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The dangers of colon cleansing

Patients may look to colon cleansing as a way to “enhance their well-being,” but in reality they may be doing themselves harm.

PRACTICE RECOMMENDATIONS

➤ Advise patients that colon cleansing has no proven benefits and many adverse effects. **B**

➤ Ask patients with otherwise unexplained nausea, vomiting, or diarrhea if they engage in colon cleansing. **C**

Strength of recommendation (SOR)

- A** Good-quality patient-oriented evidence
- B** Inconsistent or limited-quality patient-oriented evidence
- C** Consensus, usual practice, opinion, disease-oriented evidence, case series

CASE 1 ▶ A 31-year-old African American woman sought treatment at her local emergency department (ED) for nausea, vomiting, and diarrhea. She reported passing more than 6 yellowish-brown, watery, nonbloody stools during the previous 2 days. She felt weak, feverish, and light-headed and showed signs of dehydration.

The patient had Crohn’s disease and had undergone a partial colectomy 5 years earlier. She told the ED physician that 2 days before visiting the ED she had gone to a “cleansing center” for a colonic cleansing, but was unable to complete the process because she developed cramps 15 minutes into the procedure. Less than an hour later, she developed diarrhea, nausea, and vomiting.

In the ED, her serum potassium was 2.9 mEq/L, blood urea nitrogen was 26 mg/dL, and creatinine was 1.9 mg/dL. She was afebrile, with a blood pressure of 135/75 mm Hg and a heart rate of 113 beats per minute. After receiving 2 liters of normal saline and 90 mEq of potassium chloride replacement, the patient felt better and was later discharged from the ED.

Three days later, the patient came to our residency clinic. She described her stools as being loose, but not watery or bloody, and passed in small amounts, about 4 times daily. She still had some abdominal cramping just before passing stool, but bowel movements relieved that. Her vital signs were within normal limits, and her physical exam was benign. The patient was instructed to follow her normal diet, as tolerated, and drink plenty of fluids to maintain good hydration. Her symptoms resolved by the following week.

CASE 2 ▶ A 49-year-old African American man came to our community hospital because of vomiting, diarrhea, and abdominal pain he had been experiencing for 4 days. He linked the symptoms to eating a large fast-food breakfast, followed by a big lunch the day before. He described having multiple episodes of nonbloody, nonbilious vomiting, nonbloody watery diarrhea, and “twisting” abdominal pain that was constant but temporarily relieved with a warm compress or

positional maneuvers. He had never had a similar episode and had not taken any antibiotics recently.

Upon further questioning, the patient revealed that he had used a colon cleanser a few days earlier. A review showed that he had lost 24 pounds in 10 days. Vitals were within normal limits. Serum potassium was 2.9 mEq/L, and creatinine was 2.1 mg/dL. A computed tomography scan of the abdomen revealed moderate to moderately severe dilatation of multiple small bowel loops with multiple air fluid levels, suggesting an early or partial small bowel obstruction. We obtained a surgical consultation, but surgery was not required. He was discharged after 2 days.

The patient returned to the hospital 3 days later with similar symptoms and severe weakness associated with dizziness. At that time his serum potassium was 2.4 mEq/L and creatinine was 4.0 mg/dL. Aspartate aminotransferase was 29 U/L, alanine aminotransferase was 80 U/L, lipase was 418 U/L, and amylase was 94 U/L.

The patient was readmitted for dehydration, hypokalemia, and pancreatitis and, following a colonoscopy and biopsy that revealed chronic and acute inflammation, a gastroenterologist made a diagnosis of "herbal intoxication." The patient was hydrated, his electrolytes were replaced, and his diet was slowly returned to normal. He was discharged after 5 days.

An old practice rediscovered

Colon cleansing has been around since ancient times, when its purported benefits were based on the belief that intestinal waste can poison the body ("autointoxication").¹ The procedure became popular in the early 1900s, but in a 1919 paper, the American Medical Association discounted the autointoxication theory and condemned the practice.¹ The procedure then fell out of favor, albeit temporarily.² Colon cleansing has staged a comeback in recent years.

Colon cleansing basics

Colon cleansing, also called colonic irrigation or colonic hydrotherapy, is performed by colonic hygienists or colon therapists, or can

be self-administered. The procedure works like an enema. The patient generally lies on a table and water (with or without additional herbs or compounds) is pumped through the rectum via a tube.

Unlike enemas, for which a small amount of fluid is used, however, colon cleansing calls for a large volume of fluid—up to 60 liters—to be introduced into the rectum.^{3,4} Fluids and waste are expelled through another tube. The procedure may be repeated several times.

Products go by many names

Most colon cleansing products come in the forms of laxatives, teas, powders, and capsules. They can be taken by mouth or inserted into the rectum. They often contain sodium phosphate, coffee, probiotics, enzymes, or any of a variety of herbs.⁵ Some products contain fiber preparations, including psyllium, flaxseed, and laxatives such as cascara, magnesium oxide, cat's claw, artichoke leaves, burdock root, licorice, and milk thistle.²

With names such as Nature's Bounty Colon Cleanser Natural Detox Formula, Health Plus Inc. Colon Cleanse, and 7-Day Miracle Cleanse, as well as endorsements by movie stars, these colon cleansing products are actively promoted as a natural way to enhance one's well-being. Advertisements promising that colon cleansing will alleviate fatigue, headache, weight gain, and low energy are ubiquitous on the Internet and in newspapers and magazines. The ads tout the safety of "herbal" and "natural" preparations. These materials also provide anecdotal support for claims that colon cleansing improves the immune and circulatory systems, enhances cognitive abilities, and aids weight loss through "detoxification."⁶

Individuals who want to cleanse their own colons can choose among home kits, some of which include disposable tubing, while others have components that can be reused if they are sterilized after each use.^{5,7} But many people turn to a "hydrotherapist" for colon irrigation. The services are also increasingly being offered by practitioners who describe themselves as "colon hygienists."

These individuals sometimes belong to organizations such as the National Board for Colon Hydrotherapy (NBCH) or the Interna-



Despite colon cleansing's long history and current popularity, the literature does not support its purported benefits.

4 things to tell patients about colon cleansing

1. Colon irrigation is not wise—particularly if you have a history of gastrointestinal disease (including diverticulitis, Crohn’s disease, or ulcerative colitis) or a history of colon surgery, severe hemorrhoids, kidney disease, or heart disease. These conditions increase the risk of adverse effects.^{2,3,11,16}
2. Side effects of colon cleansing include nausea, vomiting, diarrhea, dizziness, dehydration, electrolyte abnormalities, acute kidney insufficiency, pancreatitis, bowel perforation, heart failure, and infection.^{2,3,11,16}
3. The devices that practitioners use for the procedure are not approved for colon cleansing by the US Food and Drug Administration. Inadequately disinfected or sterilized irrigation machines have been linked to bacterial contamination.^{2,11,19}
4. Colon cleansing practitioners are not licensed by a scientifically based organization. Rather, practitioners have undergone a training process structured by an organization that is attempting to institute its own certification and licensing requirements.

➤
Some herbal preparations have also been associated with aplastic anemia and liver toxicity.

tional Association for Colon Hydrotherapy (I-ACT).^{8,9} These practitioners are not licensed, but they are required to have a high school or equivalent degree plus 3 semesters of postsecondary education and to be certified in cardiopulmonary resuscitation. They also take various seminars and continuing education courses from the NBCH and I-ACT.

How many individuals have used colon cleansing is unclear, although one study suggested that in the United Kingdom, registered practitioners carry out an estimated 5600 procedures every month.¹⁰

Where’s the evidence?

Despite colon cleansing’s long history and current popularity, the literature does not support its purported benefits. Historically, colon cleansing was thought to prevent autointoxication from toxins originating in the colon, but the evidence for this claim is limited.¹¹ A search of the literature using the terms “colon cleansing,” “herbal colon cleanse,” “colon detoxification,” and “colon irrigation,” yielded no scientifically robust studies in support of this practice. One study suggested that lymphocytes might migrate from the gut into the circulation after the procedure, which may “improve colon and immune system function.”¹²

Even though colon cleansing is touted as a commonly used form of holistic, com-

plementary and alternative medicine, the Natural Standard Professional Database concluded in a monograph that there is “limited clinical evidence validating colon therapy as a health promotion practice” and noted a “lack of sufficient evidence” for most of its prescribed uses.¹³

Adverse effects:

From cramping to renal failure

Most reports in the literature note a variety of adverse effects of colon cleansing that range from mild (eg, cramping, abdominal pain, fullness, bloating, nausea, vomiting, perianal irritation, and soreness) to severe (eg, electrolyte imbalance and renal failure).^{11,14-17} Some herbal preparations have also been associated with aplastic anemia and liver toxicity.¹⁸

Case reports also have noted back and pelvic abscesses after colonic hydrotherapy, fatal aeroportia (gas accumulation in the mesenteric veins) with air emboli, rectal perforations, perineal gangrene, acute water intoxication, coffee enema-associated colitis and septicemia, and deaths due to amebiasis.^{2,3,19-21}

The FDA has issued many warning letters

The preparations used for colon cleansing are considered dietary supplements, and the US Food and Drug Administration (FDA) requires

that they be labeled as such; the FDA does not preapprove these substances, however. The FDA also requires that colonic hydrotherapy and irrigation system devices meet certain requirements, but the agency has never approved any system for general nonmedical purposes, such as colon cleansing.

The devices have an FDA Class III designation, indicating that if a device is used for purposes beyond what is medically indicated (preparation for radiologic and endoscopic procedures), the manufacturer must obtain premarket approval from the FDA, which is based on evaluation of the safety and effectiveness of the device as shown by available scientific evidence and current regulations.²² During the past decade the FDA has issued numerous warning letters to manufacturers

for unapproved use of the devices for colon cleansing.²³⁻²⁶

Raise the issue with patients

Given the current popularity of colon cleansing, it's important to recognize that some of your patients may engage in, or be thinking about, the practice. (See "4 things to tell patients about colon cleansing" on page 456.) Be sure to tell patients about the potential consequences of colon cleansing and to emphasize that there is a lack of evidence to back up supporters' claims. **JFP**

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References

- Ernst E. Colonic irrigation and the theory of autointoxication: a triumph of ignorance over science. *J Clin Gastroenterol.* 1997;24:196-198.
- Acosta RD, Cash BD. Clinical effects of colonic cleansing for general health promotion: a systemic review. *Am J Gastroenterol.* 2009;104:2830-2836.
- Handley DV, Rieger NA, Rodda DJ. Rectal perforation from colonic irrigation administered by alternative practitioners. *Med J Aust.* 2004;181:575-576.
- Seow-Choen F. The physiology of colonic therapy. *Colorectal Dis.* 2009;11:686-688.
- Colon cleansing. *Med Lett Drugs Ther.* 2009;51:39.
- Just cleansing. A guide to cleansing and detox. Available at: <http://www.justcleansing.com>. Accessed November 17, 2010.
- Home Colonics Company. Available at: <http://www.homecolonics.com>. Accessed November 17, 2010.
- National Board for Colon Hydrotherapy. Available at: <http://www.nbcht.org>. Accessed November 27, 2010.
- International Association for Colon Hydrotherapy. Available at: <http://www.i-act.org>. Accessed November 27, 2010.
- Taffinder NJ, Tan E, Webb IG, et al. Retrograde commercial colonic hydrotherapy. *Colorectal Dis.* 2004;6:258-260.
- Richards DG, McMillin DL, Mein EA, et al. Colonic irrigations: a review of the historical controversy and the potential for adverse effects. *J Altern Complement Med.* 2006;12:389-393.
- Uchiyama-Tanaka Y. Colon irrigation causes lymphocyte movement from gut-associated lymphatic tissues to peripheral blood. *Biomed Res.* 2009;30:311-314.
- Colon therapy/colonic irrigation. Natural Standard Professional Monograph. 2011. Available at: <http://naturalstandard.com/databases/hw/colon.asp>. Accessed June 21, 2011.
- Abaskharoun R, Depew W, Vanner S. Changes in renal function following administration of oral sodium phosphate or polyethylene glycol for colon cleansing before colonoscopy. *Can J Gastroenterol.* 2007;21:227-231.
- Rex D. Dosing considerations in the use of sodium phosphate bowel preparations for colonoscopy. *Ann Pharmacother.* 2007;41:1466-1475.
- Dykes C, Cash BD. Key safety issues of bowel preparations for colonoscopy and importance of adequate hydration. *Gastroenterology Nurs.* 2007;31:30-35.
- Norlela S, Izham C, Khalid BA. Colonic irrigation-induced hyponatremia. *Malays J Pathol.* 2004;26:117-118.
- Smereck J. Aplastic anemia: a possible toxic effect of an herbal "colon cleansing" preparation. *J Emerg Med.* 2007;11:191-192.
- Ratnaraja N, Raymond N. Extensive abscesses following colonic hydrotherapy. *Lancet Infect Dis.* 2005;5:527.
- Chen WL, Tsao YT. Fatal aortic aneurysm with systemic air embolism after colon hydrotherapy. *J Trauma.* 2010;68:247.
- Tan MP, Cheong DM. Life-threatening perineal gangrene from rectal perforation following colonic hydrotherapy: a case report. *Ann Acad Med Singapore.* 1999;28:583-585.
- US Food and Drug Administration. Premarket approval. Available at: <http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/HowtoMarketYourDevice/PremarketSubmissions/PremarketApprovalPMA/default.htm>. Accessed June 21, 2011.
- US Food and Drug Administration. Device classification. Available at: <http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/Overview/ClassifyYourDevice/default.htm>. Accessed December 1, 2010.
- US Food and Drug Administration. Warning letter to Clearwater Colon Hydrotherapy. Available at: <http://www.fda.gov/ICECI/EnforcementActions/WarningLetters/2001/ucm178494.htm>. Accessed June 21, 2011.
- US Food and Drug Administration. Warning letter to Augustine R. Hoerninger, III, PhD, ND. Available at: <http://www.fda.gov/ICECI/EnforcementActions/WarningLetters/2003/ucm147378.htm>. Accessed June 21, 2011.
- US Food and Drug Administration. Warning letter to Jimmy J. Girouard. Available at: <http://www.fda.gov/ICECI/EnforcementActions/WarningLetters/2003/ucm147792.htm>. Accessed June 21, 2011.



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