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Putting Evidence into Practice

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This series is coordinated by Corey D. Fogleman, MD, Assistant Medical Editor.

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Chewing Gum for Postoperative Recovery of Gastrointestinal Function

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Clinical Question

Does chewing gum reduce the risk of ileus by speeding the return of flatus and bowel movements in the postoperative setting?

Evidence-Based Answer

Having patients chew gum reduces the time to first flatus and time to first bowel movement, as well as the length of hospitalization by about half a day. (Strength of Recommendation: A, based on consistent, good-quality patient-oriented evidence.)

Practice Pointers

Postoperative ileus is common and may lead to prolonged hospitalization among other complications. Enhanced Recovery After Surgery techniques, including optimal pain control by epidural and local anesthesia, minimally invasive techniques, and aggressive postoperative rehabilitation, have been shown to reduce the risk of ileus.[1] However, early postoperative feeding, one aspect of the Enhanced Recovery After Surgery program, may increase the risk of vomiting. Having patients chew gum in the postoperative period is not an aspect of the program, but it may decrease the risk of ileus by stimulating the cephalo-vagal system and intestinal motility while encouraging the flow of pancreatic juices and saliva.

This Cochrane review included 81 randomized controlled trials with 9,072 participants. Placebo interventions were sucking hard candy and wearing a silicone-adhesive patch or an acupressure wrist bracelet. Alternative treatments included early ambulation and sphincter exercises, stomach massage, chewing green tea leaves, early oral feeding, laxative use or early feeding, combinations of early oral hydration and early mobilization, or combinations of olive oil and water. Surgical procedures were categorized into colorectal surgery, cesarean delivery, and all other procedures.

The two outcomes used to signify that patients were recovering appropriately were time to first flatus and time to first bowel movement. Among all patients, the use of chewing gum reduced time to first flatus by 10.4 hours (95% confidence interval [CI], 8.9 to 11.9) and time to first bowel movement by 12.7 hours (95% CI, 10.9 to 14.5). Although outcomes favored chewing gum among all three groups of surgical patients, the effect size for both outcomes was greatest for patients recovering from colorectal surgery (time to first flatus reduced by 12.5 hours; time to first bowel movement reduced by 18.1 hours) and was smallest for those recovering from cesarean delivery (time to first flatus reduced by 7.9 hours; time to first bowel movement reduced by 9.1 hours).

Among all patients who used chewing gum, the length of hospital stay was reduced by 0.7 days (95% CI, 0.5 to 0.8). This effect was present across each of the three classes of surgical patients. Again, the effect was greatest in those undergoing colorectal surgery (reduced hospitalization by 1.0 day [95% CI, 0.4 to 1.6]) and smaller among those undergoing cesarean delivery (reduced hospitalization by 0.2 days [95% CI, 0.1 to 0.3]). Chewing gum was generally well tolerated and is inexpensive. Some studies reported less nausea and vomiting among those using chewing gum.

It is impossible to blind participants to this type of intervention, and most studies did not mask outcome assessment. However, risk of bias did not predict the extent of effect size on any outcome. Only four studies included patients who were otherwise being treated with Enhanced Recovery After Surgery techniques. In these participants, the effect size was smaller for time to first flatus, larger for time to first bowel movement, and there was no difference in length

of hospitalization. Only four studies in this review included children.

Guidelines discussing care of patients after cesarean delivery do not specify most components of Enhanced Recovery After Surgery, nor the use of chewing gum.[2] Guidelines regarding perioperative care of specific patient groups do include some aspects of the Enhanced Recovery After Surgery system, such as early feeding, but they do not discuss the use of chewing gum.[3]

SOURCE: Short V, Herbert G, Perry R, et al. Chewing gum for postoperative recovery of gastrointestinal function. *Cochrane Database Syst Rev.* 2015;(2):CD006506.

The practice recommendations in this activity are available at http://summaries.cochrane.org/CD006506.

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Psychological Interventions for Medically Unexplained Physical Symptoms

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Clinical Question

Do psychological therapies reduce the severity of medically unexplained physical symptoms?

Evidence-Based Answer

Psychological therapy, specifically cognitive behavior therapy (CBT), has been shown to reduce the severity of medically unexplained physical symptoms in patients with somatoform disorders. The effect is small to moderate in magnitude, but in these studies CBT was as acceptable as usual care to patients. (Strength of Recommendation: B, based on inconsistent or limited-quality patient-oriented evidence.)

Practice Pointers

Up to one-third of patients who present to their physician with physical symptoms will receive no medical explanation for those symptoms.[1] Persistent medically unexplained physical symptoms are part of the diagnostic criteria for many somatoform disorders. They place a heavy burden on the patient and can strain the patient-physician relationship.[2] An earlier systematic review concluded that new generation antidepressants are slightly better than placebo for short-term treatment of these symptoms.[3]

The authors of this Cochrane review sought to determine whether there were any effective nonpharmacologic treatments for medically unexplained physical symptoms. This meta-analysis included 21 studies with 2,658 participants. All studies were randomized and examined some form of psychological therapy, with most examining CBT. All participants were required to meet the criteria for a somatoform disorder as well as to have medically unexplained physical symptoms described as their primary medical problem. Primary outcomes examined were changes in the severity of medically unexplained physical symptoms and acceptability of treatment. Secondary outcomes included depression and anxiety, adverse effects, behavioral or emotional dysfunction, overall treatment response, functional disability, and health care use.

Fifteen of the studies evaluated patients receiving psychological therapy vs. usual care or wait list control patients; 10 of the studies examined CBT. Psychological therapy as a whole group (standardized mean difference [SMD] = –0.34; 95% confidence interval [CI], –0.53 to –0.16) and CBT as a subgroup (SMD = –0.37; 95% CI, –0.69 to –0.05) were both more effective than usual care. These effects persisted for both groups at one year of follow-up. Usual care was considered slightly more acceptable by patients (relative risk [RR] = 0.93; 95% CI, 0.88 to 0.99) than psychological therapy overall. However, CBT as a subgroup was judged by patients in these studies to be as acceptable as usual care. Clinician-rated symptoms of anxiety (SMD = –0.40; 95% CI, –0.63 to –0.17) and depression (SMD = –0.25; 95% CI, –0.48 to –0.02) favored psychological

therapies over usual care. However, participant ratings of the anxiety and depression symptoms did not show a significant difference. Outcomes of clinician-rated treatment response (RR = 3.30; 95% CI, 2.08 to 5.21), functional disability (SMD = 0.17; 95% CI, 0.03 to 0.32), and health care usage (SMD = –0.68; 95% CI, –1.06 to –0.30) favored psychological therapy. There were no significant differences in adverse effects or behavioral/emotional dysfunction between groups.

Five studies examined psychological therapies vs. enhanced care, defined by the review as usual care with added enhancements of various types that could include participant education, a psychiatric interview, or reattribution training for the primary care physician. Reduction in the severity of medically unexplained physical symptoms at one year of follow-up favored the psychological therapies (SMD = –0.21; 95% CI, –0.40 to –0.02). Acceptability of treatment favored enhanced care (RR = 0.93; 95% CI, 0.87 to 1.00). Behavioral/emotional dysfunction (SMD = –0.24; 95% CI, –0.49 to 0.00) and functional disability (SMD = 0.20; 95% CI, 0.02 to 0.38) favored psychological therapies at one year of follow-up.

One study compared CBT with progressive muscle relaxation. No significant differences were noted in any primary or secondary outcomes in this comparison.

All studies in this review included participants who were willing to receive psychological treatment. There was a high risk of bias caused by a lack of blinding, which was not possible with the treatments studied. In most cases, there were too few studies to draw strong conclusions about secondary outcomes, or even about primary outcomes for therapies other than CBT. Finally, there were no studies examining therapies that were both nonpharmacologic and nonbehavioral, such as physical therapy.

Medically unexplained physical symptoms are common and often persistent in those with somatoform disorders. Although psychological therapies such as CBT may have some benefit over usual care, there are currently no practice guidelines regarding the best treatment for these symptoms. More high-quality studies are needed to determine the effectiveness and acceptability of nonpharmacologic interventions for medically unexplained physical symptoms.

SOURCE: van Dessel N, den Boeft M, van der Wouden JC, et al. Non-pharmacological interventions for somatoform disorders and medically unexplained physical symptoms (MUPS) in adults. *Cochrane Database Syst Rev.* 2014;(11):CD011142.

The practice recommendations in this activity are available at http://summaries.cochrane.org/CD011142.

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