3% difference between diets.

**Bottom line** The Atkins, Zone, Weight Watchers, and Ornish diets are equally effective for helping adults lose weight and reduce cardiac risk factors. Since success in this study directly correlated with adherence to the diet, it makes sense to help patients choose the diet that is easiest for them to follow, and not preferentially encourage one diet over any other.

**Level of evidence** 1b- (see [www.infopoems.com/levels.html](http://www.infopoems.com/levels.html)). Individual randomised controlled trials (with a wide confidence interval).

Dansinger ML, Gleason JA, Griffith JL, Selker HP, Schaefer EJ. Comparison of the Atkins, Ornish, Weight Watchers, and Zone diets for weight loss and heart disease risk reduction. A randomized trial. *JAMA* 2005;293:43-53.

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\* Patient-Oriented Evidence that Matters. See editorial (*BMJ* 2002;325:983)

## Editor's choice

### Say no to the free lunch

Are you a pig or a weasel? Or do you consider yourself above all that? When the *BMJ* published a special issue on the links between doctors and drug companies in 2003, the cover showed pigs in white coats lurching and golfing with weasel drug reps. At the time this seemed strong stuff even to those involved in editing the issue. But little has happened since to suggest that the image was wrong. In fact, every day new revelations suggest that the reality is worse.

The power of drug companies to buy influence over every key group in health care—doctors, charities, patient groups, journalists, politicians—has clearly shocked a UK parliamentary committee (p 855). It should shock us all. Can we console ourselves that companies' lavish spending on research and marketing, which far outstrips spending on independent research and drug information, leads to truly innovative treatments? No, says the committee's report. Can we rely on regulatory bodies to keep the industry in check? No, again.

What we can rely on, says Slattery-Moschkau, a former drug rep and creator of a hard hitting new film on the industry (p 911), is that drug reps are "armed and dangerous," selected for their ability to seduce and persuade rather than their scientific skills, and armed with, among other things, details of your prescribing behaviour.

All of this might encourage new resolve to step away from the trough and stand with the good guys. So it's interesting that the American College of Physicians has refused a booth at its annual meeting to the not-for-profit group No Free Lunch, which works to reduce conflicts of interest (p 862). Interesting, too, that the US National Institutes of Health may be forced to relax its policy on conflict of interest in response to protests from staff that it is too restrictive (p 864).

The *BMJ*, like most academic medical journals that carry pharmaceutical advertising, is perhaps somewhere between a pig and a weasel. And those of you alert to competing interests will see that Gauthier (p 857), in line with our policy on disclosure, lists at the end of his editorial several companies he has received funding from. We take the pragmatic view that competing interests cannot be removed altogether, since few clinical experts do not have some links to industry. But this is a hard balance to keep, and perhaps we delude ourselves that we have got it right.

Ferner (p 855) indicates that "professional self delusion"—doctors' view that they are not influenced by marketing—may force external regulation. The committee recommends, for example, requiring clinicians to register all substantial gifts from industry. It also recommends limits to promotion aimed at inexperienced prescribers and more training for medical students about marketing by drug companies.

So when the drug reps call for a chat, or offer to throw a sponsored lunch, make sure you are armed with cynicism, or information, or both. Better still—however seductive they are, just say no.

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