

# NONPRESCRIPTION MEDICINES DIGEST



December, 2004

Welcome to the November quarterly issue of the *NMA Newsletter*. In this issue, you will find several articles that add to our knowledge of nonprescription medicines. The first article provides an overview of how colonic tissue may be altered with chronic stimulant laxative abuse and explores concerns that have been raised by the FDA and others regarding cancer and cathartic colon. The second article reminds us to be alert to conditions such as pellagra that may seem old fashioned, yet can still be found in certain patient populations. Finally, sorting out patients who have self-treatable abdominal disorders from recurrent abdominal pain patients is discussed.

The *NMA Newsletters* are now in the process of being archived. In case you have missed an issue, you can find the archives at [http://www.nmafaculty.org/newsletter/newsletters\\_archive.htm](http://www.nmafaculty.org/newsletter/newsletters_archive.htm).

Watch for a new link to *News from P&G* appearing on the website. We will be posting news items of interest such as the recently released ThermaCare® Knee Wrap. As always, the website can be accessed at <http://www.nmafaculty.org>.

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## Stimulant Laxatives and Damage to the Colon

The demand for laxatives to produce a bowel movement has always been high, partly due to the widespread misconception that one must have a daily bowel movement to maintain health. The author of this paper explores the stimulant group of laxatives, including diphenylmethanes (bisacodyl), castor oil, and anthraquinones (senna, sennosides). He discusses their mechanisms before providing an in-depth examination of the question of structural changes they cause in colonic tissues that could affect bowel function.

Bisacodyl causes morphologic changes in surface absorptive cells in man, and its abuse was associated with ultrastructural changes of colonic submucosal nerves. Castor oil's primary constituent, ricinoleic acid, causes morphologic changes in surface epithelial cells in animals.



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an associate.

Anthraquinones have produced the greatest concern. This is partly due to the proven risk of pseudomelanosis coli, a brownish discoloration of the colonic mucosa that is seen with several months of constant use of anthraquinones. However, its significance is unknown. The author asserts that the current concern is primarily due to a 1968 study of twelve patients addicted to laxatives. When their colons were removed because of chronic constipation, the investigators noticed damage to enteric nerves and smooth muscle atrophy. Chronic anthraquinone laxative use was implicated as the cause, but the authors could not rule out damage from previously used non-anthraquinone laxatives. Studies in animals have not yielded clear results.

The author reviewed two papers concerning the risk of cathartic colon with chronic laxative use or abuse. One appeared to demonstrate that cathartic colon use is rare. However, another found that 25% of patients with chronic constipation who used stimulant laxatives had cathartic colon.

The author also summarized the recent FDA actions regarding stimulant laxatives and the risk of colorectal cancer. He concluded that information to implicate currently available stimulants is lacking.

Finally, the paper reviewed the four types of stimulant laxative abuse: eating disorders, malingering, Munchausen syndrome, and Polle syndrome (Munchausen by proxy). Laxative abuse can be recognized as a watery diarrhea of high volume occurring in conjunction with cramping and abdominal pain. The patient also may have fluid and electrolyte disorders.

Wald A. Is chronic use of stimulant laxatives harmful to the colon? *J Clin Gastroenterology*. 2003;36:386-389.

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## Pellagra: A New Paper about an Old Condition

As pharmacists counsel patients with minor health care conditions, we must constantly remember that some of the symptoms can denote serious underlying medical conditions. Diarrhea and dermatitis are problems for which pharmacist advice is constantly solicited. The authors of this paper remind us of one of their potential causes.

Pellagra was known in Europe for two centuries before it was seen in the United States. Mainly occurring in civilizations with a high intake of maize, it is caused by a deficiency of niacin. The initial cases in the U.S. were seen in 1902. However, widespread poverty and high consumption of corn caused it to become epidemic in the southern U.S. The link to insufficient dietary iron was first established in 1926.

The authors assert that, although epidemics are no longer seen, the pharmacist may still encounter pellagra among patients who are chronic alcoholics, eating a fad diet, dependent on drugs, or experiencing a malabsorption state.

Pellagra manifests with the classic triad of the three "Ds," dermatitis, dementia, and diarrhea. (Various authors now add a fourth "D," death.) The dermatitis presents as

painful, pruritic areas of erythema that evolve into an exudative set of vesicular or bullous lesions wherever skin is exposed to the sun, to pressure, or to friction (e.g., the backs of the hands, the face, the front of the neck). Diffuse involvement of the mucosal surface causes diarrhea, with watery stools that may contain blood and mucus. The patient eventually develops disorientation, confusion, memory loss, and psychosis.

The pharmacist is well-advised to consider pellagra when the patient with a dermatitis also develops diarrhea. A physician referral is the wisest course of action, to assess the degree of damage and ascertain the exact level of niacin needed to reverse the symptoms and prevent future episodes.

A dietitian should also be consulted to advise the patient on a diet rich in protein that will prevent pellagra.

Hegy J. Schwartz RA, Hegyi V. Pellagra: Dermatitis, dementia, and diarrhea. *Int J Dermatol.* 2004;43:1-5.

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## Recurrent Abdominal Pain

One of the symptoms patients ask pharmacists about is abdominal pain. An isolated episode of mild abdominal discomfort may indicate trapped gas dysbarism, or an incipient episode of diarrhea. However, recurrent abdominal pain (RAP) is a cause for alarm, as the authors of this paper point out.

RAP is defined as three or more episodes of intermittent abdominal pain sufficiently severe to disrupt a child's normal activities during a period of three months. It affects 10-15% of schoolchildren in the U.S. Most patients have no identifiable cause, and are classified as having functional RAP. This is the most common cause of RAP in those aged 4-10 years, followed in descending order of frequency by such diagnoses as constipation, acid peptic diseases (e.g., GERD, esophagitis, gastritis), irritable bowel syndrome, abdominal migraine, infectious colitis, urinary tract infection, and parasitic infection. For those aged 10-18 years, the most common diagnoses causing RAP, in descending order, are IBS, functional RAP, acid peptic disease, lactose intolerance, abdominal migraine, infectious and inflammatory colitis, dysmenorrhea, parasitic infection, chronic hepatitis, and abuse (sexual and physical).

The authors present alarm symptoms (e.g., under the age of 4 years) that indicate organic causes of RAP requiring an immediate physician referral. Localized or eccentric pain, or pain radiating to the back or shoulder indicate duodenal ulcer, cholelithiasis, or pancreatitis. Weight loss, poor growth, or delayed puberty indicate celiac disease or inflammatory bowel disease (IBD). Extraintestinal symptoms such as fever, rash, uveitis, arthralgia, dysuria, or jaundice indicate IBD or SLE. A patient with a history of foreign travel or possible exposure to contaminated water or milk may have hepatitis, giardiasis, or yersinosis. Those with a family history of IBD, peptic ulcer disease, or migraines may have peptic injury or IBD.

This article makes it apparent that the patient presenting to the pharmacist with a complaint of RAP should be referred for a physician-directed diagnostic workup to

discover the source of the pain.

Kohli R, Li B U.K. Differential diagnosis of recurrent abdominal pain: New considerations. *Pediatric Annals*. 2004;33:113-122.