

POEMs

Patient-Oriented Evidence that Matters

The first of the POEMs in this issue shows that any weight loss diet that works is a good weight loss diet. Then there's a study cautioning that patients on warfarin may also be taking aspirin and that this is not a good thing; and finally, since spring often brings an extra load of bugs and sniffles, the third POEM reinforces hand-washing as a preventive strategy. Editor.

Clinical question

Which diets are most effective in the long-term to help patients lose weight?

Bottom line

The low-carbohydrate diets, low-fat diets, and Mediterranean diet all help patients lose weight. Although they modestly improve lipid profiles and fasting insulin levels, there were few changes in the medical treatment of participants as a result of their dieting. If patients want to lose weight and lower their cholesterol, they should simply choose a diet they can stick with. (LOE = 1b)

Reference

Shai I, Schwarzfuchs D, Henkin Y, et al, for the Dietary Intervention Randomized Controlled Trial (DIRECT) Group. Weight loss with a low-carbohydrate, Mediterranean, or low fat diet. *N Engl J Med* 2008;359(3):229-241.

Study Design

Randomised controlled trial (single-blinded)

Funding

Government

Allocation

Uncertain

Setting

Population-based

Synopsis

Most organisations still recommend a low-fat, calorie-restricted diet for weight loss and control of lipids and blood sugar. Recently, the Atkins diet (low-carbohydrate, no

calorie restriction) and the Mediterranean diet (moderate monounsaturated fats, restricted calories, poultry and fish instead of beef and lamb) have become popular. In this study, 322 obese workers (86% male; mean body mass index = 31 kg/m²; mean age = 52 years) at an Israeli research station were randomised to consume one of the three diets. The main meal of the day in Israel is lunch and was prepared for them at the company cafeteria; participants and their spouses also received education from a dietician on how to choose and prepare meals at home. Groups were similar at baseline, and patients were followed up for two years. Compliance was good, with 95.4% compliancy for one year, and 84.6% for the full two years. There were 10 withdrawals in the low-fat diet group, 16 in the Mediterranean diet group, and 20 in the low-carbohydrate diet group ($P = .04$). All groups lost weight: 2.9 kg (6.4 lbs) in the low-fat group, 4.4 kg (9.7 lbs) in the Mediterranean group, and 4.7 kg (10.3 lbs) in the low-carbohydrate group. For the small number of women in the study, the Mediterranean diet resulted in the most weight loss and the low-fat diet resulted in very little weight change (-6.4 kg vs -0.1 kg, respectively). For men, the mean weight loss for all three diets ranged from 3.4 kg to 4.9 kg. All groups reduced their blood pressure and modestly improved their lipid profiles. The low-carbohydrate diet was more likely to lower fasting insulin levels, which is of uncertain clinical significance. The effect on blood sugar in patients with diabetes was variable. Perhaps most tellingly, there were few changes in the patients' medications for hyperlipidemia, blood pressure, or blood sugar over the two-year study.

Clinical question

What are community patterns of practice and outcome regarding the combination of warfarin and an antiplatelet agent?

Bottom line

The combined use of aspirin with warfarin is common, but this combination is not supported by the evidence and it increases the risk of hemorrhage. Physicians should ask patients who take warfarin about their use of aspirin products and should discourage the combination. (LOE = 2b)

Reference

Johnson SG, Rogers K, Delate T, Witt DM. Outcomes associated with combined antiplatelet and anticoagulant therapy. *Chest* 2008;133(4):948-954.

Study Design

Cohort (retrospective)

Funding

Unknown/not stated

Setting

Population-based

Synopsis

The combination of anticoagulation using warfarin and an antiplatelet agent (aspirin, clopidogrel, or dipyridamole) is only recommended for selected patients with mechanical heart valves. Although it has been studied in patients after acute myocardial infarction, no benefit was

seen, and the risk of hemorrhage was higher (*Circulation* 2002;105:557-563; POEM #40656). This cohort study examined the records of patients in the Kaiser Permanente system cared for by their coagulation service as of September 30, 2005. Patients who reported the use of aspirin or who had been prescribed dipyridamole or clopidogrel during the previous 90 days were considered antiplatelet users (n=1623) and the remainder were considered nonusers of antiplatelet agents (n=2560). The vast majority were taking aspirin, usually in a dose of 81mg per day. Only 1.3% of patients taking warfarin were also taking clopidogrel. The primary indications for anticoagulation in the combined therapy group were atrial fibrillation (47.7%), venous thromboembolism (17.3%), valvular heart disease (12.6%), stroke or transient ischemic attack (8.3%), coronary artery disease (6.5%), cardiomyopathy (3.7%), and arterial thromboembolism (1.5%). Combination therapy was less common among patients being treated for venous thromboembolism, but more common among those with coronary artery disease, cardiomyopathy, or cerebrovascular disease as the primary indication. Adjusted odds ratios showed a greater risk of any hemorrhage (2.7; 95% CI 1.4 - 5.3) and major hemorrhage (2.1; 95% CI 1.01-4.4) with combination therapy, but no difference in the risk of death, thrombosis, or coronary events. International normalised ratio control was a secondary outcome, and was worse in the combination therapy group.

Clinical question

Do hand-washing programs prevent infections?

Bottom line

Hand washing prevents infections. (LOE = 2a)

Reference

Aiello AE, Coulborn RM, Perez V, Larson EL. Effect of hand hygiene on infectious disease risk in the community setting: a meta-analysis. *Am J Public Health* 2008;98(8):1372-1381.

Study Design

Meta-analysis (other)

Funding

Unknown/not stated

Setting

Various (meta-analysis)

Synopsis

These authors searched multiple databases and reference lists of included articles to identify randomised and quasi-experimental studies of hand washing programs and their effect on gastrointestinal and respiratory illnesses. Two reviewers independently assessed the eligibility of articles and ultimately included 30 studies. The authors do not report whether they assessed the quality of the included studies. The bulk of the studies used educational interventions or education combined with various soaps and antiseptics. Most took place in child-care centres and schools rather than as community-wide campaigns. Unfortunately, the authors don't give us data on the number of participants in the studies or the absolute effects, so we can't estimate the numbers needed to treat to prevent one infection. Hand-washing programmes reduced gastrointestinal infections by 31% (relative risk (RR) = 0.69; 95% CI, 0.58 - 0.81) and respiratory infections by 21% (RR = 0.79; 0.66 - 0.95). Finally, non-antibacterial soaps worked as well as antibacterial soaps.