Walking exercise improves bowel preparation before colonoscopy

Research question Can gentle exercise improve the quality of standard bowel preparation before colonoscopy?

Answer Yes. Patients who walk intermittently while taking bowel preparation solution have cleaner bowels than patients who sit still.

Why did the authors do the study? Poor bowel preparation is a leading cause of failed colonoscopy. Animal studies have shown that exercise can enhance bowel movement. These authors wanted to find out if gentle exercise would help patients clear their bowels before a colonoscopy.

What did they do? Three hundred and eighty three outpatients from South Korea took part in a single blind randomised controlled trial of standard bowel preparation for colonoscopy with or without gentle exercise. All the participants had a liquid dinner the evening before their colonoscopy and 5 mg of bisacodyl as a premedication followed by 2.5 to 3.0 litres of polyethylene glycol on the day. Those randomised to exercise took the solution in 250 ml doses and walked around for at least five minutes after each dose. Control patients took 250 ml of polyethylene glycol every 10 minutes and rested between doses. Patients in the two groups were well matched for age, sex, body mass index, bowel habit, and interval between bowel preparation and colonoscopy (about 4.5 hours). Three hundred and fifty six patients contributed data to the final analysis. All participants had the same endoscopist, who rated the quality of bowel preparation according to a four point scale: 1 (excellent), 2 (good), 3 (fair), or 4 (poor). The endoscopist remained unaware of treatment allocation. At the end of the trial, the authors looked for a difference in scores between the two groups of patients. They also did a multivariate analysis to find out which factors (including the type of bowel preparation) were associated with a cleaner bowel.

What did they find? Patients who had walked around during their bowel preparation had significantly cleaner bowels than control patients: 41% (74/182) of the exercise group and 25% (44/174) of the control group had good or excellent bowel preparation, according to the endoscopist. Overall, the exercise group had a lower (better) mean bowel preparation score than the control group (2.59 v 2.76, $P = 0.005$). Exercise seemed to work for patients with or without a history of constipation. In the multivariate analysis, walking during bowel preparation doubled the chance of a good or excellent result, compared with resting (odds ratio 2.06, 95% CI 1.29 to 3.29; $P = 0.003$). The authors conclude that walking can help with standard bowel preparation in outpatients having a colonoscopy.

What does it mean? This is the first trial to test the theory that exercise can help clean out patients' bowels before a colonoscopy. The effects were modest but clinically worthwhile, and were achieved without too much inconvenience for patients. If other studies confirm these promising results, this cheap simple intervention would be easy to incorporate into the routine of bowel preparation for fit outpatients having an elective colonoscopy. Sicker patients, who may be harder to prepare than others, were excluded from this study.

Kim et al. Effectiveness of walking exercise as a bowel preparation for colonoscopy: a randomized controlled trial. *American Journal of Gastroenterology* 2005;100:1-6.

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Editor's choice

In praise of uncertainty

Imagine that you have just been told that your child has cancer. As the news sinks in, you are likely to want to know what the best treatment is and to be assured that your child will get it. You may not want to hear that we don't know what the best treatment is and that the only way to find out for sure is to enter your child into a trial.

If a parent's decision is hard, so too is the job of the trialist. With a child's future in the balance, how comfortable are you that encouraging a parent to enrol is in the best interests of that child? This week's *BMJ* carries an important paper that may make your job easier. Ambuj Kumar and colleagues (p 1295) looked back at a cohort of consecutive trials of treatments for cancer in children. Their aim was to find out how often new treatments were better or worse than standard treatments. They wanted to know whether the pattern of success and failure for new treatments showed genuine uncertainty on the part of the trialists. Without this uncertainty—if you could predict with any degree of confidence the outcome of a trial—asking people to be randomised would be unethical.

What they found, from looking at more than 100 trials funded by the US National Cancer Institute, was that the new treatments being tested were just as likely to be worse as they were to be better than standard treatments. On average, the benefits (survival without an event) were greater with new treatments, but the harms (death related to the treatment) were also greater, so that overall survival was similar. The researchers also used time series analysis to show that each trial represented an independent experiment. Improved outcomes for children with cancer have not come, they say, from a series of successes but from empirical testing by trialists. They conclude that “the uncertainty principle”—the ethical foundation for randomising patients into trials—is alive and well.

Is a 50% success rate good enough? A quarter of a century ago, the US statistician Frederick Mosteller said that we should consider this rate of success a good investment. In fact, perhaps a higher success rate should be looked upon with suspicion. This week's paper makes an important distinction: all the trials they looked at were publicly funded. Does the health of the uncertainty principle extend to industry funded trials? Sadly this seems unlikely. A systematic review published in the *BMJ* (*BMJ* 2003;326:1167-70) found that industry funded trials are more likely to favour the company's drug. The two most likely explanations seem to be selective reporting of good outcomes, or violation of the uncertainty principle by, for example, choosing a comparator that is known to be inferior.

So should you encourage parents to enrol their children into randomised trials? If the trials are publicly funded, this paper says that you should. For industry funded studies the answer is probably also yes, but look hard at the control treatment and at the outcome measures.

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